

# Publications by Björn W. Schuller

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Current h-index: 57 (source: Google Scholar)

Current citation count: 14592 (source: Google Scholar)

Citations are only provided for papers with citation count  $\geq 100$ .

(IF): Journal Impact Factor according to Journal Citation Reports, Thomson Reuters.

(IF\*): Conference Impact Factor according to <http://citescholar.org>.

Acceptance rates and impact factors of satellite workshops may be subsumed with the main conference.

## A) BOOKS

### Books Authored (6):

- 1) B. W. Schuller, *I Know What You're Thinking: The Making of Emotional Machines*. Princeton University Press, 2018. to appear
- 2) A. Balahur-Dobrescu, M. Taboada, and B. W. Schuller, *Computational Methods for Affect Detection from Natural Language*. Computational Social Sciences, Springer, 2017. to appear
- 3) B. Schuller, *Intelligent Audio Analysis*. Signals and Communication Technology, Springer, 2013. 350 pages
- 4) B. Schuller and A. Batliner, *Computational Paralinguistics: Emotion, Affect and Personality in Speech and Language Processing*. Wiley, November 2013
- 5) K. Kroschel, G. Rigoll, and B. Schuller, *Statistische Informationstechnik*. Berlin/Heidelberg: Springer, 5th ed., 2011
- 6) B. Schuller, *Mensch, Maschine, Emotion – Erkennung aus sprachlicher und manueller Interaktion*. Saarbrücken: VDM Verlag Dr Müller, 2007. 239 pages

### Books Edited (2):

- 7) S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds., *Handbook of Multimodal-Multisensor Interfaces (3 volumes)*. ACM Books, Morgan & Claypool, 2017. to appear
- 8) S. D'Mello, A. Graesser, B. Schuller, and J.-C. Martin, eds., *Proceedings of the 4th International HUMAINE Association Conference on Affective Computing and Intelligent Interaction 2011, ACII 2011*, vol. 6974/6975, Part I / Part II of *Lecture Notes on Computer Science (LNCS)*, (Memphis, TN), HUMAINE Association, Springer, October 2011

### Contributions to Books (43):

- 9) B. Schuller, A. Elkins, and K. Scherer, "Computational Analysis of Vocal Expression of Affect: Trends and Challenges," in *Social Signal Processing* (J. Burgoon, N. Magnenat-Thalmann, M. Pantic, and A. Vinciarelli, eds.), ch. 6, pp. 56–68, Cambridge University Press, 2017
- 10) B. Schuller, "Multimodal User State & Trait Recognition: An Overview," in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. 30 pages, to appear
- 11) B. Schuller, S. Bengio, and L.-P. Morency, "Perspectives on Predictive Power of Multimodal Deep Learning: Surprises and Future Directions," in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. 15 pages, to appear
- 12) B. Schuller, M. Ernst, A. Ross, and F. Ramos, "Perspectives on Strategic Fusion: What Can Neuroscience, Engineering, and Applications Experience Teach Us about Optimizing Multimodal Multi-sensor System Reliability?," in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. 15 pages, to appear
- 13) S. Bengio, L. Deng, L.-P. Morency, and B. Schuller, "Multi-disciplinary Challenge Topic: Perspectives on Predictive Power of Multimodal Deep Learning: Surprises and Future Directions," in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. 30 pages, to appear
- 14) F. Ramos, A. Ross, and B. Schuller, "Multidisciplinary Challenge Topic: Perspectives on Strategic Fusion: What Can Neuroscience, Engineering, and Applications Experience Teach Us about Optimizing Multimodal Multi-sensor System Reliability?," in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. to appear
- 15) H. Gunes and B. Schuller, "Automatic Analysis of Aesthetics: Human Beauty, Attractiveness, and Likability," in *Social Signal Processing* (J. Burgoon, N. Magnenat-Thalmann, M. Pantic, and A. Vinciarelli, eds.), ch. 14, pp. 183–201, Cambridge University Press, 2017
- 16) H. Gunes and B. Schuller, "Automatic Analysis of Social Emotions," in *Social Signal Processing* (J. Burgoon, N. Magnenat-Thalmann, M. Pantic, and A. Vinciarelli, eds.), ch. 16, pp. 213–224, Cambridge University Press, 2017
- 17) V. Pandit, S. Amiriparian, M. Schmitt, K. Qian, J. Guo, S. Matsuoka, and B. Schuller, "Big Data Multimedia Mining: Feature Extraction facing Volume, Velocity, and Variety," in *Big Data Analytics for Large-Scale Multimedia Search* (S. Vrochidis, B. Huet, E. Chang, and I. Kompatsiaris, eds.), Wiley, 2017. to appear
- 18) P. Tzirakis, S. Zafeiriou, and B. Schuller, "Real-world automatic continuous affect recognition from audiovisual signals," in *Multi-modal Behavior Analysis in the Wild: Advances and Challenges* (X. Alameda-Pineda, E. Ricci, and N. Sebe, eds.), Elsevier, 2017. to appear
- 19) B. Schuller, "Acquisition of affect," in *Emotions and Personality in Personalized Services* (M. Tkalcic, B. De Carolis, M. de Gemmis, A. Odić, and A. Kosir, eds.), HumanComputer Interaction Series, pp. 57–80, Springer, 1st ed., 2016
- 20) F. Burkhardt, C. Pelachaud, B. Schuller, and E. Zovato, "Emotion Markup Language," in *Multimodal Interaction with W3C Standards: Towards Natural User Interfaces to Everything* (D. Dahl, ed.), pp. 65–80, Berlin/Heidelberg: Springer, 2017
- 21) G. Keren, A. E.-D. Mousa, O. Pietquin, S. Zafeiriou, and B. Schuller, "Deep Learning for Multisensorial and Multimodal Interaction," in *Handbook of Multimodal-Multisensor Interfaces* (S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds.), ACM Books, Morgan & Claypool, 2017. 30 pages, to appear
- 22) M. Schmitt and B. Schuller, "Machine-based decoding of paralinguistic vocal features," in *The Oxford Handbook of Voice Perception* (S. Frühholz and P. Belin, eds.), ch. 40, Oxford University Press, 2015. invited contribution, to appear
- 23) B. Schuller, "Deep Learning our Everyday Emotions – A Short Overview," in *Advances in Neural Networks: Computational and Theoretical Issues Emotional Expressions and Daily Cognitive Functions* (S. Bassis, A. Esposito, and F. C. Morabito, eds.), vol. 37 of *Smart Innovation Systems and Technologies*, pp. 339–346, Berlin Heidelberg: Springer, 2015. invited contribution
- 24) B. Schuller and F. Weninger, "Human Affect Recognition – Audio-Based Methods," in *Wiley Encyclopedia of Electrical and Electronics Engineering* (J. G. Webster, ed.), pp. 1–13, New York: John Wiley & Sons, 2015. invited contribution
- 25) B. Schuller, "Multimodal Affect Databases - Collection, Challenges & Chances," in *Handbook of Affective Computing* (R. A.

- Calvo, S. D’Mello, J. Gratch, and A. Kappas, eds.), Oxford Library of Psychology, ch. 23, pp. 323–333, Oxford University Press, 2015. invited contribution
- 26) B. Schuller, “Emotion Modeling via Speech Content and Prosody – in Computer Games and Elsewhere,” in *Emotion in Games – Theory and Practice* (G. Yannakakis and K. Karpouzis, eds.), vol. 4 of *Socio-Affective Computing*, ch. 5, pp. 85–102, Springer, 2015. invited contribution
  - 27) A. Batliner, S. Steidl, F. Eyben, and B. Schuller, “On Laughter and Speech Laugh, Based on Observations of Child-Robot Interaction,” in *Phonetics of Laughing* (J. Trouvain and N. Campbell, eds.), Saarbrücken, Germany: universaar – Saarland University Press, 2015. 29 pages, to appear
  - 28) R. Brückner and B. Schuller, “Being at Odds? – Deep and Hierarchical Neural Networks for Classification and Regression of Conflict in Speech,” in *Conflict and Multimodal Communication – Social research and machine intelligence* (F. D’Errico, I. Poggi, A. Vinciarelli, and L. Vincze, eds.), Computational Social Sciences, pp. 403–429, Berlin/Heidelberg: Springer, 2015. invited contribution
  - 29) G. Castellano, H. Gunes, C. Peters, and B. Schuller, “Multimodal Affect Detection for Naturalistic Human-Computer and Human-Robot Interactions,” in *Handbook of Affective Computing* (R. A. Calvo, S. D’Mello, J. Gratch, and A. Kappas, eds.), Oxford Library of Psychology, ch. 17, pp. 246–260, Oxford University Press, 2015. invited contribution
  - 30) E. Marchi, Y. Zhang, F. Eyben, F. Ringeval, and B. Schuller, “Autism and Speech, Language, and Emotion - a Survey,” in *Evaluating the Role of Speech Technology in Medical Case Management* (H. Patil and M. Kulshreshtha, eds.), Berlin: De Gruyter, 2015. invited contribution, to appear
  - 31) F. Weninger, M. Wöllmer, and B. Schuller, “Emotion Recognition in Naturalistic Speech and Language - A Survey,” in *Emotion Recognition: A Pattern Analysis Approach* (A. Konar and A. Chakraborty, eds.), ch. 10, pp. 237–267, Wiley, 1st ed., December 2015
  - 32) E. Marchi, F. Ringeval, and B. Schuller, “Voice-enabled assistive robots for handling autism spectrum conditions: an examination of the role of prosody,” in *Speech and Automata in Health Care (Speech Technology and Text Mining in Medicine and Healthcare)* (A. Neustein, ed.), pp. 207–236, Boston/Berlin/Munich: De Gruyter, 2014. invited contribution
  - 33) B. Schuller, “Prosody and Phonemes: On the Influence of Speaking Style,” in *Prosody and Iconicity* (S. Hancil and D. Hirst, eds.), ch. 13, pp. 233–250, Benjamins, May 2013
  - 34) B. Schuller and F. Weninger, “Ten Recent Trends in Computational Paralinguistics,” in *4th COST 2102 International Training School on Cognitive Behavioural Systems* (A. Esposito, A. Vinciarelli, R. Hoffmann, and V. C. Müller, eds.), vol. 7403/2012 of *Lecture Notes on Computer Science (LNCS)* 7403, pp. 35–49, Berlin Heidelberg: Springer, 2012
  - 35) R. Rotili, E. Principi, M. Wöllmer, S. Squartini, and B. Schuller, “Conversational Speech Recognition In Non-Stationary Reverberated Environments,” in *4th COST 2102 International Training School on Cognitive Behavioural Systems* (A. Esposito, A. Vinciarelli, R. Hoffmann, and V. C. Müller, eds.), vol. 7403/2012 of *Lecture Notes on Computer Science (LNCS)*, pp. 50–59, Berlin Heidelberg: Springer, 2012
  - 36) R. Rotili, E. Principi, S. Squartini, and B. Schuller, “Real-Time Speech Recognition in a Multi-Talker Reverberated Acoustic Scenario,” in *Advanced Intelligent Computing Theories and Applications. With Aspects of Artificial Intelligence. Proc. Seventh International Conference on Intelligent Computing (ICIC 2011)*, vol. 6839 of *Lecture Notes on Computer Science (LNCS)*, pp. 379–386, Springer, 2012
  - 37) B. Schuller, “Voice and Speech Analysis in Search of States and Traits,” in *Computer Analysis of Human Behavior* (A. A. Salah and T. Gevers, eds.), Advances in Pattern Recognition, ch. 9, pp. 227–253, Springer, 2011
  - 38) B. Schuller and T. Knaup, “Learning and Knowledge-based Sentiment Analysis in Movie Review Key Excerpts,” in *Toward Autonomous, Adaptive, and Context-Aware Multimodal Interfaces: Theoretical and Practical Issues: Third COST 2102 International Training School, Caserta, Italy, March 15-19, 2010, Revised Selected Papers* (A. Esposito, A. M. Esposito, R. Martone, V. Müller, and G. Scarpetta, eds.), vol. 6456/2010 of *Lecture Notes on Computer Science (LNCS)*, pp. 448–472, Heidelberg: Springer, 1st ed., 2011
  - 39) B. Schuller, M. Wöllmer, F. Eyben, and G. Rigoll, “Retrieval of Paralinguistic Information in Broadcasts,” in *Multimedia Information Extraction: Advances in video, audio, and imagery extraction for search, data mining, surveillance, and authoring* (M. T. Maybury, ed.), ch. 17, pp. 273–288, Wiley, IEEE Computer Society Press, 2011
  - 40) D. Arsić and B. Schuller, “Real Time Person Tracking and Behavior Interpretation in Multi Camera Scenarios Applying Homography and Coupled HMMs,” in *Analysis of Verbal and Nonverbal Communication and Enactment: The Processing Issues, COST 2102 International Conference, Budapest, Hungary, September 7-10, 2010, Revised Selected Papers* (A. Esposito, A. Vinciarelli, K. Vicsi, C. Pelachaud, and A. Nijholt, eds.), vol. 6800/2011 of *Lecture Notes on Computer Science (LNCS)*, pp. 1–18, Heidelberg: Springer, 2011
  - 41) B. Schuller, F. Dibiasi, F. Eyben, and G. Rigoll, “Music Thumbing Incorporating Harmony- and Rhythm Structure,” in *Adaptive Multimedia Retrieval: 6th International Workshop, AMR 2008, Berlin, Germany, June 26-27, 2008. Revised Selected Papers* (M. Detyniecki, U. Leiner, and A. Nürnberger, eds.), vol. 5811/2010 of *Lecture Notes in Computer Science (LNCS)*, pp. 78–88, Berlin/Heidelberg: Springer, 2010
  - 42) A. Batliner, B. Schuller, D. Seppi, S. Steidl, L. Devillers, L. Vidrascu, T. Vogt, V. Aharonson, and N. Amir, “The Automatic Recognition of Emotions in Speech,” in *Emotion-Oriented Systems: The HUMAINE Handbook* (R. Cowie, P. Petta, and C. Pelachaud, eds.), Cognitive Technologies, pp. 71–99, Springer, 1st ed., 2010
  - 43) M. Wöllmer, F. Eyben, A. Graves, B. Schuller, and G. Rigoll, “Improving Keyword Spotting with a Tandem BLSTM-DBN Architecture,” in *Advances in Non-Linear Speech Processing: International Conference on Nonlinear Speech Processing, NO-LISP 2009, Vic, Spain, June 25-27, 2009, Revised Selected Papers* (J. Sole-Casals and V. Zaiats, eds.), vol. 5933/2010 of *Lecture Notes on Computer Science (LNCS)*, pp. 68–75, Springer, 2010
  - 44) B. Schuller, M. Wöllmer, F. Eyben, and G. Rigoll, “Spectral or Voice Quality? Feature Type Relevance for the Discrimination of Emotion Pairs,” in *The Role of Prosody in Affective Speech* (S. Hancil, ed.), vol. 97 of *Linguistic Insights, Studies in Language and Communication*, pp. 285–307, Peter Lang Publishing Group, 2009
  - 45) B. Schuller, F. Eyben, and G. Rigoll, “Static and Dynamic Modelling for the Recognition of Non-Verbal Vocalisations in Conversational Speech,” in *Perception in Multimodal Dialogue Systems: 4th IEEE Tutorial and Research Workshop on Perception and Interactive Technologies for Speech-Based Systems, PIT 2008, Kloster Irsee, Germany, June 16-18, 2008, Proceedings* (E. André, L. Dybkjaer, H. Neumann, R. Pieraccini, and M. Weber, eds.), vol. 5078/2008 of *Lecture Notes on Computer Science (LNCS)*, pp. 99–110, Berlin/Heidelberg: Springer, 2008
  - 46) B. Schuller, M. Wöllmer, T. Moosmayr, G. Ruske, and G. Rigoll, “Switching Linear Dynamic Models for Noise Robust In-Car Speech Recognition,” in *Pattern Recognition: 30th DAGM Symposium Munich, Germany, June 10-13, 2008 Proceedings* (G. Rigoll, ed.), vol. 5096 of *Lecture Notes on Computer Science (LNCS)*, pp. 244–253, Berlin/Heidelberg: Springer, 2008. (acceptance rate: 39%, IF\* 1.13 (2010))
  - 47) B. Vlasenko, B. Schuller, A. Wendemuth, and G. Rigoll, “On the Influence of Phonetic Content Variation for Acoustic Emo-

- tion Recognition,” in *Perception in Multimodal Dialogue Systems: 4th IEEE Tutorial and Research Workshop on Perception and Interactive Technologies for Speech-Based Systems, PIT 2008, Kloster Irsee, Germany, June 16-18, 2008, Proceedings* (E. André, L. Dybkjaer, H. Neumann, R. Pieraccini, and M. Weber, eds.), vol. 5078/2008 of *Lecture Notes on Computer Science (LNCS)*, pp. 217–220, Berlin/Heidelberg: Springer, 2008
- 48) M. Grimm, K. Kroschel, H. Harris, C. Nass, B. Schuller, G. Rigoll, and T. Moosmayr, “On the Necessity and Feasibility of Detecting a Driver’s Emotional State While Driving,” in *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Portugal, September 12-14, 2007, Proceedings* (A. Paiva, R. W. Picard, and R. Prada, eds.), vol. 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pp. 126–138, Berlin/Heidelberg: Springer, 2007
- 49) B. Vlasenko, B. Schuller, A. Wendemuth, and G. Rigoll, “Frame vs. Turn-Level: Emotion Recognition from Speech Considering Static and Dynamic Processing,” in *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Portugal, September 12-14, 2007, Proceedings* (A. Paiva, R. W. Picard, and R. Prada, eds.), vol. 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pp. 139–147, Berlin/Heidelberg: Springer, 2007
- 50) M. Schröder, L. Devillers, K. Karpouzis, J.-C. Martin, C. Pelachaud, C. Peter, H. Pirker, B. Schuller, J. Tao, and I. Wilson, “What should a generic emotion markup language be able to represent?,” in *Affective Computing and Intelligent Interaction: Second International Conference, ACII 2007, Lisbon, Portugal, September 12-14, 2007, Proceedings* (A. Paiva, R. W. Picard, and R. Prada, eds.), vol. 4738/2007 of *Lecture Notes on Computer Science (LNCS)*, pp. 440–451, Berlin/Heidelberg: Springer, 2007
- 51) B. Schuller, M. Ablameier, R. Müller, S. Reifinger, T. Poitschke, and G. Rigoll, “Speech Communication and Multimodal Interfaces,” in *Advanced Man Machine Interaction* (K.-F. Kraiss, ed.), Signals and Communication Technology, ch. 4, pp. 141–190, Berlin/Heidelberg: Springer, 2006
- B) REFEREED JOURNAL PAPERS (98)
- 52) B. Schuller, “Can Affective Computing Save Lives? Meet Mobile Health,” *IEEE Computer Magazine*, vol. 50, p. 40, 2017. (IF: 1.438 (2013))
- 53) B. Schuller, “Speech Emotion Recognition: 20 Years in a Nutshell, Benchmarks, and Ongoing Trends,” *Communications of the ACM*, 2016. 8 pages, to appear (IF: 3.301, 5-year IF: 4.425 (2015))
- 54) E. Coutinho and B. Schuller, “Shared Acoustic Codes Underlie Emotional Communication in Music and Speech – Evidence from Deep Transfer Learning,” *PLoS ONE*, vol. 12, 2017. 23 pages, to appear (IF: 3.057 (2015))
- 55) J. Deng, S. Frühholz, Z. Zhang, and B. Schuller, “Recognizing Emotions From Whispered Speech Based on Acoustic Feature Transfer Learning,” *IEEE Access*, vol. 5, pp. 5235–5246, December 2017. (IF: 1.270, 5-year IF: 1.276 (2015))
- 56) J. Deng, X. Xu, Z. Zhang, S. Frühholz, and B. Schuller, “Universum Autoencoder-based Domain Adaptation for Speech Emotion Recognition,” *IEEE Signal Processing Letters*, vol. 24, 2017. 5 pages, to appear (acceptance rate: 17 %, IF: 1.674, 5-year IF: 1.595 (2012))
- 57) J. Guo, K. Qian, G. Zhang, H. Xu, and B. Schuller, “Accelerating biomedical signal processing using GPU: A case study of snore sounds feature extraction,” *Interdisciplinary Sciences – Computational Life Sciences*, vol. 9, 2017. 11 pages, to appear (IF: 0.853 (2015))
- 58) C. Janott, B. Schuller, and C. Heiser, “Akustische Informationen von Schnarchgeräuschen,” *HNO, Leitthemenheft “Schlafmedizin”*, vol. 22, pp. 1–10, February 2017. (IF: 0.852 (2015))
- 59) E. Marchi, F. Vesperini, S. Squartini, and B. Schuller, “Deep Recurrent Neural Network-based Autoencoders for Acoustic Novelty Detection,” *Computational Intelligence and Neuroscience*, vol. 2017, 2017. 14 pages (IF: 0.430 (2015))
- 60) P. B. Marschik, F. B. Pokorný, R. Peharz, D. Zhang, J. O’Muircheartaigh, H. Roeyers, S. Bölte, A. J. Spittle, B. Urlsberger, B. Schuller, L. Poustka, S. Ozonoff, F. Pernkopf, T. Pock, K. Tammimies, C. Enzinger, M. Kriebler, I. Tomantschger, K. D. Bartl-Pokorný, J. Sigafoos, L. Roche, G. Esposito, M. Gugatschka, K. Nielsen-Saines, C. Einspieler, W. E. Kaufmann, and The BEE-PRI study group, “A Novel Way to Measure and Predict Development: A Heuristic Approach to Facilitate the Early Detection of Neurodevelopmental Disorders,” *Current Neurology and Neuroscience Reports*, vol. 17, no. 43, 2017. 15 pages (IF: 2.961, 5-year IF: 3.064 (2015))
- 61) K. Qian, Z. Zhang, A. Baird, and B. Schuller, “Active Learning for Bird Sounds Classification,” *Acta Acustica united with Acustica*, vol. 103, pp. 361–364, April 2017. (IF: 0.897 (2015))
- 62) O. Rudovic, J. Lee, L. Mascarell-Maricic, B. W. Schuller, and R. Picard, “Measuring Engagement in Autism Therapy with Social Robots: a Cross-cultural Study,” *Frontiers in Robotics and AI, section Humanoid Robotics, Special Issue on Affective and Social Signals for HRI*, 2017. to appear
- 63) M. Schmitt and B. Schuller, “openXBOW – Introducing the Passau Open-Source Crossmodal Bag-of-Words Toolkit,” *Journal of Machine Learning Research*, vol. 18, 2017. 5 pages, to appear (acceptance rate: 18 %, IF: 2.450, 5-year IF: 5.587 (2015))
- 64) M. Soleymani, D. Garcia, B. Jou, B. Schuller, S.-F. Chang, and M. Pantic, “A Survey of Multimodal Sentiment Analysis,” *Image and Vision Computing, Special Issue on Multimodal Sentiment Analysis and Mining in the Wild*, vol. 35, 2017. 23 pages, to appear (IF: 1.766, 5-year IF: 2.584 (2015))
- 65) G. Trigeorgis, K. Bousmalis, S. Zafeiriou, and B. Schuller, “A deep matrix factorization method for learning attribute representations,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 39, pp. 417–429, March 2017. (IF: 6.077, 5-year IF: 8.693 (2015))
- 66) G. Trigeorgis, M. A. Nicolaou, S. Zafeiriou, and B. Schuller, “Deep Canonical Time Warping for simultaneous alignment and representation learning of sequences,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 39, 2017. 12 pages, to appear (IF: 6.077, 5-year IF: 8.693 (2015))
- 67) X. Xu, J. Deng, N. Cummins, Z. Zhang, C. Wu, L. Zhao, and B. Schuller, “A Two-Dimensional Framework of Multiple Kernel Subspace Learning for Recognising Emotion in Speech,” *IEEE/ACM Transactions on Audio, Speech and Language Processing*, vol. 25, pp. 1436–1449, July 2017. (acceptance rate: 25 %, IF: 2.625, 5-year IF: 2.583 (2013))
- 68) Z. Zhang, N. Cummins, and B. Schuller, “Advanced Data Exploitation in Speech Analysis – An Overview,” *IEEE Signal Processing Magazine*, vol. 34, July 2017. 24 pages, to appear (IF: 6.671 (2015))
- 69) B. Schuller, “Can Virtual Human Interviewers “Hear” Real Humans’ Depression?,” *IEEE Computer Magazine*, vol. 49, p. 8, July 2016. (IF: 1.438 (2013))
- 70) J. Deng, X. Xu, Z. Zhang, S. Frühholz, and B. Schuller, “Exploitation of Phase-based Features for Whispered Speech Emotion Recognition,” *IEEE Access*, vol. 4, pp. 4299–4309, July 2016. (IF: 1.270, 5-year IF: 1.276 (2015))
- 71) F. Eyben, K. Scherer, B. Schuller, J. Sundberg, E. André, C. Busso, L. Devillers, J. Epps, P. Laukka, S. Narayanan, and K. Truong, “The Geneva Minimalistic Acoustic Parameter Set (GeMAPS) for Voice Research and Affective Computing,” *IEEE Transactions on Affective Computing*, vol. 7, pp. 190–202, April–June 2016. (acceptance rate: 22 %, IF: 3.466, 5-year IF: 3.871 (2013))
- 72) F. Gross, J. Jordan, F. Weninger, F. Klanner, and B. Schuller, “Route and Stopping Intent Prediction at Intersections from Car Fleet Data,” *IEEE Transactions on Intelligent Vehicles*, vol. 1, pp. 177–186, June 2016

- 73) W. Han, E. Coutinho, H. Ruan, H. Li, B. Schuller, X. Yu, and X. Zhu, "Semi-Supervised Active Learning for Sound Classification in Hybrid Learning Environments," *PLoS ONE*, vol. 11, no. 9, 2016. 23 pages (IF: 3.234 (2014))
- 74) J. Han, Z. Zhang, N. Cummins, F. Ringeval, and B. Schuller, "Strength Modelling for Real-World Automatic Continuous Affect Recognition from Audiovisual Signals," *Image and Vision Computing, Special Issue on Multimodal Sentiment Analysis and Mining in the Wild*, vol. 34, 2016. 12 pages, to appear (IF: 1.766, 5-Year IF: 2.584 (2015))
- 75) S. Hantke, F. Weninger, R. Kurle, F. Ringeval, A. Batliner, A. El-Desoky Mousa, and B. Schuller, "I Hear You Eat and Speak: Automatic Recognition of Eating Condition and Food Types, Use-Cases, and Impact on ASR Performance," *PLoS ONE*, vol. 11, pp. 1–24, May 2016. (IF: 3.234 (2014))
- 76) F. Lingenfelser, J. Wagner, J. Deng, R. Brueckner, B. Schuller, and E. André, "Asynchronous and Event-based Fusion Systems for Affect Recognition on Naturalistic Data in Comparison to Conventional Approaches," *IEEE Transactions on Affective Computing*, vol. 7, 2016. 13 pages, to appear (IF: 3.466, 5-year IF: 3.871 (2013))
- 77) E. Marchi, S. Frühholz, and B. Schuller, "The Effect of Narrow-band Transmission on Recognition of Paralinguistic Information from Human Vocalizations," *IEEE Access*, vol. 4, pp. 6059–6072, October 2016. (IF: 1.270, 5-year IF: 1.276 (2015))
- 78) A. Mencattini, E. Martinelli, F. Ringeval, B. Schuller, and C. Di Natale, "Continuous Estimation of Emotions in Speech by Dynamic Cooperative Speaker Models," *IEEE Transactions on Affective Computing*, vol. 7, 2016. 14 pages, to appear (IF: 3.466, 5-year IF: 3.871 (2013))
- 79) K. Qian, C. Janott, V. Pandit, Z. Zhang, C. Heiser, W. Hohenhorst, M. Herzog, W. Hemmert, and B. Schuller, "Classification of the Excitation Location of Snore Sounds in the Upper Airway by Acoustic Multi-Feature Analysis," *IEEE Transactions on Biomedical Engineering*, 2016. 11 pages, to appear (IF: 2.468, 5-year IF: 2.719 (2015))
- 80) A. Rynkiewicz, B. Schuller, E. Marchi, S. Piana, A. Camurri, A. Lassalle, and S. Baron-Cohen, "An investigation of the 'female camouflage effect' in autism using a computerized ADOS-2, and a test of sex/gender differences," *Molecular Autism*, vol. 7, no. 10, 2016. 10 pages (IF: 5.413 (2014))
- 81) H. Sagha, N. Cummins, and B. Schuller, "Autoencoders for Sentiment Analysis: A Review," *WIREs Data Mining and Knowledge Discovery*, vol. 7, 2017. to appear, invited review article (IF: 1.759 (2015))
- 82) H. Sagha, F. Li, E. V. J. del R. Millán, R. Chavarriaga, and B. Schuller, "Stream fusion for multi-stream automatic speech recognition," *International Journal of Speech Technology*, vol. 19, no. 4, pp. 669–675, 2016
- 83) B. Schuller, S. Steidl, A. Batliner, E. Nöth, A. Vinciarelli, F. Burkhardt, R. van Son, F. Weninger, F. Eyben, T. Bocklet, G. Mohammadi, and B. Weiss, "A Survey on Perceived Speaker Traits: Personality, Likability, Pathology, and the First Challenge," *Computer Speech and Language, Special Issue on Next Generation Computational Paralinguistics*, vol. 29, pp. 100–131, January 2015. (acceptance rate: 23 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 84) B. Schuller, "Do Computers Have Personality?," *IEEE Computer Magazine*, vol. 48, pp. 6–7, March 2015. (IF: 1.438 (2013))
- 85) B. Schuller, A. E.-D. Mousa, and V. Vasileios, "Sentiment Analysis and Opinion Mining: On Optimal Parameters and Performances," *WIREs Data Mining and Knowledge Discovery*, vol. 5, pp. 255–263, September/October 2015. invited focus article (IF: 1.759 (2015))
- 86) E. Coutinho and B. Schuller, "Automatic estimation of biosignals from the human voice," *Science, Special Supplement on Advances in Computational Psychophysiology*, vol. 350, pp. 114:48–50, 2 October 2015. invited contribution
- 87) F. Eyben, G. L. Salomo, J. Sundberg, K. Scherer, and B. Schuller, "Emotion in the singing voice - a deeper look at acoustic features in the light of automatic classification," *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Scalable Audio-Content Analysis*, vol. 2015, 2015. 9 pages (acceptance rate: 33 %, IF: 0.709 (2011))
- 88) A. Mencattini, F. Ringeval, B. Schuller, E. Martinelli, and C. D. Natale, "Continuous monitoring of emotions by a multimodal cooperative sensor system," *Procedia Engineering, Special Issue EuroSensors 2015*, vol. 120, pp. 556–559, July 2015
- 89) F. Weninger, J. Bergmann, and B. Schuller, "Introducing CUR-RENT: the Munich Open-Source CUDA RecurREnt Neural Network Toolkit," *Journal of Machine Learning Research*, vol. 16, pp. 547–551, 2015. (acceptance rate: 18 %, IF: 2.450, 5-year IF: 5.587 (2015))
- 90) Z. Zhang, E. Coutinho, J. Deng, and B. Schuller, "Cooperative Learning and its Application to Emotion Recognition from Speech," *IEEE/ACM Transactions on Audio, Speech and Language Processing*, vol. 23, no. 1, pp. 115–126, 2015. (acceptance rate: 25 %, IF: 2.625, 5-year IF: 2.583 (2013))
- 91) B. Schuller, S. Steidl, A. Batliner, F. Schiel, J. Krajewski, F. Weninger, and F. Eyben, "Medium-Term Speaker States – A Review on Intoxication, Sleepiness and the First Challenge," *Computer Speech and Language, Special Issue on Broadening the View on Speaker Analysis*, vol. 28, pp. 346–374, March 2014. (acceptance rate: 23 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 92) F. Ringeval, F. Eyben, E. Kroupi, A. Yuce, J.-P. Thiran, T. Ebrahimi, D. Lalanne, and B. Schuller, "Prediction of Asynchronous Dimensional Emotion Ratings from Audiovisual and Physiological Data," *Pattern Recognition Letters*, vol. 66, pp. 22–30, November 2015. (acceptance rate: 25 %, IF: 1.062, 5-year IF: 1.466 (2013))
- 93) A. Rosner, B. Schuller, and B. Kostek, "Classification of music genres based on music separation into harmonic and drum components," *Archives of Acoustics*, vol. 39, no. 4, pp. 629–638, 2014. (IF: 0.829, 5-year IF: 0.500 (2012))
- 94) Z. Zhang, E. Coutinho, J. Deng, and B. Schuller, "Distributing Recognition in Computational Paralinguistics," *IEEE Transactions on Affective Computing*, vol. 5, pp. 406–417, October–December 2014. (acceptance rate: 22 %, IF: 3.466, 5-year IF: 3.871 (2013))
- 95) J. Deng, Z. Zhang, F. Eyben, and B. Schuller, "Autoencoder-based Unsupervised Domain Adaptation for Speech Emotion Recognition," *IEEE Signal Processing Letters*, vol. 21, no. 9, pp. 1068–1072, 2014. (acceptance rate: 17 %, IF: 1.674, 5-year IF: 1.595 (2012))
- 96) J. T. Geiger, F. Weninger, J. F. Gemmeke, M. Wöllmer, B. Schuller, and G. Rigoll, "Memory-Enhanced Neural Networks and NMF for Robust ASR," *IEEE/ACM Transactions on Audio, Speech and Language Processing*, vol. 22, pp. 1037–1046, June 2014. (acceptance rate: 25 %, IF: 2.625, 5-year IF: 2.583 (2013))
- 97) F. Weninger, J. Geiger, M. Wöllmer, B. Schuller, and G. Rigoll, "Feature Enhancement by Deep LSTM Networks for ASR in Reverberant Multisource Environments," *Computer Speech and Language*, vol. 28, pp. 888–902, July 2014. (acceptance rate: 23 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 98) M. Wöllmer and B. Schuller, "Probabilistic Speech Feature Extraction with Context-Sensitive Bottleneck Neural Networks," *Neurocomputing, Special Issue on Machines learning for Non-Linear Processing Selected papers from the 2011 International Conference on Non-Linear Speech Processing (NoLISP 2011)*, vol. 132, pp. 113–120, May 2014. (acceptance rate: 31 %, IF: 2.005 (2013))
- 99) Z. Zhang, J. Pinto, C. Plahl, B. Schuller, and D. Willett, "Channel Mapping using Bidirectional Long Short-Term Memory for Dereverberation in Hands-Free Voice Controlled Devices," *IEEE Transactions on Consumer Electronics*, vol. 60, pp. 525–533, August 2014. (acceptance rate: 15 %, IF: 1.157 (2013))

- 100) B. Schuller, I. Dunwell, F. Weninger, and L. Paletta, "Serious Gaming for Behavior Change – The State of Play," *IEEE Pervasive Computing Magazine, Special Issue on Understanding and Changing Behavior*, vol. 12, pp. 48–55, July–September 2013. (IF: 2.103 (2013))
- 101) B. Schuller, S. Steidl, A. Batliner, F. Burkhardt, L. Devillers, C. Müller, and S. Narayanan, "Paralinguistics in Speech and Language – State-of-the-Art and the Challenge," *Computer Speech and Language, Special Issue on Paralinguistics in Naturalistic Speech and Language*, vol. 27, pp. 4–39, January 2013. (CSL most downloaded article 2012–2014 (3208 downloads) (acceptance rate: 36%, IF: 1.812 (2013), 5-year IF: 1.776, > 100 citations))
- 102) E. Cambria, B. Schuller, Y. Xia, and C. Havasi, "New Avenues in Opinion Mining and Sentiment Analysis," *IEEE Intelligent Systems Magazine*, vol. 28, pp. 15–21, March/April 2013. (IF: 2.570, 5-year IF: 2.632 (2010), > 300 citations)
- 103) F. Eyben, F. Weninger, N. Lehment, B. Schuller, and G. Rigoll, "Affective Video Retrieval: Violence Detection in Hollywood Movies by Large-Scale Segmental Feature Extraction," *PLOS ONE*, vol. 8, pp. 1–9, December 2013. (acceptance rate: 50%, IF: 3.534 (2013))
- 104) H. Gunes and B. Schuller, "Categorical and Dimensional Affect Analysis in Continuous Input: Current Trends and Future Directions," *Image and Vision Computing, Special Issue on Affect Analysis in Continuous Input*, vol. 31, pp. 120–136, February 2013. (acceptance rate: 20%, IF: 1.581 (2013), > 100 citations)
- 105) M. Hofmann, J. Geiger, S. Bachmann, B. Schuller, and G. Rigoll, "The TUM Gait from Audio, Image and Depth (GAID) Database: Multimodal Recognition of Subjects and Traits," *Journal of Visual Communication and Image Representation, Special Issue on Visual Understanding and Applications with RGB-D Cameras*, vol. 25, no. 1, pp. 195–206, 2013. (IF: 1.361 (2013))
- 106) F. Weninger, F. Eyben, B. W. Schuller, M. Mortillaro, and K. R. Scherer, "On the Acoustics of Emotion in Audio: What Speech, Music and Sound have in Common," *Frontiers in Psychology, section Emotion Science, Special Issue on Expression of emotion in music and vocal communication*, vol. 4, pp. 1–12, May 2013. (IF: 2.843 (2013))
- 107) F. Weninger, P. Staudt, and B. Schuller, "Words that Fascinate the Listener: Predicting Affective Ratings of On-Line Lectures," *International Journal of Distance Education Technologies, Special Issue on Emotional Intelligence for Online Learning*, vol. 11, pp. 110–123, April–June 2013
- 108) M. Wöllmer, B. Schuller, and G. Rigoll, "Keyword Spotting Exploiting Long Short-Term Memory," *Speech Communication*, vol. 55, no. 2, pp. 252–265, 2013. (acceptance rate: 38%, IF: 1.267, 5-year IF: 1.526 (2011))
- 109) M. Wöllmer, F. Weninger, T. Knaup, B. Schuller, C. Sun, K. Sagae, and L.-P. Morency, "YouTube Movie Reviews: Sentiment Analysis in an Audiovisual Context," *IEEE Intelligent Systems Magazine, Special Issue on Statistical Approaches to Concept-Level Sentiment Analysis*, vol. 28, pp. 46–53, May/June 2013. (acceptance rate: 17%, IF: 2.570, 5-year IF: 2.632 (2010))
- 110) M. Wöllmer, M. Kaiser, F. Eyben, B. Schuller, and G. Rigoll, "LSTM-Modeling of Continuous Emotions in an Audiovisual Affect Recognition Framework," *Image and Vision Computing, Special Issue on Affect Analysis in Continuous Input*, vol. 31, pp. 153–163, February 2013. (acceptance rate: 20%, IF: 1.581 (2013))
- 111) B. Schuller, "The Computational Paralinguistics Challenge," *IEEE Signal Processing Magazine*, vol. 29, pp. 97–101, July 2012. (IF: 6.000, 5-year IF: 7.043 (2011))
- 112) B. Schuller and B. Gollan, "Music Theoretic and Perception-based Features for Audio Key Determination," *Journal of New Music Research*, vol. 41, no. 2, pp. 175–193, 2012. (IF: 0.755, 5-year IF: 0.768 (2010))
- 113) B. Schuller, "Recognizing Affect from Linguistic Information in 3D Continuous Space," *IEEE Transactions on Affective Computing*, vol. 2, pp. 192–205, October–December 2012. (acceptance rate: 22%, IF: 3.466, 5-year IF: 3.871 (2013))
- 114) B. Schuller, Z. Zhang, F. Weninger, and F. Burkhardt, "Synthesized Speech for Model Training in Cross-Corpus Recognition of Human Emotion," *International Journal of Speech Technology, Special Issue on New and Improved Advances in Speaker Recognition Technologies*, vol. 15, no. 3, pp. 313–323, 2012
- 115) R. Rotili, E. Principi, S. Squartini, and B. Schuller, "A Real-Time Speech Enhancement Framework in Noisy and Reverberated Acoustic Scenarios," *Cognitive Computation*, vol. 5, no. 4, pp. 504–516, 2012. (IF: 1.000 (2011))
- 116) F. Eyben, A. Batliner, and B. Schuller, "Towards a standard set of acoustic features for the processing of emotion in speech," *Proceedings of Meetings on Acoustics*, vol. 16, 2012. 11 pages
- 117) F. Weninger, J. Krajewski, A. Batliner, and B. Schuller, "The Voice of Leadership: Models and Performances of Automatic Analysis in On-Line Speeches," *IEEE Transactions on Affective Computing*, vol. 3, no. 4, pp. 496–508, 2012. (acceptance rate: 22%, IF: 3.466, 5-year IF: 3.871 (2013))
- 118) M. Wöllmer, F. Weninger, J. Geiger, B. Schuller, and G. Rigoll, "Noise Robust ASR in Reverberated Multisource Environments Applying Convolutional NMF and Long Short-Term Memory," *Computer Speech and Language, Special Issue on Speech Separation and Recognition in Multisource Environments*, vol. 27, pp. 780–797, May 2013. (acceptance rate: 36%, IF: 1.812, 5-year IF: 1.776 (2013))
- 119) F. Weninger and B. Schuller, "Optimization and Parallelization of Monaural Source Separation Algorithms in the openBliS-SART Toolkit," *Journal of Signal Processing Systems*, vol. 69, no. 3, pp. 267–277, 2012. (IF: 0.672, 5-year IF: 0.684 (2011))
- 120) E. Principi, R. Rotili, M. Wöllmer, F. Eyben, S. Squartini, and B. Schuller, "Real-Time Activity Detection in a Multi-Talker Reverberated Environment," *Cognitive Computation, Special Issue on Cognitive and Emotional Information Processing for Human-Machine Interaction*, vol. 4, no. 4, pp. 386–397, 2012. (IF: 1.000 (2011))
- 121) J. Krajewski, S. Schnieder, D. Sommer, A. Batliner, and B. Schuller, "Applying Multiple Classifiers and Non-Linear Dynamics Features for Detecting Sleepiness from Speech," *Neurocomputing, Special Issue From neuron to behavior: evidence from behavioral measurements*, vol. 84, pp. 65–75, May 2012. (acceptance rate: 31%, IF: 2.005 (2013))
- 122) A. Metallinou, M. Wöllmer, A. Katsamanis, F. Eyben, B. Schuller, and S. Narayanan, "Context-Sensitive Learning for Enhanced Audiovisual Emotion Classification," *IEEE Transactions on Affective Computing*, vol. 3, pp. 184–198, April – June 2012. (acceptance rate: 22%, IF: 3.466, 5-year IF: 3.871 (2013))
- 123) F. Eyben, M. Wöllmer, and B. Schuller, "A Multi-Task Approach to Continuous Five-Dimensional Affect Sensing in Natural Speech," *ACM Transactions on Interactive Intelligent Systems, Special Issue on Affective Interaction in Natural Environments*, vol. 2, March 2012. 29 pages
- 124) P. Grosche, B. Schuller, M. Müller, and G. Rigoll, "Automatic Transcription of Recorded Music," *Acta Acustica united with Acustica*, vol. 98, pp. 199–215(17), March/April 2012. (IF: 0.714 (2012))
- 125) M. Schröder, E. Bevacqua, R. Cowie, F. Eyben, H. Gunes, D. Heylen, M. ter Maat, G. McKeown, S. Pammi, M. Pantic, C. Pelachaud, B. Schuller, E. de Sevin, M. Valstar, and M. Wöllmer, "Building Autonomous Sensitive Artificial Listeners," *IEEE Transactions on Affective Computing*, vol. 3, pp. 165–183, April – June 2012. (acceptance rate: 22%, IF: 3.466, 5-year IF: 3.871 (2013), > 100 citations)
- 126) B. Schuller, "Affective Speaker State Analysis in the Presence of Reverberation," *International Journal of Speech Technology*, vol. 14, no. 2, pp. 77–87, 2011
- 127) B. Schuller, A. Batliner, S. Steidl, and D. Seppi, "Recognising Realistic Emotions and Affect in Speech: State of the Art

- and Lessons Learnt from the First Challenge,” *Speech Communication, Special Issue on Sensing Emotion and Affect - Facing Realism in Speech Processing*, vol. 53, pp. 1062–1087, November/December 2011. (acceptance rate: 38 %, IF: 1.267, 5-year IF: 1.526 (2011), > 300 citations)
- 128) M. Wöllmer, E. Marchi, S. Squartini, and B. Schuller, “Multi-Stream LSTM-HMM Decoding and Histogram Equalization for Noise Robust Keyword Spotting,” *Cognitive Neurodynamics*, vol. 5, no. 3, pp. 253–264, 2011. (acceptance rate: 50 %, IF: 1.77 (2013))
- 129) M. Wöllmer, F. Weninger, F. Eyben, and B. Schuller, “Computational Assessment of Interest in Speech – Facing the Real-Life Challenge,” *Künstliche Intelligenz (German Journal on Artificial Intelligence), Special Issue on Emotion and Computing*, vol. 25, no. 3, pp. 227–236, 2011
- 130) M. Wöllmer, C. Blaschke, T. Schindl, B. Schuller, B. Färber, S. Mayer, and B. Trefflich, “On-line Driver Distraction Detection using Long Short-Term Memory,” *IEEE Transactions on Intelligent Transportation Systems*, vol. 12, no. 2, pp. 574–582, 2011. (IF: 3.452, 5-year IF: 4.090 (2011))
- 131) M. Wöllmer, B. Schuller, A. Batliner, S. Steidl, and D. Seppi, “Tandem Decoding of Children’s Speech for Keyword Detection in a Child-Robot Interaction Scenario,” *ACM Transactions on Speech and Language Processing, Special Issue on Speech and Language Processing of Children’s Speech for Child-machine Interaction Applications*, vol. 7, August 2011. 22 pages, Article 12
- 132) F. Weninger, B. Schuller, A. Batliner, S. Steidl, and D. Seppi, “Recognition of Non-Prototypical Emotions in Reverberated and Noisy Speech by Non-Negative Matrix Factorization,” *EURASIP Journal on Advances in Signal Processing, Special Issue on Emotion and Mental State Recognition from Speech*, vol. 2011, no. Article ID 838790, 2011. 16 pages (acceptance rate: 38 %, IF: 1.012, 5-Year IF: 1.136 (2010))
- 133) A. Batliner, S. Steidl, B. Schuller, D. Seppi, T. Vogt, J. Wagner, L. Devillers, L. Vidrascu, V. Aharonson, L. Kessous, and N. Amir, “Whodunnit – Searching for the Most Important Feature Types Signalling Emotion-Related User States in Speech,” *Computer Speech and Language, Special Issue on Affective Speech in real-life interactions*, vol. 25, no. 1, pp. 4–28, 2011. (acceptance rate: 31 %, IF: 1.812, 5-year IF: 1.776 (2013), > 100 citations)
- 134) B. Schuller, B. Vlasenko, F. Eyben, M. Wöllmer, A. Stuhlsatz, A. Wendemuth, and G. Rigoll, “Cross-Corpus Acoustic Emotion Recognition: Variances and Strategies,” *IEEE Transactions on Affective Computing*, vol. 1, pp. 119–131, July-December 2010. (acceptance rate: 32 %, IF: 3.466, 5-year IF: 3.871 (2013), > 100 citations)
- 135) B. Schuller, C. Hage, D. Schuller, and G. Rigoll, ““Mister D.J., Cheer Me Up!”: Musical and Textual Features for Automatic Mood Classification,” *Journal of New Music Research*, vol. 39, no. 1, pp. 13–34, 2010. (IF: 0.755, 5-year IF: 0.768 (2010))
- 136) B. Schuller, “On the acoustics of emotion in speech: Desperately seeking a standard,” *Journal of the Acoustical Society of America*, vol. 127, pp. 1995–1995, March 2010. (IF: 1.644, 5-year IF: 1.899 (2010))
- 137) B. Schuller, J. Dorfner, and G. Rigoll, “Determination of Non-Prototypical Valence and Arousal in Popular Music: Features and Performances,” *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Scalable Audio-Content Analysis*, vol. 2010, no. Article ID 735854, 2010. 19 pages, (acceptance rate: 33 %, IF: 0.709 (2011))
- 138) S. Steidl, A. Batliner, D. Seppi, and B. Schuller, “On the Impact of Children’s Emotional Speech on Acoustic and Language Models,” *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Atypical Speech*, vol. 2010, no. Article ID 783954, 2010. 14 pages (acceptance rate: 33 %, IF: 0.709 (2011))
- 139) A. Batliner, D. Seppi, S. Steidl, and B. Schuller, “Segmenting into adequate units for automatic recognition of emotion-related episodes: a speech-based approach,” *Advances in Human Computer Interaction, Special Issue on Emotion-Aware Natural Interaction*, vol. 2010, no. Article ID 782802, 2010. 15 pages
- 140) F. Eyben, M. Wöllmer, A. Graves, B. Schuller, E. Douglas-Cowie, and R. Cowie, “On-line Emotion Recognition in a 3-D Activation-Valence-Time Continuum using Acoustic and Linguistic Cues,” *Journal on Multimodal User Interfaces, Special Issue on Real-Time Affect Analysis and Interpretation: Closing the Affective Loop in Virtual Agents and Robots*, vol. 3, pp. 7–12, March 2010. (IF: 0.833 (2012))
- 141) S. Can, B. Schuller, M. Kranzfelder, and H. Feussner, “Emotional factors in speech based human-machine interaction in the operating room,” *International Journal of Computer Assisted Radiology and Surgery*, vol. 5, no. Supplement 1, pp. 188–189, 2010. (acceptance rate: 75 %, IF: 1.659 (2013))
- 142) M. Wöllmer, F. Eyben, A. Graves, B. Schuller, and G. Rigoll, “Bidirectional LSTM Networks for Context-Sensitive Keyword Detection in a Cognitive Virtual Agent Framework,” *Cognitive Computation, Special Issue on Non-Linear and Non-Conventional Speech Processing*, vol. 2, no. 3, pp. 180–190, 2010. (IF: 1.1 (2013))
- 143) F. Eyben, M. Wöllmer, T. Poitschke, B. Schuller, C. Blaschke, B. Färber, and N. Nguyen-Thien, “Emotion on the Road – Necessity, Acceptance, and Feasibility of Affective Computing in the Car,” *Advances in Human Computer Interaction, Special Issue on Emotion-Aware Natural Interaction*, vol. 2010, no. Article ID 263593, 2010. 17 pages
- 144) M. Wöllmer, B. Schuller, F. Eyben, and G. Rigoll, “Combining Long Short-Term Memory and Dynamic Bayesian Networks for Incremental Emotion-Sensitive Artificial Listening,” *IEEE Journal of Selected Topics in Signal Processing, Special Issue on Speech Processing for Natural Interaction with Intelligent Environments*, vol. 4, pp. 867–881, October 2010. (IF: 2.571 (2010), > 100 citations)
- 145) B. Schuller, R. Müller, F. Eyben, J. Gast, B. Hörnler, M. Wöllmer, G. Rigoll, A. Höthker, and H. Konosu, “Being Bored? Recognising Natural Interest by Extensive Audiovisual Integration for Real-Life Application,” *Image and Vision Computing, Special Issue on Visual and Multimodal Analysis of Human Spontaneous Behavior*, vol. 27, pp. 1760–1774, November 2009. (IF: 1.474, 5-Year IF: 1.767 (2009), > 100 citations)
- 146) B. Schuller, M. Wöllmer, T. Moosmayr, and G. Rigoll, “Recognition of Noisy Speech: A Comparative Survey of Robust Model Architecture and Feature Enhancement,” *EURASIP Journal on Audio, Speech, and Music Processing*, vol. 2009, no. Article ID 942617, 2009. 17 pages (acceptance rate: 33 %, IF: 0.709 (2011))
- 147) M. Wöllmer, M. Al-Hames, F. Eyben, B. Schuller, and G. Rigoll, “A Multidimensional Dynamic Time Warping Algorithm for Efficient Multimodal Fusion of Asynchronous Data Streams,” *Neurocomputing*, vol. 73, pp. 366–380, December 2009. (IF: 1.440, 5-year IF: 1.459 (2009))
- 148) B. Schuller, F. Eyben, and G. Rigoll, “Tango or Waltz? – Putting Ballroom Dance Style into Tempo Detection,” *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Intelligent Audio, Speech, and Music Processing Applications*, vol. 2008, no. Article ID 846135, 2008. 12 pages (acceptance rate: 33 %, IF: 0.709 (2011))
- 149) R. Nieschulz, B. Schuller, M. Geiger, and R. Neuss, “Aspects of Efficient Usability Engineering,” *Information Technology, Special Issue on Usability Engineering*, vol. 44, no. 1, pp. 23–30, 2002

### C) REFEREED CONFERENCE PROCEEDINGS

#### *Contributions to Conference Proceedings (372):*

- 150) B. Schuller, “Big Data, Deep Learning – At the Edge of X-Ray

- Speaker Analysis,” in *Proceedings 19th International Conference on Speech and Computer, SPECOM 2017, Hatfield, UK, 12.-16.09.2017*, Lecture Notes in Computer Science (LNCS), Berlin/Heidelberg: Springer, September 2017. 16 pages, to appear
- 151) B. Schuller, “Reading the Author and Speaker: Towards a Holistic Approach on Automatic Assessment of What is in One’s Words,” in *Proceedings 18th International Conference on Intelligent Text Processing and Computational Linguistics, CICLing 2017, Budapest, Hungary, 17.-23.04.2017*, Lecture Notes in Computer Science (LNCS), Berlin/Heidelberg: Springer, April 2017. 12 pages, to appear
- 152) B. Schuller, S. Steidl, A. Batliner, E. Bergelson, J. Krajewski, C. Janott, A. Amatuni, M. Casillas, A. Seidl, M. Soderstrom, A. Warlaumont, G. Hidalgo, S. Schlieder, C. Heiser, W. Hohenhorst, M. Herzog, M. Schmitt, K. Qian, Y. Zhang, G. Trigeorgis, P. Tzirakis, and S. Zafeiriou, “The INTERSPEECH 2017 Computational Paralinguistics Challenge: Addressee, Cold & Snoring,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 153) S. Amiriparian, M. Gerczuk, S. Ottl, N. Cummins, M. Freitag, S. Pugachevskiy, and B. Schuller, “Snore Sound Classification Using Image-based Deep Spectrum Features,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 154) A. Baird, S. Amiriparian, N. Cummins, A. M. Alcorn, A. Batliner, S. Pugachevskiy, M. Freitag, M. Gerczuk, and B. Schuller, “Automatic Classification of Autistic Child Vocalisations: A Novel Database and Results,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 155) A. Baird, S. H. Jorgensen, E. Parada-Cabaleiro, S. Hantke, N. Cummins, and B. Schuller, “Perception of Paralinguistic Traits in Synthesized Voices,” in *Proceedings of the 11th Audio Mostly Conference on Interaction with Sound (Audio Mostly)*, (London, UK), ACM, ACM, August 2017. 5 pages, to appear
- 156) J. Böhm, F. Eyben, M. Schmitt, H. Kosch, and B. Schuller, “Seeking the SuperStar: Automatic Assessment of Perceived Singing Quality,” in *Proceedings 30th International Joint Conference on Neural Networks (IJCNN)*, (Anchorage, AK), pp. 1560–1569, IEEE, IEEE, May 2017. (acceptance rate: 67 %)
- 157) R. Brückner, M. Schmitt, M. Pantic, and B. Schuller, “Spotting Social Signals in Conversational Speech over IP: A Deep Learning Perspective,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 158) T. Chen, K. Qian, A. Mutanen, B. Schuller, P. Jrvantausta, and W. Su, “Classification of Electricity Customer Groups Towards Individualized Price Scheme Design,” in *Proceedings 49th North American Power Symposium (NAPS)*, (Morgantown, WV), IEEE, IEEE, September 2017. 5 pages, to appear
- 159) N. Cummins, B. Vlasenko, H. Sagha, and B. Schuller, “Enhancing speech-based depression detection through gender dependent vowel level formant features,” in *Proc. 16th Conference on Artificial Intelligence in Medicine (AIME)*, (Vienna, Austria), Society for Artificial Intelligence in Medicine (AIME), June 2017. 5 pages, to appear
- 160) N. Cummins, M. Schmitt, S. Amiriparian, J. Krajewski, and B. Schuller, “You sound ill, take the day off: Classification of speech affected by Upper Respiratory Tract Infection,” in *Proceedings of the 39th Annual International Conference of the IEEE Engineering in Medicine & Biology Society, EMBC 2017*, (Jeju Island, South Korea), IEEE, IEEE, July 2017. 4 pages, to appear
- 161) J. Deng, N. Cummins, M. Schmitt, K. Qian, F. Ringeval, and B. Schuller, “Speech-based Diagnosis of Autism Spectrum Condition by Generative Adversarial Network Representations,” in *Proceedings of the 7th International Digital Health Conference, DH 2017*, (London, U. K.), ACM, ACM, July 2017. 5 pages, to appear
- 162) F. Eyben, M. Unfried, G. Hagerer, and B. Schuller, “Automatic Multi-lingual Arousal Detection from Voice Applied to Real Product Testing Applications,” in *Proceedings 42nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017*, (New Orleans, LA), pp. 5155–5159, IEEE, IEEE, March 2017. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 163) M. Freitag, S. Amiriparian, N. Cummins, M. Gerczuk, and B. Schuller, “An ‘End-to-Evolution’ Hybrid Approach for Snore Sound Classification,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 164) T. Geib, M. Schmitt, and B. Schuller, “Automatic Guitar String Detection by String-Inverse Frequency Estimation,” in *Proceedings GI Workshop “Musik trifft Informatik”, held in conjunction with INFORMATIK 2017*, (Chemnitz, Germany), GI, GI, September 2017. 14 pages, to appear
- 165) J. Guo, K. Qian, B. W. Schuller, and S. Matsuoka, “GPU-based Training of Autoencoders for Bird Sound Data Processing,” in *Proceedings IEEE International Conference on Consumer Electronics Taiwan, ICCE-TW 2017*, (Taipei, Taiwan), IEEE, IEEE, June 2017. 2 pages, to appear
- 166) G. Hagerer, N. Cummins, F. Eyben, and B. Schuller, ““Did you laugh enough today?” – Deep Neural Networks for Mobile and Wearable Laughter Trackers,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 2 pages, Show & Tell demonstration, to appear (acceptance rate: 50 %)
- 167) G. Hagerer, V. Pandit, F. Eyben, and B. Schuller, “Enhancing LSTM RNN-based Speech Overlap Detection by Artificially Mixed Data,” in *Proceedings AES 56th International Conference on Semantic Audio*, (Erlangen, Germany), pp. 1–8, AES, Audio Engineering Society, June 2017. to appear
- 168) J. Han, Z. Zhang, F. Ringeval, and B. Schuller, “Prediction-based Learning from Continuous Emotion Recognition in Speech,” in *Proceedings 42nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017*, (New Orleans, LA), pp. 5005–5009, IEEE, IEEE, March 2017. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 169) J. Han, Z. Zhang, F. Ringeval, and B. Schuller, “Reconstruction-error-based Learning for Continuous Emotion Recognition in Speech,” in *Proceedings 42nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017*, (New Orleans, LA), pp. 2367–2371, IEEE, IEEE, March 2017. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 170) S. Hantke, H. Sagha, N. Cummins, and B. Schuller, “Emotional Speech of Mentally and Physically Disabled Individuals: Introducing The EmotAsS Database and First Findings,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 171) S. Hantke, Z. Zhang, and B. Schuller, “Towards Intelligent Crowdsourcing for Audio Data Annotation: Integrating Active Learning in the Real World,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 172) G. Keren, T. Kirschstein, E. Marchi, F. Ringeval, and B. Schuller, “End-to-end learning for dimensional emotion

- recognition from physiological signals,” in *Proceedings 18th IEEE International Conference on Multimedia and Expo, ICME 2017*, (Hong Kong, P.R. China), IEEE, IEEE, July 2017. 6 pages, to appear (acceptance rate: 30 %, IF\* 0.88 (2010))
- 173) A. E.-D. Mousa and B. Schuller, “Contextual Bidirectional Long Short-Term Memory Recurrent Neural Network Language Models: A Generative Approach to Sentiment Analysis,” in *Proceedings EACL 2017, 15th Conference of the European Chapter of the Association for Computational Linguistics*, (Valencia, Spain), pp. 1023–1032, ACL, ACL, April 2017. (acceptance rate: 27 % for long papers)
- 174) E. Parada-Cabaleiro, A. E. Baird, N. Cummins, and B. Schuller, “Stimulation of Psychological Listener Experiences by Semi-Automatically Composed Electroacoustic Environments,” in *Proceedings 18th IEEE International Conference on Multimedia and Expo, ICME 2017*, (Hong Kong, P.R. China), IEEE, IEEE, July 2017. 7 pages, to appear (acceptance rate: 30 %, IF\* 0.88 (2010))
- 175) E. Parada-Cabaleiro, A. Baird, A. Batliner, N. Cummins, S. Hantke, and B. Schuller, “The Perception of Emotions in Noisified Non-Sense Speech,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 176) F. Pokorny, B. Schuller, P. Marschik, R. Brückner, P. Nyström, N. Cummins, S. Bölte, C. Einspieler, and T. Falck-Ytter, “Earlier Identification of Children with Autism Spectrum Disorder: An Automatic Vocalisation-based Approach,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 177) K. Qian, C. Janott, J. Deng, C. Heiser, W. Hohenhorst, N. Cummins, and B. Schuller, “Snore Sound Recognition: On Wavelets and Classifiers from Deep Nets to Kernels,” in *Proceedings of the 39th Annual International Conference of the IEEE Engineering in Medicine & Biology Society, EMBC 2017*, (Jeju Island, South Korea), IEEE, IEEE, July 2017. 4 pages, to appear
- 178) F. Ringeval, B. Schuller, M. Valstar, S. Mozgai, N. Cummins, M. Schmitt, and M. Pantic, “AVEC 2017 – Real-life Depression, and Affect Recognition Workshop and Challenge,” in *Proceedings of the 7th International Workshop on Audio/Visual Emotion Challenge, AVEC’17, co-located with the 25th ACM International Conference on Multimedia, MM 2017* (F. Ringeval, M. Valstar, J. Gratch, B. Schuller, R. Cowie, and M. Pantic, eds.), (Mountain View, CA), ACM, ACM, October 2017. 6 pages, to appear
- 179) F. Ringeval, M. Valstar, J. Gratch, B. Schuller, R. Cowie, and M. Pantic, “Summary for AVEC 2017 – Real-life Depression, and Affect Recognition Workshop and Challenge,” in *Proceedings of the 25th ACM International Conference on Multimedia, MM 2017*, (Mountain View, CA), ACM, ACM, October 2017. 2 pages, to appear
- 180) O. Rudovic, J. Lee, L. Mascarell-Maricic, B. W. Schuller, and R. Picard, “Engagement in Autism Therapy with Social Robots: a Cross-cultural Study,” in *Proceedings International Conference on Robotics and Automation, ICRA*, (Singapore, Singapore), IEEE, IEEE, May–June 2017. 1 page, to appear
- 181) R. Sabathé, E. Coutinho, and B. Schuller, “Deep Recurrent Music Writer: Memory-enhanced Variational Autoencoder-based Musical Score Composition and an Objective Measure,” in *Proceedings 30th International Joint Conference on Neural Networks (IJCNN)*, (Anchorage, AK), pp. 3467–3474, IEEE, IEEE, May 2017. (acceptance rate: 67 %)
- 182) M. Schmitt and B. Schuller, “Recognising Guitar Effects – Which Acoustic Features Really Matter?,” in *Proceedings GI Workshop “Musik trifft Informatik”*, held in conjunction with *INFORMATIK 2017*, (Chemnitz, Germany), GI, GI, September 2017. 15 pages, to appear
- 183) B. Vlasenko, H. Sagha, N. Cummins, and B. Schuller, “Implementing gender-dependent vowel-level analysis for boosting speech-based depression recognition,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 184) R. Walecki, O. Rudovic, V. Pavlovic, B. Schuller, and M. Pantic, “Deep Structured Ordinal Regression for Facial Action Unit Intensity Estimation,” in *Proceedings IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2017*, (Honolulu, HI), IEEE, IEEE, July 2017. (acceptance rate: 20 %, IF\* 5.97 (2010))
- 185) Y. Zhang, F. Weninger, and B. Schuller, “Cross-Domain Classification of Drowsiness in Speech: The Case of Alcohol Intoxication and Sleep Deprivation,” in *Proceedings INTERSPEECH 2017, 18th Annual Conference of the International Speech Communication Association*, (Stockholm, Sweden), ISCA, ISCA, August 2017. 5 pages, to appear (acceptance rate: 50 %)
- 186) Y. Zhang, Y. Liu, F. Weninger, and B. Schuller, “Multi-Task Deep Neural Network with Shared Hidden Layers: Breaking Down the Wall between Emotion Representations,” in *Proceedings 42nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2017*, (New Orleans, LA), pp. 4990–4994, IEEE, IEEE, March 2017. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 187) Z. Zhang, F. Weninger, M. Wöllmer, J. Han, and B. Schuller, “Towards Intoxicated Speech Recognition,” in *Proceedings 30th International Joint Conference on Neural Networks (IJCNN)*, (Anchorage, AK), pp. 1555–1559, IEEE, IEEE, May 2017. (acceptance rate: 67 %)
- 188) B. Schuller, “7 Essential Principles to Make Multimodal Sentiment Analysis Work in the Wild,” in *Proceedings of the 4th Workshop on Sentiment Analysis where AI meets Psychology (SAAIP 2016)*, satellite of the *25th International Joint Conference on Artificial Intelligence, IJCAI 2016* (S. Bandyopadhyay, D. Das, E. Cambria, and B. G. Patra, eds.), vol. 1619, (New York City, NY), p. 1, IJCAI/AAAI, CEUR, July 2016. invited contribution
- 189) B. Schuller, J.-G. Ganascia, and L. Devillers, “Multimodal Sentiment Analysis in the Wild: Ethical considerations on Data Collection, Annotation, and Exploitation,” in *Proceedings of the 1st International Workshop on ETHics In Corpus Collection, Annotation and Application (ETHI-CA<sup>2</sup> 2016)*, satellite of the *10th Language Resources and Evaluation Conference (LREC 2016)* (L. Devillers, B. Schuller, E. Mower Provost, P. Robinson, J. Mariani, and A. Delaborde, eds.), (Portoroz, Slovenia), pp. 29–34, ELRA, ELRA, May 2016
- 190) B. Schuller and M. McTear, “Sociocognitive Language Processing - Emphasising the Soft Factors,” in *Proceedings of the Seventh International Workshop on Spoken Dialogue Systems (IWSDS)*, (Saariselkä, Finland), January 2016. 6 pages
- 191) B. Schuller, S. Steidl, A. Batliner, J. Hirschberg, J. K. Burgoon, A. Baird, A. Elkins, Y. Zhang, E. Coutinho, and K. Evanini, “The INTERSPEECH 2016 Computational Paralinguistics Challenge: Deception, Sincerity & Native Language,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2001–2005, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 192) I. Abdić, L. Fridman, D. McDuff, E. Marchi, B. Reimer, and B. Schuller, “Driver Frustration Detection From Audio and Video,” in *Proceedings of the 25th International Joint Conference on Artificial Intelligence, IJCAI 2016*, (New York City, NY), pp. 1354–1360, IJCAI/AAAI, July 2016. (acceptance rate: 25 %)
- 193) I. Abdić, L. Fridman, D. E. Brown, W. Angell, B. Reimer, E. Marchi, and B. Schuller, “Detecting Road Surface Wetness from Audio: A Deep Learning Approach,” in *Proceedings 23rd*



- International Conference on Pattern Recognition (ICPR 2016)*, (Cancun, Mexico), IAPR, IAPR, December 2016. 6 pages
- 194) I. Abdić, L. Fridman, D. McDuff, E. Marchi, B. Reimer, and B. Schuller, “Driver Frustration Detection From Audio and Video (Extended Abstract),” in *KI 2016: Advances in Artificial Intelligence 39th Annual German Conference on AI* (G. Friedrich, M. Helmert, and F. Wotawa, eds.), vol. LNCS Volume 9904/2016, (Klagenfurt, Austria), pp. 237–243, GfI / ÖGAI, Springer, September 2016. (acceptance rate: 45 %)
  - 195) S. Amiriparian, J. Pohjalainen, E. Marchi, S. Pugachevskiy, and B. Schuller, “Is deception emotional? An emotion-driven predictive approach,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2011–2015, ISCA, ISCA, September 2016. nominated for best student paper award (12 nominations for 3 awards, acceptance rate overall conference: 50 %)
  - 196) E. Cambria, S. Poria, R. Bajpai, and B. Schuller, “SenticNet4: A Semantic Resource for Sentiment Analysis Based on Conceptual Primitives,” in *Proceedings of the 26th International Conference on Computational Linguistics, COLING*, (Osaka, Japan), pp. 2666–2677, ICCL, ANLP, December 2016
  - 197) E. Coutinho, F. Hönl, Y. Zhang, S. Hantke, A. Batliner, E. Nöth, and B. Schuller, “Assessing the Prosody of Non-Native Speakers of English: Measures and Feature Sets,” in *Proceedings 10th Language Resources and Evaluation Conference (LREC 2016)*, (Portoroz, Slovenia), pp. 1328–1332, ELRA, ELRA, May 2016
  - 198) J. Deng, N. Cummins, J. Han, X. Xu, Z. Ren, V. Pandit, Z. Zhang, and B. Schuller, “The University of Passau Open Emotion Recognition System for the Multimodal Emotion Challenge,” in *Proceedings of the 7th Chinese Conference on Pattern Recognition, CCPR*, (Chengdu, P.R. China), pp. 652–666, Springer, November 2016
  - 199) B. Dong, Z. Zhang, and B. Schuller, “Empirical Mode Decomposition: A Data-Enrichment Perspective on Speech Emotion Recognition,” in *Proceedings of the 6th International Workshop on Emotion and Sentiment Analysis (ESA 2016), satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)* (J. Sánchez-Rada and B. Schuller, eds.), (Portoroz, Slovenia), pp. 71–75, ELRA, ELRA, May 2016. (acceptance rate: 74 %)
  - 200) J. Guo, K. Qian, H. Xu, C. Janott, B. W. Schuller, and S. Matsuoka, “GPU-Based Fast Signal Processing for Large Amounts of Snore Sound Data,” in *Proceedings IEEE 5th Global Conference on Consumer Electronics, GCCE 2016*, (Kyoto, Japan), pp. 523–524, IEEE, IEEE, October 2016. (acceptance rate: 66 %)
  - 201) S. Hantke, A. Batliner, and B. Schuller, “Ethics for Crowd-sourced Corpus Collection, Data Annotation and its Application in the Web-based Game iHEARu-PLAY,” in *Proceedings of the 1st International Workshop on ETHics In Corpus Collection, Annotation and Application (ETHI-CA<sup>2</sup> 2016), satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)* (L. Devillers, B. Schuller, E. Mower Provost, P. Robinson, J. Mariani, and A. Delaborde, eds.), (Portoroz, Slovenia), pp. 54–59, ELRA, ELRA, May 2016. (oral acceptance rate: 45 %)
  - 202) S. Hantke, E. Marchi, and B. Schuller, “Introducing the Weighted Trustability Evaluator for Crowdsourcing Exemplified by Speaker Likability Classification,” in *Proceedings 10th Language Resources and Evaluation Conference (LREC 2016)*, (Portoroz, Slovenia), pp. 2156–2161, ELRA, ELRA, May 2016
  - 203) G. Keren, J. Deng, J. Pohjalainen, and B. Schuller, “Convolutional Neural Networks and Data Augmentation for Classifying Speakers’ Native Language,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2393–2397, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
  - 204) G. Keren and B. Schuller, “Convolutional RNN: an Enhanced Model for Extracting Features from Sequential Data,” in *Proceedings 2016 International Joint Conference on Neural Networks (IJCNN) as part of the IEEE World Congress on Computational Intelligence (IEEE WCCI)*, (Vancouver, Canada), pp. 3412–3419, IEEE, IEEE, July 2016
  - 205) G. Keren, S. Sabato, and B. Schuller, “Tunable Sensitivity to Large Errors in Neural Network Training,” in *Proceedings of the 31st AAAI Conference on Artificial Intelligence, AAAI 17*, (San Francisco, CA), pp. 2087–2093, AAAI, February 2017. (acceptance rate: 25 %)
  - 206) Y. Li, J. Tao, B. Schuller, S. Shan, D. Jiang, and J. Jia, “MEC 2016: The Multimodal Emotion Recognition Challenge of CCPR 2016,” in *Proceedings of the 7th Chinese Conference on Pattern Recognition, CCPR*, (Chengdu, P.R. China), pp. 667–678, Springer, November 2016
  - 207) E. Marchi, D. Tonelli, X. Xu, F. Ringeval, J. Deng, S. Squartini, and B. Schuller, “Pairwise Decomposition with Deep Neural Networks and Multiscale Kernel Subspace Learning for Acoustic Scene Classification,” in *Proceedings of the Detection and Classification of Acoustic Scenes and Events 2016 IEEE AASP Challenge Workshop (DCASE 2016), satellite to EUSIPCO 2016*, (Budapest, Hungary), pp. 1–5, EUSIPCO, IEEE, September 2016
  - 208) E. Marchi, F. Eyben, G. Hagerer, and B. W. Schuller, “Real-time Tracking of Speakers’ Emotions, States, and Traits on Mobile Platforms,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 1182–1183, ISCA, ISCA, September 2016. Show & Tell demonstration (acceptance rate: 50 %)
  - 209) E. Marchi, D. Tonelli, X. Xu, F. Ringeval, J. Deng, S. Squartini, and B. Schuller, “The UP System for the 2016 DCASE Challenge using Deep Recurrent Neural Network and Multiscale Kernel Subspace Learning,” in *Proceedings of the Detection and Classification of Acoustic Scenes and Events 2016 IEEE AASP Challenge Workshop (DCASE 2016), satellite to EUSIPCO 2016*, (Budapest, Hungary), EUSIPCO, IEEE, September 2016. 1 page
  - 210) A. E.-D. Mousa and B. Schuller, “Deep Bidirectional Long Short-Term Memory Recurrent Neural Networks for Grapheme-to-Phoneme Conversion utilizing Complex Many-to-Many Alignments,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2836–2840, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
  - 211) F. B. Pokorny, P. B. Marschik, C. Einspieler, and B. W. Schuller, “Does She Speak RTT? Towards an Earlier Identification of Rett Syndrome Through Intelligent Pre-linguistic Vocalisation Analysis,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 1953–1957, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
  - 212) F. B. Pokorny, R. Peharz, W. Roth, M. Zohrer, F. Pernkopf, P. B. Marschik, and B. W. Schuller, “Manual Versus Automated: The Challenging Routine of Infant Vocalisation Segmentation in Home Videos to Study Neuro(mal)development,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2997–3001, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
  - 213) K. Qian, C. Janott, Z. Zhang, C. Heiser, and B. Schuller, “Wavelet Features for Classification of VOTE Snore Sounds,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 221–225, IEEE, IEEE, March 2016. (acceptance rate: 45 %, IF\* 1.16 (2010))
  - 214) M. Pantic, V. Evers, M. Deisenroth, L. Merino, and B. Schuller, “Social and Affective Robotics Tutorial,” in *Proceedings of the*

- 24th ACM International Conference on Multimedia, MM 2016, (Amsterdam, The Netherlands), pp. 1477–1478, ACM, ACM, October 2016. (acceptance rate short paper: 30%, IF\* 2.45 (2010))
- 215) J. Pohjalainen, F. Ringeval, Z. Zhang, and B. Schuller, “Spectral and Cepstral Audio Noise Reduction Techniques in Speech Emotion Recognition,” in *Proceedings of the 24th ACM International Conference on Multimedia, MM 2016*, (Amsterdam, The Netherlands), pp. 670–674, ACM, ACM, October 2016. (acceptance rate short paper: 30%, IF\* 2.45 (2010))
- 216) F. Ringeval, E. Marchi, C. Grossard, J. Xavier, M. Chetouani, D. Cohen, and B. Schuller, “Automatic Analysis of Typical and Atypical Encoding of Spontaneous Emotion in the Voice of Children,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 1210–1214, ISCA, ISCA, September 2016. (acceptance rate: 50%)
- 217) A. Rynkiewicz, B. Schuller, E. Marchi, S. Piana, A. Camurri, A. Lassalle, and S. Baron-Cohen, “An Investigation of the Female Camouflage Effect’ in Autism Using a New Computerized Test Showing Sex/Gender Differences during ADOS-2,” in *Proceedings 15th Annual International Meeting For Autism Research (IMFAR 2016)*, (Baltimore, MD), International Society for Autism Research (INSAR), INSAR, May 2016. 1 page
- 218) H. Sagha, J. Deng, M. Gavryukova, J. Han, and B. Schuller, “Cross Lingual Speech Emotion Recognition using Canonical Correlation Analysis on Principal Component Subspace,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 5800–5804, IEEE, IEEE, March 2016. (acceptance rate: 45%, IF\* 1.16 (2010))
- 219) H. Sagha, P. Matejka, M. Gavryukova, F. Povolny, E. Marchi, and B. Schuller, “Enhancing multilingual recognition of emotion in speech by language identification,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2949–2953, ISCA, ISCA, September 2016. (acceptance rate: 50%)
- 220) J. Sánchez-Rada, B. Schuller, V. Patti, P. Buitelaar, G. Vulcu, F. Burkhardt, C. Clavel, M. Petychakis, and C. A. Iglesias, “Towards a Common Linked Data Model for Sentiment and Emotion Analysis,” in *Proceedings of the 6th International Workshop on Emotion and Sentiment Analysis (ESA 2016), satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)* (J. Sánchez-Rada and B. Schuller, eds.), (Portoroz, Slovenia), pp. 48–54, ELRA, ELRA, May 2016. (acceptance rate: 42% for long papers)
- 221) M. Schmitt, C. Janott, V. Pandit, K. Qian, C. Heiser, W. Hemmert, and B. Schuller, “A Bag-of-Audio-Words Approach for Snore Sounds’ Excitation Localisation,” in *Proceedings 14th ITG Conference on Speech Communication*, vol. 267 of *ITG-Fachbericht*, (Paderborn, Germany), pp. 230–234, ITG/VDE, IEEE/VDE, October 2016. nominated for best student paper award (4 nominations for 2 awards)
- 222) M. Schmitt, F. Ringeval, and B. Schuller, “At the Border of Acoustics and Linguistics: Bag-of-Audio-Words for the Recognition of Emotions in Speech,” in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 495–499, ISCA, ISCA, September 2016. (acceptance rate: 50%)
- 223) M. Schmitt, E. Marchi, F. Ringeval, and B. Schuller, “Towards Cross-lingual Automatic Diagnosis of Autism Spectrum Condition in Children’s Voices,” in *Proceedings 14th ITG Conference on Speech Communication*, vol. 267 of *ITG-Fachbericht*, (Paderborn, Germany), pp. 264–268, ITG/VDE, IEEE/VDE, October 2016
- 224) M. Telespan and B. Schuller, “Audio Watermarking Based on Empirical Mode Decomposition and Beat Detection,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 2124–2128, IEEE, IEEE, March 2016. (acceptance rate: 45%, IF\* 1.16 (2010))
- 225) G. Trigeorgis, F. Ringeval, R. Brückner, E. Marchi, M. Nicolaou, B. Schuller, and S. Zafeiriou, “Adieu Features? End-to-End Speech Emotion Recognition using a Deep Convolutional Recurrent Network,” in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 5200–5204, IEEE, IEEE, March 2016. winner of the IEEE Spoken Language Processing Student Travel Grant 2016 (acceptance rate: 45%, IF\* 1.16 (2010))
- 226) G. Trigeorgis, M. A. Nicolaou, S. Zafeiriou, and B. Schuller, “Deep Canonical Time Warping,” in *Proceedings IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2016*, (Las Vegas, NV), pp. 5110–5118, IEEE, IEEE, June 2016. (acceptance rate: ~25%, IF\* 5.97 (2010))
- 227) M. Valstar, J. Gratch, B. Schuller, F. Ringeval, D. Lalanne, M. Torres Torres, S. Scherer, G. Stratou, R. Cowie, and M. Pantic, “AVEC 2016: Depression, Mood, and Emotion Recognition Workshop and Challenge,” in *Proceedings of the 6th International Workshop on Audio/Visual Emotion Challenge, AVEC’16, co-located with the 24th ACM International Conference on Multimedia, MM 2016* (M. Valstar, J. Gratch, B. Schuller, F. Ringeval, R. Cowie, and M. Pantic, eds.), (Amsterdam, The Netherlands), pp. 3–10, ACM, ACM, October 2016
- 228) M. Valstar, C. Pelachaud, D. Heylen, A. Cafaro, S. Dermouche, A. Ghitulescu, E. André, T. Bauer, J. Wagner, L. Durieu, M. Aylett, P. Blaise, E. Coutinho, B. Schuller, Y. Zhang, M. Theune, and J. van Waterschoot, “Ask Alice; an Artificial Retrieval of Information Agent,” in *Proceedings of the 18th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, C. Busso, and C. Pelachaud, eds.), (Tokyo, Japan), pp. 419–420, ACM, ACM, November 2016. (IF\* 1.77 (2010))
- 229) M. Valstar, J. Gratch, B. Schuller, F. Ringeval, R. Cowie, and M. Pantic, “Summary for AVEC 2016: Depression, Mood, and Emotion Recognition Workshop and Challenge,” in *Proceedings of the 24th ACM International Conference on Multimedia, MM 2016*, (Amsterdam, The Netherlands), pp. 1483–1484, ACM, ACM, October 2016. (acceptance rate short paper: 30%, IF\* 2.45 (2010))
- 230) B. Vlasenko, B. Schuller, and A. Wendemuth, “Tendencies Regarding the Effect of Emotional Intensity in Inter Corpus Phoneme-Level Speech Emotion Modelling,” in *Proceedings 2016 IEEE International Workshop on Machine Learning for Signal Processing, MLSP*, (Salerno, Italy), pp. 1–6, IEEE, IEEE, September 2016
- 231) R. Wegener, C. Kohlschein, S. Jeschke, and B. Schuller, “Automatic Detection of Textual Triggers of Reader Emotion in Short Stories,” in *Proceedings of the 6th International Workshop on Emotion and Sentiment Analysis (ESA 2016), satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)* (J. Sánchez-Rada and B. Schuller, eds.), (Portoroz, Slovenia), pp. 80–84, ELRA, ELRA, May 2016. (acceptance rate: 74%)
- 232) F. Weninger, F. Ringeval, E. Marchi, and B. Schuller, “Discriminatively trained recurrent neural networks for continuous dimensional emotion recognition from audio,” in *Proceedings of the 25th International Joint Conference on Artificial Intelligence, IJCAI 2016*, (New York City, NY), pp. 2196–2202, IJCAI/AAAI, July 2016. (acceptance rate: 25%)
- 233) F. Weninger, F. Ringeval, E. Marchi, and B. Schuller, “Discriminatively Trained Recurrent Neural Networks for Continuous Dimensional Emotion Recognition from Audio (Extended Abstract),” in *KI 2016: Advances in Artificial Intelligence 39th Annual German Conference on AI* (G. Friedrich, M. Helmert, and F. Wotawa, eds.), vol. LNCS Volume 9904/2016, (Klagenfurt, Austria), pp. 310–315, GfI / ÖGAI, Springer, September 2016. (acceptance rate: 45%)

- 234) X. Xu, J. Deng, M. Gavryukova, Z. Zhang, L. Zhao, and B. Schuller, "Multiscale Kernel Locally Penalised Discriminant Analysis Exemplified by Emotion Recognition in Speech," in *Proceedings of the 18th ACM International Conference on Multimodal Interaction, ICMI (L.-P. Morency, C. Busso, and C. Pelachaud, eds.)*, (Tokyo, Japan), pp. 233–237, ACM, ACM, November 2016. (IF\* 1.77 (2010))
- 235) Z. Zhang, F. Ringeval, B. Dong, E. Coutinho, E. Marchi, and B. Schuller, "Enhanced Semi-Supervised Learning for Multimodal Emotion Recognition," in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 5185–5189, IEEE, IEEE, March 2016. (acceptance rate: 45 %, IF\* 1.16 (2010))
- 236) Z. Zhang, F. Ringeval, J. Han, J. Deng, E. Marchi, and B. Schuller, "Facing Realism in Spontaneous Emotion Recognition from Speech: Feature Enhancement by Autoencoder with LSTM Neural Networks," in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 3593–3597, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 237) Y. Zhang, F. Weninger, A. Batliner, F. Hönl, and B. Schuller, "Language Proficiency Assessment of English L2 Speakers Based on Joint Analysis of Prosody and Native Language," in *Proceedings of the 18th ACM International Conference on Multimodal Interaction, ICMI (L.-P. Morency, C. Busso, and C. Pelachaud, eds.)*, (Tokyo, Japan), pp. 274–278, ACM, ACM, November 2016. (IF\* 1.77 (2010))
- 238) Y. Zhang, F. Weninger, Z. Ren, and B. Schuller, "Sincerity and Deception in Speech: Two Sides of the Same Coin? A Transfer- and Multi-Task Learning Perspective," in *Proceedings INTERSPEECH 2016, 17th Annual Conference of the International Speech Communication Association*, (San Francisco, CA), pp. 2041–2045, ISCA, ISCA, September 2016. (acceptance rate: 50 %)
- 239) Y. Zhang, Y. Zhou, J. Shen, and B. Schuller, "Semi-autonomous Data Enrichment Based on Cross-task Labelling of Missing Targets for Holistic Speech Analysis," in *Proceedings 41st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2016*, (Shanghai, P.R. China), pp. 6090–6094, IEEE, IEEE, March 2016. (acceptance rate: 45 %, IF\* 1.16 (2010))
- 240) Y. Zhang and B. Schuller, "Towards Human-Like Holistic Machine Perception of Speaker States and Traits," in *Proceedings of the Human-Like Computing Machine Intelligence Workshop, MI20-HLC*, (Windsor, U.K.), Springer, October 2016. 3 pages
- 241) J. Deng, X. Xu, Z. Zhang, S. Frühholz, D. Grandjean, and B. Schuller, "Fisher Kernels on Phase-based Features for Speech Emotion Recognition," in *Proceedings of the Seventh International Workshop on Spoken Dialogue Systems (IWSDS)*, (Saariselkä, Finland), Springer, January 2016. 6 pages
- 242) B. Schuller, B. Vlasenko, F. Eyben, M. Wöllmer, A. Stuhlsatz, A. Wendemuth, and G. Rigoll, "Cross-Corpus Acoustic Emotion Recognition: Variances and Strategies (Extended Abstract)," in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi'an, P.R. China), pp. 470–476, AAAC, IEEE, September 2015. invited for the Special Session on Most Influential Articles in IEEE Transactions on Affective Computing
- 243) B. Schuller, E. Marchi, S. Baron-Cohen, A. Lassalle, H. O'Reilly, D. Pigat, P. Robinson, I. Davies, T. Baltrusaitis, M. Mahmoud, O. Golan, S. Friedenson, S. Tal, S. Newman, N. Meir, R. Shillo, A. Camurri, S. Piana, A. Staglianò, S. Bölte, D. Lundqvist, S. Berggren, A. Baranger, N. Sullings, M. Sezgin, N. Alyuz, A. Rynkiewicz, K. Ptaszek, and K. Ligmann, "Recent developments and results of ASC-Inclusion: An Integrated Internet-Based Environment for Social Inclusion of Children with Autism Spectrum Conditions," in *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2015) as part of the 20th ACM International Conference on Intelligent User Interfaces, IUI 2015* (L. Paletta, B. Schuller, P. Robinson, and N. Sabourat, eds.), (Atlanta, GA), ACM, ACM, March 2015. 9 pages, best paper award (long talk acceptance rate: 36 %)
- 244) B. Schuller, "Speech Analysis in the Big Data Era," in *Text, Speech, and Dialogue – Proceedings of the 18th International Conference on Text, Speech and Dialogue, TSD 2015*, vol. 9302 of *Lecture Notes in Computer Science (LNCS)*, pp. 3–11, Springer, September 2015. satellite event of INTERSPEECH 2015, invited contribution (acceptance rate: 50 %)
- 245) B. Schuller, S. Steidl, A. Batliner, S. Hantke, F. Hönl, J. R. Orozco-Arroyave, E. Nöth, Y. Zhang, and F. Weninger, "The INTERSPEECH 2015 Computational Paralinguistics Challenge: Degree of Nativeness, Parkinson's & Eating Condition," in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 478–482, ISCA, ISCA, September 2015. (acceptance rate: 51 %)
- 246) L. Azaïs, A. Payan, T. Sun, G. Vidal, T. Zhang, E. Coutinho, F. Eyben, and B. Schuller, "Does my Speech Rock? Automatic Assessment of Public Speaking Skills," in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 2519–2523, ISCA, ISCA, September 2015. (acceptance rate: 51 %)
- 247) E. Coutinho, G. Trigeorgis, S. Zafeiriou, and B. Schuller, "Automatically Estimating Emotion in Music with Deep Long-Short Term Memory Recurrent Neural Networks," in *Proceedings of the MediaEval 2015 Multimedia Benchmark Workshop, satellite of Interspeech 2015* (M. Larson, B. Ionescu, M. Sjberg, X. Anguera, J. Poignant, M. Riegler, M. Eskevich, C. Hauff, R. Sutcliffe, G. J. Jones, Y.-H. Yang, M. Soleymani, and S. Papadopoulos, eds.), vol. 1436, (Wurzen, Germany), CEUR, September 2015. 3 pages
- 248) J. Deng, Z. Zhang, F. Eyben, and B. Schuller, "Autoencoder-based Unsupervised Domain Adaptation for Speech Emotion Recognition," in *Proceedings 40th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2015*, (Brisbane, Australia), pp. 1068–1072, IEEE, IEEE, April 2015. (IF\* 1.16 (2010))
- 249) F. Eyben, B. Huber, E. Marchi, D. Schuller, and B. Schuller, "Robust Real-time Affect Analysis and Speaker Characterisation on Mobile Devices," in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi'an, P.R. China), pp. 778–780, AAAC, IEEE, September 2015. (acceptance rate: 55 %)
- 250) S. Ferraru, D. Schuller, and B. Schuller, "Cross-Language Acoustic Emotion Recognition: An Overview and Some Tendencies," in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi'an, P.R. China), pp. 125–131, AAAC, IEEE, September 2015. (acceptance rate oral: 28 %)
- 251) K. Gentsch, E. Coutinho, F. Eyben, B. Schuller, and K. R. Scherer, "Classifying Emotion-Antecedent Appraisal in Brain Activity using Machine Learning Methods," in *Proceedings of the International Society for Research on Emotions Conference (ISRE 2015)*, (Geneva, Switzerland), ISRE, ISRE, July 2015. 1 page
- 252) S. Hantke, F. Eyben, T. Appel, and B. Schuller, "iHEARPLAY: Introducing a game for crowdsourced data collection for affective computing," in *Proc. 1st International Workshop on Automatic Sentiment Analysis in the Wild (WASA 2015) held in conjunction with the 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi'an, P.R. China), pp. 891–897, AAAC, IEEE, September 2015. (acceptance rate: 60 %)
- 253) E. Marchi, F. Vesperi, F. Eyben, S. Squartini, and B. Schuller, "A Novel Approach for Automatic Acoustic Novelty Detection

- Using a Denoising Autoencoder with Bidirectional LSTM Neural Networks,” in *Proceedings 40th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2015*, (Brisbane, Australia), pp. 1996–2000, IEEE, IEEE, April 2015. (IF\* 1.16 (2010))
- 254) E. Marchi, F. Vesperini, F. Weninger, F. Eyben, S. Squartini, and B. Schuller, “Non-Linear Prediction with LSTM Recurrent Neural Networks for Acoustic Novelty Detection,” in *Proceedings 2015 International Joint Conference on Neural Networks (IJCNN)*, (Killarney, Ireland), IEEE, IEEE, July 2015
- 255) E. Marchi, B. Schuller, S. Baron-Cohen, O. Golan, S. Bölte, P. Arora, and R. Häb-Umbach, “Typicality and Emotion in the Voice of Children with Autism Spectrum Condition: Evidence Across Three Languages,” in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 115–119, ISCA, ISCA, September 2015. (acceptance rate: 51%)
- 256) E. Marchi, B. Schuller, S. Baron-Cohen, A. Lassalle, H. O’Reilly, D. Pigat, O. Golan, S. Friedenson, S. Tal, S. Bölte, S. Berggren, D. Lundqvist, and M. S. Elfström, “Voice Emotion Games: Language and Emotion in the Voice of Children with Autism Spectrum Condition,” in *Proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2015) as part of the 20th ACM International Conference on Intelligent User Interfaces, IUI 2015* (L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds.), (Atlanta, GA), ACM, ACM, March 2015. 9 pages (long talk acceptance rate: 36%)
- 257) A. Metallinou, M. Wöllmer, A. Katsamanis, F. Eyben, B. Schuller, and S. Narayanan, “Context-Sensitive Learning for Enhanced Audiovisual Emotion Classification (Extended Abstract),” in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 463–469, AAAC, IEEE, September 2015. invited for the Special Session on Most Influential Articles in IEEE Transactions on Affective Computing
- 258) S. Newman, O. Golan, S. Baron-Cohen, S. Bölte, A. Rynkiewicz, A. Baranger, B. Schuller, P. Robinson, A. Camurri, M. Sezgin, N. Meir-Goren, S. Tal, S. Fridenson-Hayo, A. Lassalle, S. Berggren, N. Sullings, D. Pigat, K. Ptaszek, E. Marchi, S. Piana, and T. Baltrusaitis, “ASC-Inclusion - a Virtual World Teaching Children with ASC about Emotions,” in *Proceedings 14th Annual International Meeting For Autism Research (IMFAR 2015)*, (Salt Lake City, UT), International Society for Autism Research (INSAR), INSAR, May 2015. 1 page
- 259) P. Pohl and B. Schuller, “Digital Analysis of Vocal Operants,” in *Proceedings 2015 Meeting of the Experimental Analysis of Behaviour Group (EABG)*, (London, UK), EABG, EABG, March 2015. 1 page, to appear
- 260) F. Pokorny, F. Graf, F. Pernkopf, and B. Schuller, “Detection of Negative Emotions in Speech Signals Using Bags-of-Audio-Words,” in *Proc. 1st International Workshop on Automatic Sentiment Analysis in the Wild (WASA 2015) held in conjunction with the 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 879–884, AAAC, IEEE, September 2015. (acceptance rate: 60%)
- 261) K. Qian, Z. Zhang, F. Ringeval, and B. Schuller, “Bird Sounds Classification by Large Scale Acoustic Features and Extreme Learning Machine,” in *Proceedings 3rd IEEE Global Conference on Signal and Information Processing, GlobalSIP, Machine Learning Applications in Speech Processing Symposium*, (Orlando, FL), pp. 1317–1321, IEEE, IEEE, December 2015. (acceptance rate: 45%)
- 262) F. Ringeval, E. Marchi, M. Méhu, K. Scherer, and B. Schuller, “Face Reading from Speech - Predicting Facial Action Units from Audio Cues,” in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 1977–1981, ISCA, ISCA, September 2015. (acceptance rate: 51%)
- 263) F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, “AVEC 2015: The 5th International Audio/Visual Emotion Challenge and Workshop,” in *Proceedings of the 23rd ACM International Conference on Multimedia, MM 2015*, (Brisbane, Australia), pp. 1335–1336, ACM, ACM, October 2015. (acceptance rate: 25%)
- 264) F. Ringeval, B. Schuller, M. Valstar, S. Jaiswal, E. Marchi, D. Lalanne, R. Cowie, and M. Pantic, “AV+EC 2015 - The First Affect Recognition Challenge Bridging Across Audio, Video, and Physiological Data,” in *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, AVEC’15, co-located with the 23rd ACM International Conference on Multimedia, MM 2015* (F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds.), (Brisbane, Australia), pp. 3–8, ACM, ACM, October 2015
- 265) N. Sabouret, B. Schuller, L. Paletta, E. Marchi, H. Jones, and A. B. Youssef, “Intelligent User Interfaces in Digital Games for Empowerment and Inclusion,” in *Proceedings of the 12th International Conference on Advancement in Computer Entertainment Technology, ACE 2015*, (Iskandar, Malaysia), ACM, ACM, November 2015. 8 pages, Gold Paper Award
- 266) H. Sagma, E. Coutinho, and B. Schuller, “The importance of individual differences in the prediction of emotions induced by music,” in *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, AVEC’15, co-located with the 23rd ACM International Conference on Multimedia, MM 2015* (F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds.), (Brisbane, Australia), pp. 57–63, ACM, ACM, October 2015. (acceptance rate: 60%)
- 267) M. Schröder, E. Bevacqua, R. Cowie, F. Eyben, H. Gunes, D. Heylen, M. ter Maat, G. McKeown, S. Pammi, M. Pantic, C. Pelachaud, B. Schuller, E. de Sevin, M. Valstar, and M. Wöllmer, “Building Autonomous Sensitive Artificial Listeners (Extended Abstract),” in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi’an, P.R. China), pp. 456–462, AAAC, IEEE, September 2015. invited for the Special Session on Most Influential Articles in IEEE Transactions on Affective Computing
- 268) G. Trigeorgis, E. Coutinho, F. Ringeval, E. Marchi, S. Zafeiriou, and B. Schuller, “The ICL-TUM-PASSAU approach for the MediaEval 2015 “Affective Impact of Movies” Task,” in *Proceedings of the MediaEval 2015 Multimedia Benchmark Workshop, satellite of Interspeech 2015* (M. Larson, B. Ionescu, M. Sjöberg, X. Anguera, J. Poignant, M. Riegler, M. Eskevich, C. Hauff, R. Sutcliffe, G. J. Jones, Y.-H. Yang, M. Soleymani, and S. Papadopoulos, eds.), vol. 1436, (Wurzen, Germany), CEUR, September 2015. 3 pages, best result
- 269) G. Trigeorgis, M. A. Nicolaou, S. Zafeiriou, and B. Schuller, “Towards Deep Alignment of Multimodal Data,” in *Proceedings 2015 Multimodal Machine Learning Workshop held in conjunction with NIPS 2015 (MMML@NIPS)*, (Montral, QC), NIPS, NIPS, December 2015. 4 pages
- 270) F. Weninger, H. Erdogan, S. Watanabe, E. Vincent, J. Le Roux, J. R. Hershey, and B. Schuller, “Speech Enhancement with LSTM Recurrent Neural Networks and its Application to Noise-Robust ASR,” in *Latent Variable Analysis and Signal Separation – Proceedings 12th International Conference on Latent Variable Analysis and Signal Separation, LVA/ICA 2015* (E. Vincent, A. Yeredor, Z. Koldovsk, and P. Tichavsk, eds.), vol. 9237 of *Lecture Notes in Computer Science*, (Liberec, Czech Republic), pp. 91–99, Springer, August 2015
- 271) X. Xu, J. Deng, W. Zheng, L. Zhao, and B. Schuller, “Dimensionality Reduction for Speech Emotion Features by Multiscale Kernels,” in *Proceedings INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association*, (Dresden, Germany), pp. 1532–1536, ISCA, ISCA, September 2015. (acceptance rate: 51%)

- 272) Y. Zhang, E. Coutinho, Z. Zhang, C. Quan, and B. Schuller, "Agreement-based Dynamic Active Learning with Least and Medium Certainty Query Strategy," in *Proceedings Advances in Active Learning : Bridging Theory and Practice Workshop held in conjunction with the 32nd International Conference on Machine Learning, ICML 2015* (A. Krishnamurthy, A. Ramdas, N. Balcan, and A. Singh, eds.), (Lille, France), International Machine Learning Society, IMLS, July 2015. 5 pages
- 273) Y. Zhang, E. Coutinho, Z. Zhang, M. Adam, and B. Schuller, "On Rater Reliability and Agreement Based Dynamic Active Learning," in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi'an, P.R. China), pp. 70–76, AAAC, IEEE, September 2015. (acceptance rate oral: 28 %)
- 274) Y. Zhang, E. Coutinho, Z. Zhang, C. Quan, and B. Schuller, "Dynamic Active Learning Based on Agreement and Applied to Emotion Recognition in Spoken Interactions," in *Proceedings 17th International Conference on Multimodal Interaction, ICMI 2015*, (Seattle, WA), pp. 275–278, ACM, ACM, November 2015. (IF\* 1.77 (2010))
- 275) B. Schuller, Y. Zhang, F. Eyben, and F. Wening, "Intelligent systems' Holistic Evolving Analysis of Real-life Universal speaker characteristics," in *Proceedings of the 5th International Workshop on Emotion Social Signals, Sentiment & Linked Open Data (ES<sup>3</sup>LOD 2014), satellite of the 9th Language Resources and Evaluation Conference (LREC 2014)* (B. Schuller, P. Buitelaar, L. Devillers, C. Pelachaud, T. Declerck, A. Batliner, P. Rosso, and S. Gaines, eds.), (Reykjavik, Iceland), pp. 14–20, ELRA, ELRA, May 2014
- 276) B. Schuller, S. Steidl, A. Batliner, J. Epps, F. Eyben, F. Ringeval, E. Marchi, and Y. Zhang, "The INTERSPEECH 2014 Computational Paralinguistics Challenge: Cognitive & Physical Load," in *Proceedings INTERSPEECH 2014, 15th Annual Conference of the International Speech Communication Association*, (Singapore, Singapore), ISCA, ISCA, September 2014. 5 pages (acceptance rate: 52 %)
- 277) B. Schuller, F. Friedmann, and F. Eyben, "The Munich BioVoice Corpus: Effects of Physical Exercising, Heart Rate, and Skin Conductance on Human Speech Production," in *Proceedings 9th Language Resources and Evaluation Conference (LREC 2014)*, (Reykjavik, Iceland), pp. 1506–1510, ELRA, ELRA, May 2014
- 278) B. Schuller, E. Marchi, S. Baron-Cohen, H. O'Reilly, D. Pigat, P. Robinson, I. Davies, O. Golan, S. Fridenson, S. Tal, S. Newman, N. Meir, R. Shillo, A. Camurri, S. Piana, A. Staglianò, S. Bölte, D. Lundqvist, S. Berggren, A. Baranger, and N. Sullings, "The state of play of ASC-Inclusion: An Integrated Internet-Based Environment for Social Inclusion of Children with Autism Spectrum Conditions," in *Proceedings 2nd International Workshop on Digital Games for Empowerment and Inclusion (IDGEI 2014)* (L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds.), (Haifa, Israel), ACM, ACM, February 2014. 8 pages, held in conjunction with the 19th International Conference on Intelligent User Interfaces (IUI 2014)
- 279) A. Batliner and B. Schuller, "More Than Fifty Years of Speech Processing – The Rise of Computational Paralinguistics and Ethical Demands," in *Proceedings ETHICOMP 2014*, (Paris, France), Commission de réflexion sur l'Ethique de la Recherche en sciences et technologies du Numérique d'Allistene, CERNA, June 2014
- 280) R. Brückner and B. Schuller, "Social Signal Classification Using Deep BLSTM Recurrent Neural Networks," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 4856–4860, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 281) O. Celiktutan, F. Eyben, E. Sariyanidi, H. Gunes, and B. Schuller, "MAPTRAITS 2014: The First Audio/Visual Mapping Personality Traits Challenge," in *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), pp. 3–9, ACM, ACM, November 2014
- 282) O. Celiktutan, F. Eyben, E. Sariyanidi, H. Gunes, and B. Schuller, "MAPTRAITS 2014: The First Audio/Visual Mapping Personality Traits Challenge – An Introduction," in *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), pp. 529–530, ACM, ACM, November 2014
- 283) E. Coutinho, F. Wening, K. Scherer, and B. Schuller, "The Munich LSTM-RNN Approach to the MediaEval 2014 "Emotion in Music" Task," in *Proceedings of the MediaEval 2014 Multimedia Benchmark Workshop* (M. Larson, B. Ionescu, X. Anguera, M. Eskevich, P. Korshunov, M. Schedl, M. Soleymani, G. Petkos, R. Sutcliffe, J. Choi, and G. J. Jones, eds.), (Barcelona, Spain), CEUR, October 2014. 2 pages, best result
- 284) E. Coutinho, J. Deng, and B. Schuller, "Transfer Learning Emotion Manifestation Across Music and Speech," in *Proceedings 2014 International Joint Conference on Neural Networks (IJCNN) as part of the IEEE World Congress on Computational Intelligence (IEEE WCCI)*, (Beijing, China), pp. 3592–3598, IEEE, IEEE, July 2014. (acceptance rate: 30 %)
- 285) J. Deng, R. Xia, Z. Zhang, Y. Liu, and B. Schuller, "Introducing Shared-Hidden-Layer Autoencoders for Transfer Learning and their Application in Acoustic Emotion Recognition," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 4851–4855, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 286) J. Deng, Z. Zhang, and B. Schuller, "Linked Source and Target Domain Subspace Feature Transfer Learning – Exemplified by Speech Emotion Recognition," in *Proceedings 22nd International Conference on Pattern Recognition (ICPR 2014)*, (Stockholm, Sweden), pp. 761–766, IAPR, IAPR, August 2014. acceptance rate: 56 %
- 287) J. T. Geiger, M. Kneissl, B. Schuller, and G. Rigoll, "Acoustic Gait-based Person Identification using Hidden Markov Models," in *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), pp. 25–30, ACM, ACM, November 2014
- 288) J. T. Geiger, J. F. Gemmeke, B. Schuller, and G. Rigoll, "Investigating NMF Speech Enhancement for Neural Network based Acoustic Models," in *Proceedings INTERSPEECH 2014, 15th Annual Conference of the International Speech Communication Association*, (Singapore, Singapore), ISCA, ISCA, September 2014. 5 pages (acceptance rate: 52 %)
- 289) J. T. Geiger, F. Wening, J. F. Gemmeke, M. Wöllmer, B. Schuller, and G. Rigoll, "Memory-Enhanced Neural Networks and NMF for Robust ASR," in *Proceedings 2nd IEEE Global Conference on Signal and Information Processing, GlobalSIP, Machine Learning Applications in Speech Processing Symposium*, (Atlanta, GA), IEEE, IEEE, December 2014. 10 pages (acceptance rate: 45 %)
- 290) J. T. Geiger, Z. Zhang, F. Wening, B. Schuller, and G. Rigoll, "Robust Speech Recognition using Long Short-Term Memory Recurrent Neural Networks for Hybrid Acoustic Modelling," in *Proceedings INTERSPEECH 2014, 15th Annual Conference of the International Speech Communication Association*, (Singapore, Singapore), ISCA, ISCA, September 2014. 5 pages (acceptance rate: 52 %)
- 291) J. Geiger, E. Marchi, F. Wening, B. Schuller, and G. Rigoll, "The TUM system for the REVERB Challenge: Recognition of Reverberated Speech using Multi-Channel Correlation Shaping Dereverberation and BLSTM Recurrent Neural Networks," in *Proceedings REVERB Workshop, held in conjunction with ICASSP 2014 and HSCMA 2014*, (Florence, Italy), pp. 1–8,

- IEEE, IEEE, May 2014
- 292) J. T. Geiger, B. Zhang, B. Schuller, and G. Rigoll, "On the Influence of Alcohol Intoxication on Speaker Recognition," in *Proceedings AES 53rd International Conference on Semantic Audio*, (London, UK), pp. 1–7, AES, Audio Engineering Society, January 2014
- 293) K. Hartmann, R. Böck, and B. Schuller, "ERM4HCI 2014 – The 2nd Workshop on Emotion Representation and Modelling in Human-Computer-Interaction-Systems," in *Proceedings of the 2nd Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2014* (K. Hartmann, R. Böck, and B. Schuller, eds.), (Istanbul, Turkey), pp. 525–526, ACM, ACM, November 2014. held in conjunction with the 16th ACM International Conference on Multimodal Interaction, ICMI 2014
- 294) H. Kaya, F. Eyben, A. A. Salah, and B. Schuller, "CCA Based Feature Selection with Application to Continuous Depression Recognition from Acoustic Speech Features," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 3757–3761, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 295) C. Kirst, F. Weninger, C. Joder, P. Grosche, J. Geiger, and B. Schuller, "On-line NMF-based Stereo Up-Mixing of Speech Improves Perceived Reduction of Non-Stationary Noise," in *Proceedings AES 53rd International Conference on Semantic Audio* (K. Brandenburg and M. Sandler, eds.), (London, UK), pp. 1–7, AES, Audio Engineering Society, January 2014. Best Student Paper Award
- 296) E. Marchi, G. Ferroni, F. Eyben, L. Gabrielli, S. Squartini, and B. Schuller, "Multi-resolution Linear Prediction Based Features for Audio Onset Detection with Bidirectional LSTM Neural Networks," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 2183–2187, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 297) E. Marchi, G. Ferroni, F. Eyben, S. Squartini, and B. Schuller, "Audio Onset Detection: A Wavelet Packet Based Approach with Recurrent Neural Networks," in *Proceedings 2014 International Joint Conference on Neural Networks (IJCNN) as part of the IEEE World Congress on Computational Intelligence (IEEE WCCI)*, (Beijing, China), pp. 3585–3591, IEEE, IEEE, July 2014. (acceptance rate: 30 %)
- 298) S. Newman, O. Golan, S. Baron-Cohen, S. Bölte, A. Baranger, B. Schuller, P. Robinson, A. Camurri, N. Meir-Goren, M. Skurnik, S. Fridenson, S. Tal, E. Eshchar, H. O'Reilly, D. Pigat, S. Berggren, D. Lundqvist, N. Sullings, I. Davies, and S. Piana, "ASC-Inclusion – Interactive Software to Help Children with ASC Understand and Express Emotions," in *Proceedings 13th Annual International Meeting For Autism Research (IMFAR 2014)*, (Atlanta, GA), International Society for Autism Research (INSAR), INSAR, May 2014. 1 page
- 299) F. Ringeval, S. Amiriparian, F. Eyben, K. Scherer, and B. Schuller, "Emotion Recognition in the Wild: Incorporating Voice and Lip Activity in Multimodal Decision-Level Fusion," in *Proceedings of the ICMI 2014 EmotiW – Emotion Recognition In The Wild Challenge and Workshop (EmotiW 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), pp. 473–480, ACM, ACM, November 2014
- 300) M. Soleymani, A. Aljanaki, Y.-H. Yang, M. N. Caro, F. Eyben, K. Markov, B. Schuller, R. Veltkamp, F. Weninger, and F. Wiering, "Emotional Analysis of Music: A Comparison of Methods," in *Proceedings of the 22nd ACM International Conference on Multimedia, MM 2014*, (Orlando, FL), pp. 1161–1164, ACM, ACM, November 2014. 4 pages
- 301) G. Trigeorgis, K. Bousmalis, S. Zafeiriou, and B. Schuller, "A Deep Semi-NMF Model for Learning Hidden Representations," in *Proceedings 31st International Conference on Machine Learning, ICML 2014* (E. P. Xing and T. Jebara, eds.), vol. 32, (Beijing, China), International Machine Learning Society, IMLS, June 2014. 9 pages (acceptance rate: 25 %)
- 302) F. Weninger, J. R. Hershey, J. Le Rouxy, and B. Schuller, "Discriminatively Trained Recurrent Neural Networks for Single-Channel Speech Separation," in *Proceedings 2nd IEEE Global Conference on Signal and Information Processing, GlobalSIP, Machine Learning Applications in Speech Processing Symposium*, (Atlanta, GA), pp. 577–581, IEEE, IEEE, December 2014. (acceptance rate: 45 %)
- 303) F. Weninger, S. Watanabe, J. Le Roux, J. R. Hershey, Y. Tachioka, J. Geiger, B. Schuller, and G. Rigoll, "The MERL/MELCO/TUM system for the REVERB Challenge using Deep Recurrent Neural Network Feature Enhancement," in *Proceedings REVERB Workshop, held in conjunction with ICASSP 2014 and HSCMA 2014*, (Florence, Italy), pp. 1–8, IEEE, IEEE, May 2014. second best result
- 304) Z. Zhang, F. Eyben, J. Deng, and B. Schuller, "An Agreement and Sparseness-based Learning Instance Selection and its Application to Subjective Speech Phenomena," in *Proceedings of the 5th International Workshop on Emotion Social Signals, Sentiment & Linked Open Data (ES<sup>3</sup>LOD 2014), satellite of the 9th Language Resources and Evaluation Conference (LREC 2014)* (B. Schuller, P. Buitelaar, L. Devillers, C. Pelachaud, T. Declerck, A. Batliner, P. Rosso, and S. Gaines, eds.), (Reykjavik, Iceland), pp. 21–26, ELRA, ELRA, May 2014
- 305) M. Valstar, B. Schuller, K. Smith, T. Almaev, F. Eyben, J. Krajewski, R. Cowie, and M. Pantic, "AVEC 2014 – The Three Dimensional Affect and Depression Challenge," in *Proceedings of the 4th ACM international workshop on Audio/Visual Emotion Challenge*, (Orlando, FL), ACM, ACM, November 2014. 9 pages
- 306) F. J. Weninger, S. Watanabe, Y. Tachioka, and B. Schuller, "Deep Recurrent De-Noising Auto-Encoder and blind de-reverberation for reverberated speech recognition," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 4656–4660, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 307) F. J. Weninger, F. Eyben, and B. Schuller, "On-Line Continuous-Time Music Mood Regression with Deep Recurrent Neural Networks," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 5449–5453, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 308) F. J. Weninger, F. Eyben, and B. Schuller, "Single-Channel Speech Separation With Memory-Enhanced Recurrent Neural Networks," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 3737–3741, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 309) R. Xia, J. Deng, B. Schuller, and Y. Liu, "Modeling Gender Information for Emotion Recognition Using Denoising Autoencoders," in *Proceedings 39th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2014*, (Florence, Italy), pp. 990–994, IEEE, IEEE, May 2014. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 310) B. Schuller, E. Marchi, S. Baron-Cohen, H. O'Reilly, P. Robinson, I. Davies, O. Golan, S. Fridenson, S. Tal, S. Newman, N. Meir, R. Shillo, A. Camurri, S. Piana, S. Bölte, D. Lundqvist, S. Berggren, A. Baranger, and N. Sullings, "ASC-Inclusion: Interactive Emotion Games for Social Inclusion of Children with Autism Spectrum Conditions," in *Proceedings 1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013) held in conjunction with the 8th Foundations of Digital Games 2013 (FDG)* (B. Schuller, L. Paletta, and N. Sabouret, eds.), (Chania, Greece), ACM, SASDG, May 2013. 8 pages (acceptance rate: 69 %)
- 311) B. Schuller, S. Steidl, A. Batliner, A. Vinciarelli, K. Scherer,

- F. Ringeval, M. Chetouani, F. Weninger, F. Eyben, E. Marchi, M. Mortillaro, H. Salamin, A. Polychroniou, F. Valente, and S. Kim, "The INTERSPEECH 2013 Computational Paralinguistics Challenge: Social Signals, Conflict, Emotion, Autism," in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 148–152, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010), > 200 citations)
- 312) B. Schuller, F. Friedmann, and F. Eyben, "Automatic Recognition of Physiological Parameters in the Human Voice: Heart Rate and Skin Conductance," in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 7219–7223, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 313) B. Schuller, F. Pokorny, S. Ladstätter, M. Fellner, F. Graf, and L. Paletta, "Acoustic Geo-Sensing: Recognising Cyclists' Route, Route Direction, and Route Progress from Cell-Phone Audio," in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 453–457, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 314) R. Brückner and B. Schuller, "Hierarchical Neural Networks and Enhanced Class Posteriors for Social Signal Classification," in *Proceedings 13th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2013*, (Olomouc, Czech Republic), pp. 362–367, IEEE, IEEE, December 2013. 6 pages (acceptance rate: 47 %)
- 315) J. Deng, Z. Zhang, E. Marchi, and B. Schuller, "Sparse Autoencoder-based Feature Transfer Learning for Speech Emotion Recognition," in *Proc. 5th biannual Humaine Association Conference on Affective Computing and Intelligent Interaction (ACII 2013)*, (Geneva, Switzerland), pp. 511–516, HUMAINE Association, IEEE, September 2013. (acceptance rate oral: 31 %)
- 316) I. Dunwell, P. Lameris, C. Stewart, P. Petridis, S. Arnab, M. Hendrix, S. de Freitas, M. Gaved, B. Schuller, and L. Paletta, "Developing a Digital Game to Support Cultural Learning amongst Immigrants," in *Proceedings 1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013) held in conjunction with the 8th Foundations of Digital Games 2013 (FDG)* (B. Schuller, L. Paletta, and N. Sabouret, eds.), (Chania, Greece), ACM, SASDG, May 2013. 8 pages (acceptance rate: 69 %)
- 317) F. Eyben, F. Weninger, L. Paletta, and B. Schuller, "The acoustics of eye contact - Detecting visual attention from conversational audio cues," in *Proceedings 6th Workshop on Eye Gaze in Intelligent Human Machine Interaction: Gaze in Multimodal Interaction (GAZEIN 2013), held in conjunction with the 15th International Conference on Multimodal Interaction, ICMI 2013*, (Sydney, Australia), pp. 7–12, ACM, ACM, December 2013. (acceptance rate: 38 %, IF\* 1.77 (2010))
- 318) F. Eyben, F. Weninger, and B. Schuller, "Affect recognition in real-life acoustic conditions - A new perspective on feature selection," in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 2044–2048, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 319) F. Eyben, F. Weninger, F. Groß, and B. Schuller, "Recent Developments in openSMILE, the Munich Open-Source Multimedia Feature Extractor," in *Proceedings of the 21st ACM International Conference on Multimedia, MM 2013*, (Barcelona, Spain), pp. 835–838, ACM, ACM, October 2013. (Honorable Mention (2nd place) in the ACM MM 2013 Open-source Software Competition, acceptance rate: 28 %, > 200 citations))
- 320) F. Eyben, F. Weninger, S. Squartini, and B. Schuller, "Real-life Voice Activity Detection with LSTM Recurrent Neural Networks and an Application to Hollywood Movies," in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 483–487, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 321) F. Eyben, F. Weninger, E. Marchi, and B. Schuller, "Likability of human voices: A feature analysis and a neural network regression approach to automatic likability estimation," in *Proceedings 14th International Workshop on Image and Audio Analysis for Multimedia Interactive Services, WIAMIS 2013*, (Paris, France), IEEE, IEEE, July 2013. Special Session on Social Stance Analysis, 4 pages (acceptance rate: 52 %)
- 322) J. T. Geiger, F. Eyben, B. Schuller, and G. Rigoll, "Detecting Overlapping Speech with Long Short-Term Memory Recurrent Neural Networks," in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 1668–1672, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 323) J. T. Geiger, B. Schuller, and G. Rigoll, "Large-Scale Audio Feature Extraction and SVM for Acoustic Scene Classification," in *Proceedings of the 2013 IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, WASPAA 2013*, (New Paltz, NY), pp. 1–4, IEEE, IEEE, October 2013
- 324) J. T. Geiger, F. Eyben, N. Evans, B. Schuller, and G. Rigoll, "Using Linguistic Information to Detect Overlapping Speech," in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 690–694, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 325) J. T. Geiger, M. Hofmann, B. Schuller, and G. Rigoll, "Gait-based Person Identification by Spectral, Cepstral and Energy-related Audio Features," in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 458–462, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 326) J. T. Geiger, F. Weninger, A. Hurmalainen, J. F. Gemmeke, M. Wöllmer, B. Schuller, G. Rigoll, and T. Virtanen, "The TUM+TUT+KUL Approach to the CHiME Challenge 2013: Multi-Stream ASR Exploiting BLSTM Networks and Sparse NMF," in *Proceedings The 2nd CHiME Workshop on Machine Listening in Multisource Environments held in conjunction with ICASSP 2013*, (Vancouver, Canada), pp. 25–30, IEEE, IEEE, June 2013. winning paper of track 1 and best paper award
- 327) W. Han, H. Li, H. Ruan, L. Ma, J. Sun, and B. Schuller, "Active Learning for Dimensional Speech Emotion Recognition," in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 2856–2859, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 328) C. Joder, F. Weninger, D. Virette, and B. Schuller, "A Comparative Study on Sparsity Penalties for NMF-based Speech Separation: Beyond LP-Norms," in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 858–862, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 329) C. Joder, F. Weninger, D. Virette, and B. Schuller, "Integrating Noise Estimation and Factorization-based Speech Separation: a Novel Hybrid Approach," in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 131–135, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 330) C. Joder and B. Schuller, "Off-line Refinement of Audio-to-Score Alignment by Observation Template Adaptation," in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 206–210, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 331) S. Newman, O. Golan, S. Baron-Cohen, S. Bölte, A. Baranger, B. Schuller, P. Robinson, A. Camurri, N. Meir, C. Rotman, S. Tal, S. Fridenson, H. O'Reilly, D. Lundqvist, S. Berggren, N. Sullings, E. Marchi, A. Batliner, I. Davies, and S. Piana,

- “ASC-Inclusion – Interactive Software to Help Children with ASC Understand and Express Emotions,” in *Proceedings 12th Annual International Meeting For Autism Research (IMFAR 2013)*, (San Sebastián, Spain), International Society for Autism Research (INSAR), INSAR, May 2013. 1 page
- 332) A. Rosner, F. Weninger, B. Schuller, M. Michalak, and B. Kostek, “Influence of Low-Level Features Extracted from Rhythmic and Harmonic Sections on Music Genre Classification,” in *Man-Machine Interactions 3* (A. Gruca, T. Czachrski, and S. Kozielski, eds.), vol. 242 of *Advances in Intelligent Systems and Computing (AISC)*, pp. 467–473, Springer, 2013
- 333) M. Valstar, B. Schuller, K. Smith, F. Eyben, B. Jiang, S. Bilakhia, S. Schnieder, R. Cowie, and M. Pantic, “AVEC 2013 - The Continuous Audio/Visual Emotion and Depression Recognition Challenge,” in *Proceedings of the 3rd ACM international workshop on Audio/Visual Emotion Challenge*, (Barcelona, Spain), pp. 3–10, ACM, ACM, October 2013. (> 100 citations)
- 334) M. Valstar, B. Schuller, J. Krajewski, R. Cowie, and M. Pantic, “Workshop summary for the 3rd international audio/visual emotion challenge and workshop (AVEC’13),” in *Proceedings of the 21st ACM international conference on Multimedia, ACM MM 2013*, (Barcelona, Spain), pp. 1085–1086, ACM, ACM, October 2013. (acceptance rate: 28 %)
- 335) F. Weninger, C. Kirst, B. Schuller, and H.-J. Bungartz, “A Discriminative Approach to Polyphonic Piano Note Transcription using Non-negative Matrix Factorization,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 6–10, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 336) F. Weninger, C. Wagner, M. Wöllmer, B. Schuller, and L.-P. Morency, “Speaker Trait Characterization in Web Videos: Uniting Speech, Language, and Facial Features,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 3647–3651, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 337) F. Weninger, J. Geiger, M. Wöllmer, B. Schuller, and G. Rigoll, “The Munich Feature Enhancement Approach to the 2013 CHiME Challenge Using BLSTM Recurrent Neural Networks,” in *Proceedings The 2nd CHiME Workshop on Machine Listening in Multisource Environments held in conjunction with ICASSP 2013*, (Vancouver, Canada), pp. 86–90, IEEE, IEEE, June 2013
- 338) F. Weninger, F. Eyben, and B. Schuller, “The TUM Approach to the MediaEval Music Emotion Task Using Generic Affective Audio Features,” in *Proceedings of the MediaEval 2013 Multimedia Benchmark Workshop* (M. Larson, X. Anguera, T. Reuter, G. J. Jones, B. Ionescu, M. Schedl, T. Piatrik, C. Hauff, and M. Soleymani, eds.), (Barcelona, Spain), CEUR, October 2013. 2 pages, best result
- 339) M. Wöllmer, Z. Zhang, F. Weninger, B. Schuller, and G. Rigoll, “Feature Enhancement by Bidirectional LSTM Networks for Conversational Speech Recognition in Highly Non-Stationary Noise,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 6822–6826, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 340) M. Wöllmer, B. Schuller, and G. Rigoll, “Probabilistic ASR Feature Extraction Applying Context-Sensitive Connectionist Temporal Classification Networks,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 7125–7129, May 2013
- 341) Z. Zhang, J. Deng, E. Marchi, and B. Schuller, “Active Learning by Label Uncertainty for Acoustic Emotion Recognition,” in *Proceedings INTERSPEECH 2013, 14th Annual Conference of the International Speech Communication Association*, (Lyon, France), pp. 2841–2845, ISCA, ISCA, August 2013. (acceptance rate: 52 %, IF\* 1.05 (2010))
- 342) Z. Zhang, J. Deng, and B. Schuller, “Co-Training Succeeds in Computational Paralinguistics,” in *Proceedings 38th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2013*, (Vancouver, Canada), pp. 8505–8509, IEEE, IEEE, May 2013. (acceptance rate: 53 %, IF\* 1.16 (2010))
- 343) B. Schuller, S. Steidl, A. Batliner, E. Nöth, A. Vinciarelli, F. Burkhardt, R. van Son, F. Weninger, F. Eyben, T. Bocklet, G. Mohammadi, and B. Weiss, “The INTERSPEECH 2012 Speaker Trait Challenge,” in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010), > 100 citations)
- 344) B. Schuller, M. Valstar, F. Eyben, R. Cowie, and M. Pantic, “AVEC 2012 – The Continuous Audio/Visual Emotion Challenge,” in *Proceedings of the 14th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, D. Bohus, H. K. Aghajan, J. Cassell, A. Nijholt, and J. Epps, eds.), (Santa Monica, CA), pp. 449–456, ACM, ACM, October 2012. (acceptance rate: 36 %, IF\* 1.77 (2010), > 100 citations)
- 345) B. Schuller, S. Hantke, F. Weninger, W. Han, Z. Zhang, and S. Narayanan, “Automatic Recognition of Emotion Evoked by General Sound Events,” in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 341–344, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 346) S. Ungruh, J. Krajewski, and B. Schuller, “Maus- und tastaturunterstützte Detektion von Schläfrigkeit Zuständen,” in *Proceedings 48. Kongress der Deutschen Gesellschaft für Psychologie*, (Bielefeld, Germany), Deutsche Gesellschaft für Psychologie (DGPs), Deutsche Gesellschaft für Psychologie, September 2012. 1 page
- 347) F. Eyben, F. Weninger, N. Lehment, G. Rigoll, and B. Schuller, “Violent Scenes Detection with Large, Brute-forced Acoustic and Visual Feature Sets,” in *Working Notes Proceedings of the MediaEval 2012 Workshop* (M. A. Larson, S. Schmiedeke, P. Kelm, A. Rae, V. Mezaris, T. Piatrik, M. Soleymani, F. Metzke, and G. J. Jones, eds.), vol. 927, (Pisa, Italy), CEUR, October 2012. 2 pages
- 348) C. Joder, F. Weninger, M. Wöllmer, and B. Schuller, “The TUM Cumulative DTW Approach for the Mediaeval 2012 Spoken Web Search Task,” in *Working Notes Proceedings of the MediaEval 2012 Workshop* (M. A. Larson, S. Schmiedeke, P. Kelm, A. Rae, V. Mezaris, T. Piatrik, M. Soleymani, F. Metzke, and G. J. Jones, eds.), vol. 927, (Pisa, Italy), CEUR, October 2012. 2 pages
- 349) F. Eyben, B. Schuller, and G. Rigoll, “Improving Generalisation and Robustness of Acoustic Affect Recognition,” in *Proceedings of the 14th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, D. Bohus, H. K. Aghajan, J. Cassell, A. Nijholt, and J. Epps, eds.), (Santa Monica, CA), pp. 517–522, ACM, ACM, October 2012. (acceptance rate: 36 %, IF\* 1.77 (2010))
- 350) W. Han, H. Li, L. Ma, X. Zhang, J. Sun, F. Eyben, and B. Schuller, “Preserving Actual Dynamic Trend of Emotion in Dimensional Speech Emotion Recognition,” in *Proceedings of the 14th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, D. Bohus, H. K. Aghajan, J. Cassell, A. Nijholt, and J. Epps, eds.), (Santa Monica, CA), pp. 523–528, ACM, ACM, October 2012. (acceptance rate: 36 %, IF\* 1.77 (2010))
- 351) E. Marchi, B. Schuller, A. Batliner, S. Fridenzon, S. Tal, and O. Golan, “Emotion in the Speech of Children with Autism Spectrum Conditions: Prosody and Everything Else,” in *Proceedings 3rd Workshop on Child, Computer and Interaction (WOCCI 2012), Satellite Event of INTERSPEECH 2012*, (Portland, OR), ISCA, ISCA, September 2012. 8 pages (acceptance



- rate: 52 %, IF\* 1.05 (2010))
- 352) E. Marchi, A. Batliner, B. Schuller, S. Fridenzon, S. Tal, and O. Golan, "Speech, Emotion, Age, Language, Task, and Typicality: Trying to Disentangle Performance and Feature Relevance," in *Proceedings First International Workshop on Wide Spectrum Social Signal Processing (WSP 2012), held in conjunction with the ASE/IEEE International Conference on Social Computing (SocialCom 2012)*, (Amsterdam, The Netherlands), ASE/IEEE, IEEE, September 2012. 8 pages (acceptance rate: 42 %, IF\* 2.6 (2010))
- 353) J. Deng and B. Schuller, "Confidence Measures in Speech Emotion Recognition Based on Semi-supervised Learning," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 354) F. Weninger, E. Marchi, and B. Schuller, "Improving Recognition of Speaker States and Traits by Cumulative Evidence: Intoxication, Sleepiness, Age and Gender," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 355) F. Weninger and B. Schuller, "Discrimination of Linguistic and Non-Linguistic Vocalizations in Spontaneous Speech: Intra- and Inter-Corpus Perspectives," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 356) R. Brückner and B. Schuller, "Likability Classification – A not so Deep Neural Network Approach," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 357) F. Weninger, M. Wöllmer, and B. Schuller, "Combining Bottleneck-BLSTM and Semi-Supervised Sparse NMF for Recognition of Conversational Speech in Highly Instantaneous Noise," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 358) Z. Zhang and B. Schuller, "Active Learning by Sparse Instance Tracking and Classifier Confidence in Acoustic Emotion Recognition," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 359) J. T. Geiger, R. Vipperla, S. Bozonnet, N. Evans, B. Schuller, and G. Rigoll, "Convolutional Non-Negative Sparse Coding and New Features for Speech Overlap Handling in Speaker Diarization," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 360) M. Wöllmer, F. Eyben, and B. Schuller, "Temporal and Situational Context Modeling for Improved Dominance Recognition in Meetings," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 361) F. Ringeval, M. Chetouani, and B. Schuller, "Novel Metrics of Speech Rhythm for the Assessment of Emotion," in *Proceedings INTERSPEECH 2012, 13th Annual Conference of the International Speech Communication Association*, (Portland, OR), ISCA, ISCA, September 2012. 4 pages (acceptance rate: 52 %, IF\* 1.05 (2010))
- 362) C. Joder and B. Schuller, "Score-Informed Leading Voice Separation from Monaural Audio," in *Proceedings 13th International Society for Music Information Retrieval Conference, ISMIR 2012*, (Porto, Portugal), pp. 277–282, ISMIR, ISMIR, October 2012. (acceptance rate: 44 %)
- 363) J. T. Geiger, R. Vipperla, N. Evans, B. Schuller, and G. Rigoll, "Speech Overlap Handling for Speaker Diarization Using Convolutional Non-negative Sparse Coding and Energy-Related Features," in *Proceedings 20th European Signal Processing Conference (EUSIPCO)*, (Bucharest, Romania), EURASIP, EURASIP, August 2012. 4 pages
- 364) W. Han, H. Li, L. Ma, X. Zhang, and B. Schuller, "A Ranking-based Emotion Annotation Scheme and Real-life Speech Database," in *Proceedings 4th International Workshop on EMOTION SENTIMENT & SOCIAL SIGNALS 2012 (ES 2012) – Corpora for Research on Emotion, Sentiment & Social Signals, held in conjunction with LREC 2012*, (Istanbul, Turkey), pp. 67–71, ELRA, ELRA, May 2012. (acceptance rate: 68 %, IF\* 1.37 (2010))
- 365) E. Principi, R. Rotili, M. Wöllmer, S. Squartini, and B. Schuller, "Dominance Detection in a Reverberated Acoustic Scenario," in *Proceedings 9th International Conference on Advances in Neural Networks, ISNN 2012, Shenyang, China, 11.-14.07.2012*, vol. 7367 of *Lecture Notes in Computer Science (LNCS)*, pp. 394–402, Berlin/Heidelberg: Springer, July 2012. Special Session on Advances in Cognitive and Emotional Information Processing
- 366) F. Weninger, M. Wöllmer, J. Geiger, B. Schuller, J. Gemmeke, A. Hurmalainen, T. Virtanen, and G. Rigoll, "Non-Negative Matrix Factorization for Highly Noise-Robust ASR: to Enhance or to Recognize?," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 4681–4684, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 367) M. Wöllmer, A. Metallinou, N. Katsamanis, B. Schuller, and S. Narayanan, "Analyzing the Memory of BLSTM Neural Networks for Enhanced Emotion Classification in Dyadic Spoken Interactions," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 4157–4160, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 368) Z. Zhang and B. Schuller, "Semi-supervised Learning Helps in Sound Event Classification," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 333–336, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 369) F. Weninger, J. Feliu, and B. Schuller, "Supervised and Semi-Supervised Suppression of Background Music in Monaural Speech Recordings," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 61–64, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 370) F. Weninger, N. Amir, O. Amir, I. Ronen, F. Eyben, and B. Schuller, "Robust Feature Extraction for Automatic Recognition of Vibrato Singing in Recorded Polyphonic Music," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 85–88, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 371) D. Prylipko, B. Schuller, and A. Wendemuth, "Fine-Tuning HMMs for Nonverbal Vocalizations in Spontaneous Speech: a Multicorpus Perspective," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 4625–4628, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 372) F. Eyben, S. Petridis, B. Schuller, and M. Pantic, "Audiovisual Vocal Outburst Classification in Noisy Acoustic Conditions," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 5097–5100, IEEE, IEEE, March 2012. (acceptance rate: 49 %, IF\* 1.16 (2010))

- 373) R. Vipperla, J. Geiger, S. Bozonnet, D. Wang, N. Evans, B. Schuller, and G. Rigoll, "Speech Overlap Detection and Attribution Using Convolutional Non-Negative Sparse Coding," in *Proceedings 37th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2012*, (Kyoto, Japan), pp. 4181–4184, IEEE, IEEE, March 2012. (acceptance rate: 49%, IF\* 1.16 (2010))
- 374) C. Joder, F. Weninger, F. Eyben, D. Virette, and B. Schuller, "Real-time Speech Separation by Semi-Supervised Nonnegative Matrix Factorization," in *Proceedings 10th International Conference on Latent Variable Analysis and Signal Separation, LVA/ICA 2012* (F. J. Theis, A. Cichocki, A. Yeredor, and M. Zibulevsky, eds.), vol. 7191 of *Lecture Notes in Computer Science*, (Tel Aviv, Israel), pp. 322–329, Springer, March 2012. Special Session Real-world constraints and opportunities in audio source separation
- 375) B. Schuller, F. Weninger, and J. Dorfner, "Multi-Modal Non-Prototypical Music Mood Analysis in Continuous Space: Reliability and Performances," in *Proceedings 12th International Society for Music Information Retrieval Conference, ISMIR 2011*, (Miami, FL), pp. 759–764, ISMIR, ISMIR, October 2011. (acceptance rate: 59%)
- 376) B. Schuller, M. Valstar, F. Eyben, G. McKeown, R. Cowie, and M. Pantic, "AVEC 2011 - The First International Audio/Visual Emotion Challenge," in *Proceedings First International Audio/Visual Emotion Challenge and Workshop, AVEC 2011, held in conjunction with the International HUMAINE Association Conference on Affective Computing and Intelligent Interaction 2011, ACII 2011* (B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds.), vol. II, pp. 415–424, Memphis, TN: Springer, October 2011. (> 200 citations)
- 377) B. Schuller, Z. Zhang, F. Weninger, and G. Rigoll, "Selecting Training Data for Cross-Corpus Speech Emotion Recognition: Prototypicality vs. Generalization," in *Proceedings 2011 Speech Processing Conference*, (Tel Aviv, Israel), AVIOS, AVIOS, June 2011. invited contribution, 4 pages
- 378) B. Schuller, A. Batliner, S. Steidl, F. Schiel, and J. Krajewski, "The INTERSPEECH 2011 Speaker State Challenge," in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 3201–3204, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010), > 100 citations)
- 379) B. Schuller, Z. Zhang, F. Weninger, and G. Rigoll, "Using Multiple Databases for Training in Emotion Recognition: To Unite or to Vote?," in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 1553–1556, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 380) R. Rotili, E. Principi, S. Squartini, and B. Schuller, "A Real-Time Speech Enhancement Framework for Multi-party Meetings," in *Advances in Nonlinear Speech Processing, 5th International Conference on Nonlinear Speech Processing, NoLISP 2011, Las Palmas de Gran Canaria, Spain, November 7-9, 2011, Proceedings* (C. M. Travieso-González and J. Alonso-Hernández, eds.), vol. 7015/2011 of *Lecture Notes in Computer Science (LNCS)*, pp. 80–87, Springer, 2011
- 381) M. Wöllmer and B. Schuller, "Enhancing Spontaneous Speech Recognition with BLSTM Features," in *Advances in Nonlinear Speech Processing, 5th International Conference on Nonlinear Speech Processing, NoLISP 2011, Las Palmas de Gran Canaria, Spain, November 7-9, 2011, Proceedings* (C. M. Travieso-González and J. Alonso-Hernández, eds.), vol. 7015/2011 of *Lecture Notes in Computer Science (LNCS)*, pp. 17–24, Springer, 2011
- 382) Z. Zhang, F. Weninger, M. Wöllmer, and B. Schuller, "Unsupervised Learning in Cross-Corpus Acoustic Emotion Recognition," in *Proceedings 12th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2011*, (Big Island, HI), pp. 523–528, IEEE, IEEE, December 2011. (acceptance rate: 43%)
- 383) M. Wöllmer, B. Schuller, and G. Rigoll, "A Novel Bottleneck-BLSTM Front-End for Feature-Level Context Modeling in Conversational Speech Recognition," in *Proceedings 12th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2011*, (Big Island, HI), pp. 36–41, IEEE, IEEE, December 2011. (acceptance rate: 43%)
- 384) F. Weninger, M. Wöllmer, and B. Schuller, "Automatic Assessment of Singer Traits in Popular Music: Gender, Age, Height and Race," in *Proceedings 12th International Society for Music Information Retrieval Conference, ISMIR 2011*, (Miami, FL), pp. 37–42, ISMIR, ISMIR, October 2011. (acceptance rate: 59%)
- 385) S. Ungruh, J. Krajewski, F. Eyben, and B. Schuller, "Maus- und tastaturunterstützte Detektion von Schläfrigkeitsszuständen," in *Proceedings 7. Tagung der Fachgruppe Arbeits-, Organisations- und Wirtschaftspsychologie, AOW 2011*, (Rostock, Germany), Deutsche Gesellschaft für Psychologie (DGPs), Deutsche Gesellschaft für Psychologie, September 2011. 1 page
- 386) F. Weninger, J. Geiger, M. Wöllmer, B. Schuller, and G. Rigoll, "The Munich 2011 CHiME Challenge Contribution: NMF-BLSTM Speech Enhancement and Recognition for Reverberated Multisource Environments," in *Proceedings Machine Listening in Multisource Environments, CHiME 2011, satellite workshop of Interspeech 2011*, (Florence, Italy), pp. 24–29, ISCA, ISCA, September 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 387) M. Wöllmer, F. Weninger, F. Eyben, and B. Schuller, "Acoustic-Linguistic Recognition of Interest in Speech with Bottleneck-BLSTM Nets," in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 3201–3204, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 388) M. Wöllmer, F. Weninger, S. Steidl, A. Batliner, and B. Schuller, "Speech-based Non-prototypical Affect Recognition for Child-Robot Interaction in Reverberated Environments," in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 3113–3116, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 389) M. Wöllmer, B. Schuller, and G. Rigoll, "Feature Frame Stacking in RNN-based Tandem ASR Systems – Learned vs. Predefined Context," in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 1233–1236, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 390) F. Burkhardt, B. Schuller, B. Weiss, and F. Weninger, "“Would You Buy A Car From Me?” - On the Likability of Telephone Voices," in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 1557–1560, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 391) J. T. Geiger, M. A. Lakhil, B. Schuller, and G. Rigoll, "Learning new acoustic events in an HMM-based system using MAP adaptation," in *Proceedings INTERSPEECH 2011, 12th Annual Conference of the International Speech Communication Association*, (Florence, Italy), pp. 293–296, ISCA, ISCA, August 2011. (acceptance rate: 59%, IF\* 1.05 (2010))
- 392) H. Gunes, B. Schuller, M. Pantic, and R. Cowie, "Emotion Representation, Analysis and Synthesis in Continuous Space: A Survey," in *Proceedings International Workshop on Emotion Synthesis, rePresentation, and Analysis in Continuous space, EmoSPACE 2011, held in conjunction with the 9th IEEE International Conference on Automatic Face & Gesture Recognition and Workshops, FG 2011*, (Santa Barbara, CA), pp. 827–834, IEEE, IEEE, March 2011. (> 100 citations)
- 393) M. Wöllmer, E. Marchi, S. Squartini, and B. Schuller, "Robust Multi-Stream Keyword and Non-Linguistic Vocalization Detection for Computationally Intelligent Virtual Agents," in

- Proceedings 8th International Conference on Advances in Neural Networks, ISNN 2011, Guilin, China, 29.05.-01.06.2011* (D. Liu, H. Zhang, M. Polycarpou, C. Alippi, and H. He, eds.), vol. 6676, Part II of *Lecture Notes in Computer Science (LNCS)*, pp. 496–505, Berlin/Heidelberg: Springer, May/June 2011
- 394) F. Eyben, M. Wöllmer, M. Valstar, H. Gunes, B. Schuller, and M. Pantic, “String-based Audiovisual Fusion of Behavioural Events for the Assessment of Dimensional Affect,” in *Proceedings International Workshop on Emotion Synthesis, rePresentation, and Analysis in Continuous spacE, EmoSPACE 2011, held in conjunction with the 9th IEEE International Conference on Automatic Face & Gesture Recognition and Workshops, FG 2011*, (Santa Barbara, CA), pp. 322–329, IEEE, IEEE, March 2011
- 395) F. Eyben, S. Petridis, B. Schuller, G. Tzimiropoulos, S. Zafeiriou, and M. Pantic, “Audiovisual Classification of Vocal Outbursts in Human Conversation Using Long-Short-Term Memory Networks,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 5844–5847, IEEE, IEEE, May 2011. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 396) F. Weninger, B. Schuller, M. Wöllmer, and G. Rigoll, “Localization of Non-Linguistic Events in Spontaneous Speech by Non-Negative Matrix Factorization and Long Short-Term Memory,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 5840–5843, IEEE, IEEE, May 2011. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 397) F. Weninger and B. Schuller, “Audio Recognition in the Wild: Static and Dynamic Classification on a Real-World Database of Animal Vocalizations,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 337–340, IEEE, IEEE, May 2011. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 398) M. Wöllmer, F. Eyben, B. Schuller, and G. Rigoll, “A Multi-Stream ASR Framework for BLSTM Modeling of Conversational Speech,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 4860–4863, IEEE, IEEE, May 2011. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 399) F. Weninger, J.-L. Durrieu, F. Eyben, G. Richard, and B. Schuller, “Combining Monaural Source Separation With Long Short-Term Memory for Increased Robustness in Vocalist Gender Recognition,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 2196–2199, IEEE, IEEE, May 2011. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 400) F. Weninger, A. Lehmann, and B. Schuller, “openBLISSART: Design and Evaluation of a Research Toolkit for Blind Source Separation in Audio Recognition Tasks,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 1625–1628, IEEE, IEEE, May 2011. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 401) C. Landsiedel, J. Edlund, F. Eyben, D. Neiberg, and B. Schuller, “Syllabification of Conversational Speech Using Bidirectional Long-Short-Term Memory Neural Networks,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 5265–5268, IEEE, IEEE, May 2011. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 402) A. Stuhlsatz, C. Meyer, F. Eyben, T. Zielke, G. Meier, and B. Schuller, “Deep Neural Networks for Acoustic Emotion Recognition: Raising the Benchmarks,” in *Proceedings 36th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2011*, (Prague, Czech Republic), pp. 5688–5691, IEEE, IEEE, May 2011. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 403) B. Schuller, S. Steidl, A. Batliner, F. Burkhardt, L. Devillers, C. Müller, and S. Narayanan, “The INTERSPEECH 2010 Paralinguistic Challenge,” in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 2794–2797, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010), > 200 citations)
- 404) B. Schuller and L. Devillers, “Incremental Acoustic Valence Recognition: an Inter-Corpus Perspective on Features, Matching, and Performance in a Gating Paradigm,” in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 2794–2797, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 405) B. Schuller, C. Kozielski, F. Weninger, F. Eyben, and G. Rigoll, “Vocalist Gender Recognition in Recorded Popular Music,” in *Proceedings 11th International Society for Music Information Retrieval Conference, ISMIR 2010*, (Utrecht, The Netherlands), pp. 613–618, ISMIR, ISMIR, October 2010. (acceptance rate: 61 %)
- 406) B. Schuller, R. Zaccarelli, N. Rollet, and L. Devillers, “CIN-EMO - A French Spoken Language Resource for Complex Emotions: Facts and Baselines,” in *Proceedings 7th International Conference on Language Resources and Evaluation, LREC 2010* (N. Calzolari, K. Choukri, B. Maegaard, J. Mariani, J. Odijk, S. Piperidis, M. Rosner, and D. Tapias, eds.), (Valletta, Malta), pp. 1643–1647, ELRA, European Language Resources Association, May 2010. (acceptance rate: 69 %, IF\* 1.37 (2010))
- 407) B. Schuller, F. Eyben, S. Can, and H. Feussner, “Speech in Minimal Invasive Surgery – Towards an Affective Language Resource of Real-life Medical Operations,” in *Proceedings 3rd International Workshop on EMOTION: Corpora for Research on Emotion and Affect, satellite of LREC 2010* (L. Devillers, B. Schuller, R. Cowie, E. Douglas-Cowie, and A. Batliner, eds.), (Valletta, Malta), pp. 5–9, ELRA, European Language Resources Association, May 2010. (acceptance rate: 69 %, IF\* 1.37 (2010))
- 408) B. Schuller, F. Weninger, M. Wöllmer, Y. Sun, and G. Rigoll, “Non-Negative Matrix Factorization as Noise-Robust Feature Extractor for Speech Recognition,” in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 4562–4565, IEEE, IEEE, March 2010. (acceptance rate: 48 %, IF\* 1.16 (2010))
- 409) B. Schuller and F. Burkhardt, “Learning with Synthesized Speech for Automatic Emotion Recognition,” in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 5150–515, IEEE, IEEE, March 2010. (acceptance rate: 48 %, IF\* 1.16 (2010))
- 410) B. Schuller and F. Weninger, “Discrimination of Speech and Non-Linguistic Vocalizations by Non-Negative Matrix Factorization,” in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 5054–5057, IEEE, IEEE, March 2010. (acceptance rate: 48 %, IF\* 1.16 (2010))
- 411) B. Schuller, F. Metzke, S. Steidl, A. Batliner, F. Eyben, and T. Polzehl, “Late Fusion of Individual Engines for Improved Recognition of Negative Emotions in Speech – Learning vs. Democratic Vote,” in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 5230–5233, IEEE, IEEE, March 2010. (acceptance rate: 48 %, IF\* 1.16 (2010))
- 412) F. Metzke, A. Batliner, F. Eyben, T. Polzehl, B. Schuller, and S. Steidl, “Emotion Recognition using Imperfect Speech Recognition,” in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 478–481, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 413) M. Wöllmer, F. Eyben, B. Schuller, and G. Rigoll, “Recognition

- of Spontaneous Conversational Speech using Long Short-Term Memory Phoneme Predictions,” in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 1946–1949, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 414) M. Wöllmer, Y. Sun, F. Eyben, and B. Schuller, “Long Short-Term Memory Networks for Noise Robust Speech Recognition,” in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 2966–2969, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 415) M. Wöllmer, A. Metallinou, F. Eyben, B. Schuller, and S. Narayanan, “Context-Sensitive Multimodal Emotion Recognition from Speech and Facial Expression using Bidirectional LSTM Modeling,” in *Proceedings INTERSPEECH 2010, 11th Annual Conference of the International Speech Communication Association*, (Makuhari, Japan), pp. 2362–2365, ISCA, ISCA, September 2010. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 416) M. Wöllmer, F. Eyben, B. Schuller, and G. Rigoll, “Spoken Term Detection with Connectionist Temporal Classification: a Novel Hybrid CTC-DBN Decoder,” in *Proceedings 35th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2010*, (Dallas, TX), pp. 5274–5277, IEEE, IEEE, March 2010. (acceptance rate: 48 %, IF\* 1.16 (2010))
- 417) F. Eyben, M. Wöllmer, and B. Schuller, “openSMILE – The Munich Versatile and Fast Open-Source Audio Feature Extractor,” in *Proceedings of the 18th ACM International Conference on Multimedia, MM 2010*, (Florence, Italy), pp. 1459–1462, ACM, ACM, October 2010. (Honorable Mention (2nd place) in the ACM MM 2010 Open-source Software Competition, acceptance rate short paper: about 30 %, IF\* 2.45 (2010), > 600 citations)
- 418) D. Arsić, M. Wöllmer, G. Rigoll, L. Roalter, M. Kranz, M. Kaiser, F. Eyben, and B. Schuller, “Automated 3D Gesture Recognition Applying Long Short-Term Memory and Contextual Knowledge in a CAVE,” in *Proceedings 1st Workshop on Multimodal Pervasive Video Analysis, MPVA 2010, held in conjunction with ACM Multimedia 2010*, (Florence, Italy), pp. 33–36, ACM, ACM, October 2010. (acceptance rate short paper: about 30 %, IF\* 2.45 (2010))
- 419) F. Eyben, S. Böck, B. Schuller, and A. Graves, “Universal Onset Detection with Bidirectional Long-Short Term Memory Neural Networks,” in *Proceedings 11th International Society for Music Information Retrieval Conference, ISMIR 2010*, (Utrecht, The Netherlands), pp. 589–594, ISMIR, ISMIR, October 2010. (acceptance rate: 61 %)
- 420) M. Brendel, R. Zaccarelli, B. Schuller, and L. Devillers, “Towards measuring similarity between emotional corpora,” in *Proceedings 3rd International Workshop on EMOTION: Corpora for Research on Emotion and Affect, satellite of LREC 2010* (L. Devillers, B. Schuller, R. Cowie, E. Douglas-Cowie, and A. Batliner, eds.), (Valletta, Malta), pp. 58–64, ELRA, European Language Resources Association, May 2010. (acceptance rate: 69 %, IF\* 1.37 (2010))
- 421) F. Eyben, A. Batliner, B. Schuller, D. Seppi, and S. Steidl, “Cross-Corpus Classification of Realistic Emotions - Some Pilot Experiments,” in *Proceedings 3rd International Workshop on EMOTION: Corpora for Research on Emotion and Affect, satellite of LREC 2010* (L. Devillers, B. Schuller, R. Cowie, E. Douglas-Cowie, and A. Batliner, eds.), (Valletta, Malta), pp. 77–82, ELRA, European Language Resources Association, May 2010. (acceptance rate: 69 %, IF\* 1.37 (2010))
- 422) E. de Sevin, E. Bevacqua, S. Pammi, C. Pelachaud, M. Schröder, and B. Schuller, “A Multimodal Listener Behaviour Driven by Audio Input,” in *Proceedings International Workshop on Interacting with ECAs as Virtual Characters, satellite of AAMAS 2010*, (Toronto, Canada), ACM, ACM, May 2010. 4 pages (acceptance rate: 24 %, IF\* 3.12 (2010))
- 423) M. Schröder, S. Pammi, R. Cowie, G. McKeown, H. Gunes, M. Pantic, M. Valstar, D. Heylen, M. ter Maat, F. Eyben, B. Schuller, M. Wöllmer, E. Bevacqua, C. Pelachaud, and E. de Sevin, “Demo: Have a Chat with Sensitive Artificial Listeners,” in *Proceedings 36th Annual Convention of the Society for the Study of Artificial Intelligence and Simulation of Behaviour, AISB 2010*, (Leicester, UK), AISB, AISB, March 2010. Symposium Towards a Comprehensive Intelligence Test, TCIT, 1 page
- 424) M. Schröder, R. Cowie, D. Heylen, M. Pantic, C. Pelachaud, and B. Schuller, “How to build a machine that people enjoy talking to,” in *Proceedings 4th International Conference on Cognitive Systems, CogSys*, (Zurich, Switzerland), January 2010. 1 page
- 425) D. Seppi, A. Batliner, S. Steidl, B. Schuller, and E. Nöth, “Word Accent and Emotion,” in *Proceedings 5th International Conference on Speech Prosody, SP 2010*, (Chicago, IL), ISCA, ISCA, May 2010. 4 pages
- 426) B. Schuller, B. Vlasenko, F. Eyben, G. Rigoll, and A. Wendenmuth, “Acoustic Emotion Recognition: A Benchmark Comparison of Performances,” in *Proceedings 11th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2009*, (Merano, Italy), pp. 552–557, IEEE, IEEE, December 2009. (acceptance rate: 43 %, > 100 citations)
- 427) B. Schuller, S. Steidl, and A. Batliner, “The Interspeech 2009 Emotion Challenge,” in *Proceedings INTERSPEECH 2009, 10th Annual Conference of the International Speech Communication Association*, (Brighton, UK), pp. 312–315, ISCA, ISCA, September 2009. (acceptance rate: 58 %, IF\* 1.05 (2010), > 400 citations)
- 428) B. Schuller and G. Rigoll, “Recognising Interest in Conversational Speech – Comparing Bag of Frames and Supra-segmental Features,” in *Proceedings INTERSPEECH 2009, 10th Annual Conference of the International Speech Communication Association*, (Brighton, UK), pp. 1999–2002, ISCA, ISCA, September 2009. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 429) B. Schuller, J. Schenk, G. Rigoll, and T. Knaup, ““The Godfather” vs. “Chaos”: Comparing Linguistic Analysis based on Online Knowledge Sources and Bags-of-N-Grams for Movie Review Valence Estimation,” in *Proceedings 10th International Conference on Document Analysis and Recognition, ICDAR 2009*, (Barcelona, Spain), pp. 858–862, IAPR, IEEE, July 2009. (acceptance rate: 64 %)
- 430) B. Schuller, S. Can, H. Feussner, M. Wöllmer, D. Arsić, and B. Hörnler, “Speech Control in Surgery: a Field Analysis and Strategies,” in *Proceedings 10th IEEE International Conference on Multimedia and Expo, ICME 2009*, (New York, NY), pp. 1214–1217, IEEE, IEEE, July 2009. (acceptance rate: about 30 %, IF\* 0.88 (2010))
- 431) B. Schuller, B. Hörnler, D. Arsić, and G. Rigoll, “Audio Chord Labeling by Musiological Modeling and Beat-Synchronization,” in *Proceedings 10th IEEE International Conference on Multimedia and Expo, ICME 2009*, (New York, NY), pp. 526–529, IEEE, IEEE, July 2009. (acceptance rate: about 30 %, IF\* 0.88 (2010))
- 432) B. Schuller, “Traits Prosodiques dans la Modélisation Acoustique à Base de Segment,” in *Proceedings Conférence Internationale sur Prosodie et Iconicité, Proscico 2009* (S. Hancil, ed.), (Rouen, France), pp. 24–26, April 2009
- 433) B. Schuller, A. Batliner, S. Steidl, and D. Seppi, “Emotion Recognition from Speech: Putting ASR in the Loop,” in *Proceedings 34th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2009*, (Taipei, Taiwan), pp. 4585–4588, IEEE, IEEE, April 2009. (acceptance rate: 43 %, IF\* 1.16 (2010))
- 434) M. Wöllmer, F. Eyben, B. Schuller, and G. Rigoll, “Robust Vocabulary Independent Keyword Spotting with Graphical Models,” in *Proceedings 11th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2009*, (Merano, Italy), pp. 349–353, IEEE, IEEE, December 2009.

- (acceptance rate: 43 %)
- 435) F. Eyben, M. Wöllmer, B. Schuller, and A. Graves, "From Speech to Letters – Using a novel Neural Network Architecture for Grapheme Based ASR," in *Proceedings 11th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2009*, (Merano, Italy), pp. 376–380, IEEE, IEEE, December 2009. (acceptance rate: 43 %)
- 436) M. Wöllmer, F. Eyben, B. Schuller, E. Douglas-Cowie, and R. Cowie, "Data-driven Clustering in Emotional Space for Affect Recognition Using Discriminatively Trained LSTM Networks," in *Proceedings INTERSPEECH 2009, 10th Annual Conference of the International Speech Communication Association*, (Brighton, UK), pp. 1595–1598, ISCA, ISCA, September 2009. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 437) M. Wöllmer, F. Eyben, B. Schuller, Y. Sun, T. Moosmayr, and N. Nguyen-Thien, "Robust In-Car Spelling Recognition – A Tandem BLSTM-HMM Approach," in *Proceedings INTERSPEECH 2009, 10th Annual Conference of the International Speech Communication Association*, (Brighton, UK), pp. 1990–9772, ISCA, ISCA, September 2009. (acceptance rate: 58 %, IF\* 1.05 (2010))
- 438) J. Schenk, B. Hörnler, B. Schuller, A. Braun, and G. Rigoll, "GMs in On-Line Handwritten Whiteboard Note Recognition: the Influence of Implementation and Modeling," in *Proceedings 10th International Conference on Document Analysis and Recognition, ICDAR 2009*, (Barcelona, Spain), pp. 877–880, IAPR, IEEE, July 2009. (acceptance rate: 64 %)
- 439) B. Hörnler, D. Arsić, B. Schuller, and G. Rigoll, "Boosting Multi-modal Camera Selection with Semantic Features," in *Proceedings 10th IEEE International Conference on Multimedia and Expo, ICME 2009*, (New York, NY), pp. 1298–1301, IEEE, IEEE, July 2009. (acceptance rate: about 30 %, IF\* 0.88 (2010))
- 440) M. Wöllmer, F. Eyben, J. Keshet, A. Graves, B. Schuller, and G. Rigoll, "Robust Discriminative Keyword Spotting for Emotionally Colored Spontaneous Speech Using Bidirectional LSTM Networks," in *Proceedings 34th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2009*, (Taipei, Taiwan), pp. 3949–3952, IEEE, IEEE, April 2009. (acceptance rate: 43 %, IF\* 1.16 (2010))
- 441) D. Arsić, A. Lyutskanov, B. Schuller, and G. Rigoll, "Applying Bayes Markov Chains for the Detection of ATM Related Scenarios," in *Proceedings 10th IEEE Workshop on Applications of Computer Vision, WACV 2009*, (Snowbird, UT), pp. 464–471, IEEE, IEEE, December 2009
- 442) M. Schröder, E. Bevacqua, F. Eyben, H. Gunes, D. Heylen, M. ter Maat, S. Pammi, M. Pantic, C. Pelachaud, B. Schuller, E. de Sevin, M. Valstar, and M. Wöllmer, "A Demonstration of Audiovisual Sensitive Artificial Listeners," in *Proceedings 3rd International Conference on Affective Computing and Intelligent Interaction and Workshops, ACII 2009*, vol. I, (Amsterdam, The Netherlands), pp. 263–264, HUMAINE Association, IEEE, September 2009. Best Technical Demonstration Award
- 443) F. Eyben, M. Wöllmer, and B. Schuller, "openEAR – Introducing the Munich Open-Source Emotion and Affect Recognition Toolkit," in *Proceedings 3rd International Conference on Affective Computing and Intelligent Interaction and Workshops, ACII 2009*, vol. I, (Amsterdam, The Netherlands), pp. 576–581, HUMAINE Association, IEEE, September 2009. (> 200 citations)
- 444) M. Wöllmer, F. Eyben, A. Graves, B. Schuller, and G. Rigoll, "A Tandem BLSTM-DBN Architecture for Keyword Spotting with Enhanced Context Modeling," in *Proceedings ISCA Tutorial and Research Workshop on Non-Linear Speech Processing, NOLISP 2009*, (Vic, Spain), ISCA, ISCA, June 2009. 9 pages
- 445) N. Lehment, D. Arsić, A. Lyutskanov, B. Schuller, and G. Rigoll, "Supporting Multi Camera Tracking by Monocular Deformable Graph Tracking," in *Proceedings 11th IEEE International Workshop on Performance Evaluation of Tracking and Surveillance, PETS 2009*, in Conjunction with the IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2009, (Miami, FL), pp. 87–94, IEEE, IEEE, June 2009. (acceptance rate: 26 %, IF\* 5.97 (2010))
- 446) D. Arsić, B. Schuller, B. Hörnler, and G. Rigoll, "A Hierarchical Approach for Visual Suspicious Behavior Detection in Aircrafts," in *Proceedings 16th International Conference on Digital Signal Processing, DSP 2009*, (Santorini, Greece), IEEE, IEEE, July 2009. 7 pages (acceptance rate oral: 38 %)
- 447) D. Arsić, B. Hörnler, B. Schuller, and G. Rigoll, "Resolving Partial Occlusions in Crowded Environments Utilizing Range Data and Video Cameras," in *Proceedings 16th International Conference on Digital Signal Processing, DSP 2009*, (Santorini, Greece), IEEE, IEEE, July 2009. 6 pages (acceptance rate oral: 38 %)
- 448) B. Hörnler, D. Arsić, B. Schuller, and G. Rigoll, "Graphical Models for Multi-Modal Automatic Video Editing in Meetings," in *Proceedings 16th International Conference on Digital Signal Processing, DSP 2009*, (Santorini, Greece), IEEE, IEEE, July 2009. 8 pages (acceptance rate oral: 38 %)
- 449) A. Batliner, S. Steidl, F. Eyben, and B. Schuller, "Laughter in Child-Robot Interaction," in *Proceedings Interdisciplinary Workshop on Laughter and other Interactional Vocalisations in Speech, Laughter 2009*, (Berlin, Germany), February 2009
- 450) B. Schuller, A. Batliner, S. Steidl, and D. Seppi, "Does Affect Affect Automatic Recognition of Children's Speech?," in *Proceedings 1st Workshop on Child, Computer and Interaction, WOCCI 2008, ACM ICMI 2008 post-conference workshop*, (Chania, Greece), ISCA, ISCA, October 2008. 4 pages (acceptance rate: 44 %, IF\* 1.77 (2010))
- 451) D. Seppi, M. Gerosa, B. Schuller, A. Batliner, and S. Steidl, "Detecting Problems in Spoken Child-Computer Interaction," in *Proceedings 1st Workshop on Child, Computer and Interaction, WOCCI 2008, ACM ICMI 2008 post-conference workshop*, (Chania, Greece), ISCA, ISCA, October 2008. 4 pages (acceptance rate: 44 %, IF\* 1.77 (2010))
- 452) B. Schuller, M. Wöllmer, T. Moosmayr, and G. Rigoll, "Speech Recognition in Noisy Environments using a Switching Linear Dynamic Model for Feature Enhancement," in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 1789–1792, ISCA/ASSTA, ISCA, September 2008. Special Session Human-Machine Comparisons of Consonant Recognition in Noise (Consonant Challenge) (acceptance rate: 59 %, IF\* 1.05 (2010))
- 453) B. Schuller, X. Zhang, and G. Rigoll, "Prosodic and Spectral Features within Segment-based Acoustic Modeling," in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 2370–2373, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 454) B. Schuller, M. Wimmer, D. Arsić, T. Moosmayr, and G. Rigoll, "Detection of Security Related Affect and Behaviour in Passenger Transport," in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 265–268, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 455) B. Schuller, F. Dibiasi, F. Eyben, and G. Rigoll, "One Day in Half an Hour: Music Thumbnailing Incorporating Harmony- and Rhythm Structure," in *Proceedings 6th Workshop on Adaptive Multimedia Retrieval, AMR 2008*, (Berlin, Germany), June 2008. 10 pages
- 456) B. Schuller, G. Rigoll, S. Can, and H. Feussner, "Emotion Sensitive Speech Control for Human-Robot Interaction in Minimal Invasive Surgery," in *Proceedings 17th IEEE International*

- Symposium on Robot and Human Interactive Communication, RO-MAN 2008*, (Munich, Germany), pp. 453–458, IEEE, IEEE, August 2008
- 457) B. Schuller, B. Vlasenko, D. Arsić, G. Rigoll, and A. Wendemuth, “Combining Speech Recognition and Acoustic Word Emotion Models for Robust Text-Independent Emotion Recognition,” in *Proceedings 9th IEEE International Conference on Multimedia and Expo, ICME 2008*, (Hannover, Germany), pp. 1333–1336, IEEE, IEEE, June 2008. (acceptance rate: 50 %, IF\* 0.88 (2010))
- 458) B. Schuller, M. Wimmer, L. Mösenlechner, C. Kern, D. Arsić, and G. Rigoll, “Brute-Forcing Hierarchical Functionals for Paralinguistics: a Waste of Feature Space?,” in *Proceedings 33rd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2008*, (Las Vegas, NV), pp. 4501–4504, IEEE, IEEE, April 2008. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 459) M. Wöllmer, F. Eyben, S. Reiter, B. Schuller, C. Cox, E. Douglas-Cowie, and R. Cowie, “Abandoning Emotion Classes – Towards Continuous Emotion Recognition with Modelling of Long-Range Dependencies,” in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 597–600, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010), > 100 citations)
- 460) D. Seppi, A. Batliner, B. Schuller, S. Steidl, T. Vogt, J. Wagner, L. Devillers, L. Vidrascu, N. Amir, and V. Aharonson, “Patterns, Prototypes, Performance: Classifying Emotional User States,” in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 601–604, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 461) B. Vlasenko, B. Schuller, K. T. Mengistu, G. Rigoll, and A. Wendemuth, “Balancing Spoken Content Adaptation and Unit Length in the Recognition of Emotion and Interest,” in *Proceedings INTERSPEECH 2008, 9th Annual Conference of the International Speech Communication Association, incorporating 12th Australasian International Conference on Speech Science and Technology, SST 2008*, (Brisbane, Australia), pp. 805–808, ISCA/ASSTA, ISCA, September 2008. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 462) A. Batliner, B. Schuller, S. Schaeffler, and S. Steidl, “Mothers, Adults, Children, Pets – Towards the Acoustics of Intimacy,” in *Proceedings 33rd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2008*, (Las Vegas, NV), pp. 4497–4500, IEEE, IEEE, April 2008. (acceptance rate: 50 %, IF\* 1.16 (2010))
- 463) D. Arsić, B. Schuller, and G. Rigoll, “Multiple Camera Person Tracking in multiple layers combining 2D and 3D information,” in *Proceedings Workshop on Multi-camera and Multi-modal Sensor Fusion Algorithms and Applications, M2SFA2 2008, in conjunction with 10th European Conference on Computer Vision, ECCV 2008*, (Marseille, France), pp. 1–12, October 2008. (acceptance rate: about 23 %, IF\* 5.91 (2010))
- 464) M. Schröder, R. Cowie, D. Heylen, M. Pantic, C. Pelachaud, and B. Schuller, “Towards responsive Sensitive Artificial Listeners,” in *Proceedings 4th International Workshop on Human-Computer Conversation*, (Bellagio, Italy), October 2008. 6 pages
- 465) D. Arsić, N. Lehment, E. Hristov, B. Schuller, and G. Rigoll, “Applying Multi Layer Homography for Multi Camera tracking,” in *Proceedings Workshop on Activity Monitoring by Multi-Camera Surveillance Systems, AMMCSS 2008, in conjunction with 2nd ACM/IEEE International Conference on Distributed Smart Cameras, ICDS 2008*, (Stanford, CA), ACM/IEEE, IEEE, September 2008. 9 pages
- 466) M. Wimmer, B. Schuller, D. Arsić, B. Radig, and G. Rigoll, “Low-Level Fusion of Audio and Video Features For Multi-Modal Emotion Recognition,” in *Proceedings 3rd International Conference on Computer Vision Theory and Applications, VIS-APP 2008*, (Funchal, Portugal), January 2008. 7 pages
- 467) B. Schuller, B. Vlasenko, R. Minguez, G. Rigoll, and A. Wendemuth, “Comparing One and Two-Stage Acoustic Modeling in the Recognition of Emotion in Speech,” in *Proceedings 10th Biannual IEEE Automatic Speech Recognition and Understanding Workshop, ASRU 2007*, (Kyoto, Japan), pp. 596–600, IEEE, IEEE, December 2007. (acceptance rate: 43 %)
- 468) B. Schuller, A. Batliner, D. Seppi, S. Steidl, T. Vogt, J. Wagner, L. Devillers, L. Vidrascu, N. Amir, L. Kessous, and V. Aharonson, “The Relevance of Feature Type for the Automatic Classification of Emotional User States: Low Level Descriptors and Functionals,” in *Proceedings INTERSPEECH 2007, 8th Annual Conference of the International Speech Communication Association*, (Antwerp, Belgium), pp. 2253–2256, ISCA, ISCA, August 2007. (acceptance rate: 59 %, IF\* 1.05 (2010), > 100 citations)
- 469) B. Schuller, D. Seppi, A. Batliner, A. Maier, and S. Steidl, “Towards More Reality in the Recognition of Emotional Speech,” in *Proceedings 32nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2007*, vol. IV, (Honolulu, HI), pp. 941–944, IEEE, IEEE, April 2007. (acceptance rate: 46 %, IF\* 1.16 (2010), > 100 citations)
- 470) B. Schuller, M. Wimmer, D. Arsić, G. Rigoll, and B. Radig, “Audiovisual Behavior Modeling by Combined Feature Spaces,” in *Proceedings 32nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2007*, vol. II, (Honolulu, HI), pp. 733–736, IEEE, IEEE, April 2007. (acceptance rate: 46 %, IF\* 1.16 (2010))
- 471) B. Schuller, F. Eyben, and G. Rigoll, “Fast and Robust Meter and Tempo Recognition for the Automatic Discrimination of Ballroom Dance Styles,” in *Proceedings 32nd IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2007*, vol. I, (Honolulu, HI), pp. 217–220, IEEE, IEEE, April 2007. (acceptance rate: 46 %, IF\* 1.16 (2010))
- 472) B. Vlasenko, B. Schuller, A. Wendemuth, and G. Rigoll, “Combining Frame and Turn-Level Information for Robust Recognition of Emotions within Speech,” in *Proceedings INTERSPEECH 2007, 8th Annual Conference of the International Speech Communication Association*, (Antwerp, Belgium), pp. 2249–2252, ISCA, ISCA, August 2007. (acceptance rate: 59 %, IF\* 1.05 (2010))
- 473) D. Arsić, M. Hofmann, B. Schuller, and G. Rigoll, “Multi-Camera Person Tracking and Left Luggage Detection Applying Homographic Transformation,” in *Proceedings 10th IEEE International Workshop on Performance Evaluation of Tracking and Surveillance, PETS 2007, in association with ICCV 2007* (J. M. Ferryman, ed.), (Rio de Janeiro, Brazil), pp. 55–62, IEEE, IEEE, October 2007. (acceptance rate: 24 %, IF\* 5.05 (2010))
- 474) A. Batliner, S. Steidl, B. Schuller, D. Seppi, T. Vogt, L. Devillers, L. Vidrascu, N. Amir, L. Kessous, and V. Aharonson, “The Impact of F0 Extraction Errors on the Classification of Prominence and Emotion,” in *Proceedings 16th International Congress of Phonetic Sciences, ICPhS 2007*, (Saarbrücken, Germany), pp. 2201–2204, August 2007. (acceptance rate: 66 %)
- 475) F. Eyben, B. Schuller, S. Reiter, and G. Rigoll, “Wearable Assistance for the Ballroom-Dance Hobbyist – Holistic Rhythm Analysis and Dance-Style Classification,” in *Proceedings 8th IEEE International Conference on Multimedia and Expo, ICME 2007*, (Beijing, China), pp. 92–95, IEEE, IEEE, July 2007. (acceptance rate: 45 %, IF\* 0.88 (2010))
- 476) S. Reiter, B. Schuller, and G. Rigoll, “Hidden Conditional Random Fields for Meeting Segmentation,” in *Proceedings 8th IEEE International Conference on Multimedia and Expo, ICME*

- 2007, (Beijing, China), pp. 639–642, IEEE, IEEE, July 2007. (acceptance rate: 45 %, IF\* 0.88 (2010))
- 477) D. Arsić, B. Schuller, and G. Rigoll, “Suspicious Behavior Detection In Public Transport by Fusion of Low-Level Video Descriptors,” in *Proceedings 8th IEEE International Conference on Multimedia and Expo, ICME 2007*, (Beijing, China), pp. 2018–2021, IEEE, IEEE, July 2007. (acceptance rate: 45 %, IF\* 0.88 (2010))
- 478) B. Schuller and G. Rigoll, “Timing Levels in Segment-Based Speech Emotion Recognition,” in *Proceedings INTERSPEECH 2006, 9th International Conference on Spoken Language Processing, ICSLP*, (Pittsburgh, PA), pp. 1818–1821, ISCA, ISCA, September 2006
- 479) B. Schuller, N. Köhler, R. Müller, and G. Rigoll, “Recognition of Interest in Human Conversational Speech,” in *Proceedings INTERSPEECH 2006, 9th International Conference on Spoken Language Processing, ICSLP*, (Pittsburgh, PA), pp. 793–796, ISCA, ISCA, September 2006
- 480) B. Schuller, S. Reiter, and G. Rigoll, “Evolutionary Feature Generation in Speech Emotion Recognition,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 5–8, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 481) B. Schuller, F. Wallhoff, D. Arsić, and G. Rigoll, “Musical Signal Type Discrimination Based on Large Open Feature Sets,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 1089–1092, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 482) B. Schuller, D. Arsić, F. Wallhoff, and G. Rigoll, “Emotion Recognition in the Noise Applying Large Acoustic Feature Sets,” in *Proceedings 3rd International Conference on Speech Prosody, SP 2006*, (Dresden, Germany), pp. 276–289, ISCA, ISCA, May 2006
- 483) M. Al-Hames, S. Zettl, F. Wallhoff, S. Reiter, B. Schuller, and G. Rigoll, “A Two-Layer Graphical Model for Combined Video Shot And Scene Boundary Detection,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 261–264, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 484) D. Arsić, J. Schenk, B. Schuller, F. Wallhoff, and G. Rigoll, “Submotions for Hidden Markov Model Based Dynamic Facial Action Recognition,” in *Proceedings 13th IEEE International Conference on Image Processing, ICIP 2006*, (Atlanta, GA), pp. 673–676, IEEE, IEEE, October 2006. (acceptance rate: 41 %, IF\* 0.65 (2010))
- 485) A. Batliner, S. Steidl, B. Schuller, D. Seppi, K. Laskowski, T. Vogt, L. Devillers, L. Vidrascu, N. Amir, L. Kessous, and V. Aharonson, “Combining Efforts for Improving Automatic Classification of Emotional User States,” in *Proceedings 5th Slovenian and 1st International Language Technologies Conference, ISLTC 2006*, (Ljubljana, Slovenia), pp. 240–245, Slovenian Language Technologies Society, October 2006. (> 100 citations)
- 486) S. Reiter, B. Schuller, and G. Rigoll, “A combined LSTM-RNN-HMM-Approach for Meeting Event Segmentation and Recognition,” in *Proceedings 31st IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2006*, vol. 2, (Toulouse, France), pp. 393–396, IEEE, IEEE, May 2006. (acceptance rate: 49 %, IF\* 1.16 (2010))
- 487) S. Reiter, B. Schuller, and G. Rigoll, “Segmentation and Recognition of Meeting Events Using a Two-Layered HMM and a Combined MLP-HMM Approach,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 953–956, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 488) F. Wallhoff, B. Schuller, M. Hawellek, and G. Rigoll, “Efficient Recognition of Authentic Dynamic Facial Expressions on the FEEDTUM Database,” in *Proceedings 7th IEEE International Conference on Multimedia and Expo, ICME 2006*, (Toronto, Canada), pp. 493–496, IEEE, IEEE, July 2006. (acceptance rate: 51 %, IF\* 0.88 (2010))
- 489) B. Schuller, D. Arsić, F. Wallhoff, M. Lang, and G. Rigoll, “Bioanalog Acoustic Emotion Recognition by Genetic Feature Generation Based on Low-Level-Descriptors,” in *Proceedings International Conference on Computer as a Tool, EUROCON 2005*, vol. 2, (Belgrade, Serbia and Montenegro), pp. 1292–1295, IEEE, IEEE, November 2005
- 490) B. Schuller, B. J. B. Schmitt, D. Arsić, S. Reiter, M. Lang, and G. Rigoll, “Feature Selection and Stacking for Robust Discrimination of Speech, Monophonic Singing, and Polyphonic Music,” in *Proceedings 6th IEEE International Conference on Multimedia and Expo, ICME 2005*, (Amsterdam, The Netherlands), pp. 840–843, IEEE, IEEE, July 2005. (acceptance rate: 23 %, IF\* 0.88 (2010))
- 491) B. Schuller, S. Reiter, R. Müller, M. Al-Hames, M. Lang, and G. Rigoll, “Speaker Independent Speech Emotion Recognition by Ensemble Classification,” in *Proceedings 6th IEEE International Conference on Multimedia and Expo, ICME 2005*, (Amsterdam, The Netherlands), pp. 864–867, IEEE, IEEE, July 2005. (acceptance rate: 23 %, IF\* 0.88 (2010), > 100 citations)
- 492) B. Schuller, R. J. Villar, G. Rigoll, and M. Lang, “Meta-Classifiers in Acoustic and Linguistic Feature Fusion-Based Affect Recognition,” in *Proceedings 30th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2005*, vol. 1, (Philadelphia, PA), pp. 325–328, IEEE, IEEE, March 2005. (acceptance rate: 52 %, IF\* 1.16 (2010))
- 493) D. Arsić, F. Wallhoff, B. Schuller, and G. Rigoll, “Bayesian Network Based Multi Stream Fusion for Automated Online Video Surveillance,” in *Proceedings International Conference on Computer as a Tool, EUROCON 2005*, vol. 2, (Belgrade, Serbia and Montenegro), pp. 995–998, IEEE, IEEE, November 2005
- 494) D. Arsić, F. Wallhoff, B. Schuller, and G. Rigoll, “Vision-Based Online Multi-Stream Behavior Detection Applying Bayesian Networks,” in *Proceedings 6th IEEE International Conference on Multimedia and Expo, ICME 2005*, (Amsterdam, The Netherlands), pp. 1354–1357, IEEE, IEEE, July 2005. (acceptance rate: 23 %, IF\* 0.88 (2010))
- 495) D. Arsić, F. Wallhoff, B. Schuller, and G. Rigoll, “Video Based Online Behavior Detection Using Probabilistic Multi-Stream Fusion,” in *Proceedings 12th IEEE International Conference on Image Processing, ICIP 2005*, vol. 2, (Genova, Italy), pp. 606–609, IEEE, IEEE, September 2005. (acceptance rate: about 45 %, IF\* 0.65 (2010))
- 496) R. Müller, S. Schreiber, B. Schuller, and G. Rigoll, “A System Structure for Multimodal Emotion Recognition in Meeting Environments,” in *Proceedings 2nd International Workshop on Machine Learning for Multimodal Interaction, MLMI 2005* (S. Renals and S. Bengio, eds.), (Edinburgh, UK), July 2005. 2 pages
- 497) F. Wallhoff, B. Schuller, and G. Rigoll, “Speaker Identification – Comparing Linear Regression Based Adaptation and Acoustic High-Level Features,” in *Proceedings 31. Jahrestagung für Akustik, DAGA 2005*, (Munich, Germany), pp. 221–222, DEGA, DEGA, March 2005
- 498) F. Wallhoff, D. Arsić, B. Schuller, J. Stadermann, A. Störmer, and G. Rigoll, “Hybrid Profile Recognition on the Mugshot Database,” in *Proceedings International Conference on Computer as a Tool, EUROCON 2005*, vol. 2, (Belgrade, Serbia and Montenegro), pp. 1405–1408, IEEE, IEEE, November 2005
- 499) B. Schuller, G. Rigoll, and M. Lang, “Multimodal Music Retrieval for Large Databases,” in *Proceedings 5th IEEE International Conference on Multimedia and Expo, ICME 2004*, vol. 2, (Taipei, Taiwan), pp. 755–758, IEEE, IEEE, June 2004. Special Session Novel Techniques for Browsing in Large Multimedia Collections (acceptance rate: 30 %, IF\* 0.88 (2010))
- 500) B. Schuller, G. Rigoll, and M. Lang, “Discrimination of Speech and Monophonic Singing in Continuous Audio Streams Apply-

- ing Multi-Layer Support Vector Machines,” in *Proceedings 5th IEEE International Conference on Multimedia and Expo, ICME 2004*, vol. 3, (Taipei, Taiwan), pp. 1655–1658, IEEE, IEEE, June 2004. (acceptance rate: 30 %, IF\* 0.88 (2010))
- 501) B. Schuller, G. Rigoll, and M. Lang, “Emotion Recognition in the Manual Interaction with Graphical User Interfaces,” in *Proceedings 5th IEEE International Conference on Multimedia and Expo, ICME 2004*, vol. 2, (Taipei, Taiwan), pp. 1215–1218, IEEE, IEEE, June 2004. (acceptance rate: 30 %, IF\* 0.88 (2010))
- 502) B. Schuller, R. Müller, G. Rigoll, and M. Lang, “Applying Bayesian Belief Networks in Approximate String Matching for Robust Keyword-based Retrieval,” in *Proceedings 5th IEEE International Conference on Multimedia and Expo, ICME 2004*, vol. 3, (Taipei, Taiwan), pp. 1999–2002, IEEE, IEEE, June 2004. (acceptance rate: 30 %, IF\* 0.88 (2010))
- 503) B. Schuller, G. Rigoll, and M. Lang, “Speech Emotion Recognition Combining Acoustic Features and Linguistic Information in a Hybrid Support Vector Machine-Belief Network Architecture,” in *Proceedings 29th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2004*, vol. I, (Montreal, Canada), pp. 577–580, IEEE, IEEE, May 2004. (acceptance rate: 54 %, IF\* 1.16 (2010), > 200 citations)
- 504) R. Müller, B. Schuller, and G. Rigoll, “Enhanced Robustness in Speech Emotion Recognition Combining Acoustic and Semantic Analysis,” in *Proceedings HUMAINE Workshop From Signals to Signs of Emotion and Vice Versa*, (Santorini, Greece), p. 2 pages, HUMAINE, September 2004
- 505) R. Müller, B. Schuller, and G. Rigoll, “Belief Networks in Natural Language Processing for Improved Speech Emotion Recognition,” in *Proceedings 1st International Workshop on Machine Learning for Multimodal Interaction, MLMI 2004* (S. Bengio and H. Bourlard, eds.), (Martigny, Switzerland), June 2004. 1 page
- 506) B. Schuller, G. Rigoll, and M. Lang, “Sprachliche Emotionserkennung im Fahrzeug,” in *Proc. 45. Fachausschussitzung Anthropotechnik, Entscheidungsunterstützung für die Fahrzeug- und Prozessführung*, vol. DGLR Bericht 2003-04, (Neubiberg, Germany), pp. 227–240, Deutsche Gesellschaft für Luft- und Raumfahrt, Deutsche Gesellschaft für Luft- und Raumfahrt, October 2003
- 507) B. Schuller, G. Rigoll, and M. Lang, “Hidden Markov Model-based Speech Emotion Recognition,” in *Proceedings 4th IEEE International Conference on Multimedia and Expo, ICME 2003*, vol. I, (Baltimore, MD), pp. 401–404, IEEE, IEEE, July 2003. (acceptance rate: 58 %, IF\* 0.88 (2010))
- 508) B. Schuller, M. Zobl, G. Rigoll, and M. Lang, “A Hybrid Music Retrieval System using Belief Networks to Integrate Queries and Contextual Knowledge,” in *Proceedings 4th IEEE International Conference on Multimedia and Expo, ICME 2003*, vol. I, (Baltimore, MD), pp. 57–60, IEEE, IEEE, July 2003. (acceptance rate: 58 %, IF\* 0.88 (2010))
- 509) B. Schuller, G. Rigoll, and M. Lang, “HMM-Based Music Retrieval Using Stereophonic Feature Information and Frame-length Adaptation,” in *Proceedings 4th IEEE International Conference on Multimedia and Expo, ICME 2003*, vol. II, (Baltimore, MD), pp. 713–716, IEEE, IEEE, July 2003. (acceptance rate: 58 %, IF\* 0.88 (2010))
- 510) B. Schuller, G. Rigoll, and M. Lang, “Hidden Markov Model-based Speech Emotion Recognition,” in *Proceedings 28th IEEE International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2003*, vol. II, (Hong Kong, China), pp. 1–4, IEEE, IEEE, April 2003. (acceptance rate: 54 %, IF\* 1.16 (2010), > 300 citations)
- 511) M. Zobl, M. Geiger, B. Schuller, G. Rigoll, and M. Lang, “A Realtime System for Hand-Gesture Controlled Operation of In-Car Devices,” in *Proceedings 4th IEEE International Conference on Multimedia and Expo, ICME 2003*, vol. III, (Baltimore, MD), pp. 541–544, IEEE, IEEE, July 2003. (acceptance rate: 58 %, IF\* 0.88 (2010))
- 512) B. Schuller, “Towards intuitive speech interaction by the integration of emotional aspects,” in *Proceedings IEEE International Conference on Systems, Man and Cybernetics, SMC 2002*, vol. 6, (Yasmine Hammamet, Tunisia), IEEE, IEEE, October 2002. 6 pages
- 513) B. Schuller, F. Althoff, G. McGlaun, M. Lang, and G. Rigoll, “Towards Automation of Usability Studies,” in *Proceedings IEEE International Conference on Systems, Man and Cybernetics, SMC 2002*, vol. 5, (Yasmine Hammamet, Tunisia), IEEE, IEEE, October 2002. 6 pages
- 514) B. Schuller, M. Lang, and G. Rigoll, “Multimodal Emotion Recognition in Audiovisual Communication,” in *Proceedings 3rd IEEE International Conference on Multimedia and Expo, ICME 2002*, vol. 1, (Lausanne, Switzerland), pp. 745–748, IEEE, IEEE, February 2002. (acceptance rate: 50 %, IF\* 0.88 (2010))
- 515) B. Schuller, M. Lang, and G. Rigoll, “Automatic Emotion Recognition by the Speech Signal,” in *Proceedings 6th World Multiconference on Systemics, Cybernetics and Informatics, SCI 2002*, vol. IX, (Orlando, FL), pp. 367–372, SCI, SCI, July 2002
- 516) B. Schuller and M. Lang, “Integrative rapid-prototyping for multimodal user interfaces,” in *Proceedings USEWARE 2002, Mensch – Maschine – Kommunikation /Design*, vol. VDI report #1678, (Darmstadt, Germany), pp. 279–284, VDI, VDI-Verlag, June 2002
- 517) F. Althoff, K. Geiss, G. McGlaun, B. Schuller, and M. Lang, “Experimental Evaluation of User Errors at the Skill-Based Level in an Automotive Environment,” in *Proceedings International Conference on Human Factors in Computing Systems, CHI 2002*, (Minneapolis, MN), pp. 782–783, ACM, ACM, April 2002. (acceptance rate: 15 %, IF\* 6.37 (2010))
- 518) F. Althoff, G. McGlaun, B. Schuller, M. Lang, and G. Rigoll, “Evaluating Misinterpretations during Human-Machine Communication in Automotive Environments,” in *Proceedings 6th World Multiconference on Systemics, Cybernetics and Informatics, SCI 2002*, vol. VII, (Orlando, FL), SCI, SCI, July 2002. 5 pages
- 519) G. McGlaun, F. Althoff, B. Schuller, and M. Lang, “A new technique for adjusting distraction moments in multitasking non-field usability tests,” in *Proceedings International Conference on Human Factors in Computing Systems, CHI 2002*, (Minneapolis, MN), pp. 666–667, ACM, ACM, April 2002. (acceptance rate: 15 %, IF\* 6.37 (2010))
- 520) B. Schuller, F. Althoff, G. McGlaun, and M. Lang, “Navigation in virtual worlds via natural speech,” in *Proceedings 9th International Conference on Human-Computer Interaction, HCI 2001* (C. Stephanidis, ed.), (New Orleans, LA), pp. 19–21, Lawrence Erlbaum, August 2001
- 521) F. Althoff, G. McGlaun, B. Schuller, P. Morguet, and M. Lang, “Using Multimodal Interaction to Navigate in Arbitrary Virtual VRML Worlds,” in *Proceedings 3rd International Workshop on Perceptive User Interfaces, PUI 2001*, (Orlando, FL), ACM, ACM, November 2001. 8 pages (acceptance rate: 29 %)

#### D) PATENTS (4)

- 522) B. Schuller, F. Weninger, C. Kirst, and P. Grosche, “Apparatus and Method for Improving a Perception of a Sound Signal,” November 2013. WO2015070918 A1, Huawei Technologies Co Ltd, Technische Universität München, international patent, pending
- 523) C. Joder, F. Weninger, B. Schuller, and D. Virette, “Method for Determining a Dictionary of Base Components from an Audio Signal,” November 2012. EP73149, Huawei Technologies Co Ltd, Technische Universität München, European/US patent, pending
- 524) C. Joder, F. Weninger, B. Schuller, and D. Virette, “Method and Device for Reconstructing a Target Signal from a Noisy Input Signal,” November 2012. US9536538 (B2), Huawei



Technologies Co Ltd, Technische Universität München, US patent, granted

- 525) F. Burkhardt and B. Schuller, "Method and system for training speech processing devices," November 2009. EP2325836, Deutsche Telekom AG, Technische Universität München, European patent, pending

#### E) OTHER

##### Theses (3):

- 526) B. Schuller, *Intelligent Audio Analysis – Speech, Music, and Sound Recognition in Real-Life Conditions*. Habilitation thesis, Technische Universität München, Munich, Germany, July 2012. 313 pages
- 527) B. Schuller, *Automatische Emotionserkennung aus sprachlicher und manueller Interaktion*. Doctoral thesis, Technische Universität München, Munich, Germany, June 2006. 244 pages
- 528) B. Schuller, "Automatisches Verstehen gesprochener mathematischer Formeln," diploma thesis, Technische Universität München, Munich, Germany, October 1999

##### Editorials / Edited Volumes (51):

- 529) B. Schuller, "Editorial: Transactions on Affective Computing - Challenges and Chances," *IEEE Transactions on Affective Computing*, vol. 8, pp. 1–2, January–March 2017. (IF: 3.466, 5-year IF: 3.871 (2013))
- 530) B. W. Schuller, L. Paletta, P. Robinson, N. Sabouret, and G. N. Yannakakis, "Guest Editorial: Computational Intelligence in Serious Digital Games," *IEEE Transactions on Computational Intelligence and AI in Games, Special Issue on Computational Intelligence in Serious Digital Games*, 2017. (IF: 1.481 (2014))
- 531) F. Ringeval, M. Valstar, J. Gratch, B. Schuller, R. Cowie, and M. Pantic, eds., *Proceedings of the 7th International Workshop on Audio/Visual Emotion Challenge, AVEC'17, co-located with MM 2017*, (Mountain View, CA), ACM, ACM, October 2017. to appear
- 532) M. Soleymani, B. Schuller, and S.-F. Chang, "Guest Editorial: Multimodal Sentiment Analysis and Mining in the Wild," *Image and Vision Computing, Special Issue on Multimodal Sentiment Analysis and Mining in the Wild*, vol. 35, 2017. 2 pages, to appear (IF: 1.766, 5-Year IF: 2.584 (2015))
- 533) S. Squartini, B. Schuller, A. Uncini, and C.-K. Ting, "Guest Editorial: Computational Intelligence for End-to-End Audio Processing," *IEEE Transaction on Emerging Topics in Computational Intelligence, Special Issue of Computational Intelligence for End-to-End Audio Processing*, 2017. to appear
- 534) K. Veselkov and B. Schuller, "Guest Editorial: Translational data analytics and health informatics," *Methods, Special Issue on on Translational data analytics and health informatics*, 2017. to appear (IF: 3.503, 5-year IF: 3.789 (2015))
- 535) B. Schuller, "Editorial: Transactions on Affective Computing - Changes and Continuance," *IEEE Transactions on Affective Computing*, vol. 7, pp. 1–2, January–March 2016. (IF: 3.466, 5-year IF: 3.871 (2013))
- 536) L. Devillers, B. Schuller, E. Mower Provost, P. Robinson, J. Mariani, and A. Delaborde, eds., *Proceedings of the 1st International Workshop on ETHics In Corpus Collection, Annotation and Application (ETHI-CA<sup>2</sup> 2016)*, (Portoroz, Slovenia), ELRA, ELRA, May 2016. Satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)
- 537) F. Ringeval, B. Schuller, M. Valstar, J. Gratch, R. Cowie, and M. Pantic, "Introduction to the Special Section on Multimedia Computing and Applications of Socioaffective Behaviors in the Wild," *ACM Transactions on Multimedia Computing, Communications and Applications*, 2016. editorial, to appear (IF: 0.904 (2013))
- 538) J. Sánchez-Rada and B. Schuller, eds., *Proceedings of the 6th International Workshop on Emotion and Sentiment Analysis (ESA 2016)*, (Portoroz, Slovenia), ELRA, ELRA, May 2016. Satellite of the 10th Language Resources and Evaluation Conference (LREC 2016)
- 539) M. Valstar, J. Gratch, B. Schuller, F. Ringeval, R. Cowie, and M. Pantic, eds., *Proceedings of the 6th International Workshop on Audio/Visual Emotion Challenge, AVEC'16, co-located with MM 2016*, (Amsterdam, The Netherlands), ACM, ACM, October 2016
- 540) K. Hartmann, I. Siegert, B. Schuller, L.-P. Morency, A. A. Salah, and R. Böck, eds., *Proceedings of the Workshop on Emotion Representations and Modelling for Companion Systems, ERM4CT 2015*, (Seattle, WA), ACM, ACM, November 2015. held in conjunction with the 17th ACM International Conference on Multimodal Interaction, ICMI 2015
- 541) K. Hartmann, I. Siegert, B. Schuller, L.-P. Morency, A. A. Salah, and R. Böck, "ERM4CT 2015 - Workshop on Emotion Representations and Modelling for Companion Systems," in *Proceedings of the Workshop on Emotion Representations and Modelling for Companion Systems, ERM4CT 2015* (K. Hartmann, I. Siegert, B. Schuller, L.-P. Morency, A. A. Salah, and R. Böck, eds.), (Seattle, WA), ACM, ACM, November 2015. 2 pages, held in conjunction with the 17th ACM International Conference on Multimodal Interaction, ICMI 2015
- 542) E. Cambria, B. Schuller, Y. Xia, and B. White, "New Avenues in Knowledge Bases for Natural Language Processing," *Knowledge-Based Systems, Special Issue on New Avenues in Knowledge Bases for Natural Language Processing*, vol. C, no. 108, pp. 1–4, 2016. editorial (IF: 3.058, 5-year IF: 2.920 (2013))
- 543) B. Schuller, S. Steidl, A. Batliner, A. Vinciarelli, F. Burkhardt, and R. van Son, "Introduction to the Special Issue on Next Generation Computational Paralinguistics," *Computer Speech and Language, Special Issue on Next Generation Computational Paralinguistics*, vol. 29, pp. 98–99, January 2015. editorial (acceptance rate: 23 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 544) L. Paletta, B. W. Schuller, P. Robinson, and N. Sabouret, "IDGEI 2015: 3rd international workshop on intelligent digital games for empowerment and inclusion," in *Proceedings of the 20th ACM International Conference on Intelligent User Interfaces, IUI 2015*, (Atlanta, GA), pp. 450–452, ACM, ACM, March 2015
- 545) L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds., *IDGEI 2015 - 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion*, (Atlanta, GA), ACM, ACM, March 2015. held in conjunction with the 20th International Conference on Intelligent User Interfaces, IUI 2015
- 546) F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds., *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, AVEC'15, co-located with MM 2015*, (Brisbane, Australia), ACM, ACM, October 2015
- 547) F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, "AVEC 2015 Chairs' Welcome," in *Proceedings of the 5th International Workshop on Audio/Visual Emotion Challenge, AVEC'15, co-located with the 23rd ACM International Conference on Multimedia, MM 2015* (F. Ringeval, B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds.), (Brisbane, Australia), p. iii, ACM, ACM, October 2015
- 548) B. Schuller, S. Steidl, A. Batliner, A. Vinciarelli, F. Burkhardt, and R. van Son, "Introduction to the Special Issue on Next Generation Computational Paralinguistics," *Computer Speech and Language, Special Issue on Next Generation Computational Paralinguistics*, vol. 29, pp. 98–99, January 2015. editorial (acceptance rate: 23 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 549) B. Schuller, T. H. Falk, V. Parsa, and E. Nöth, "Introduction to the Special Issue on Atypical Speech & Voices: Corpora, Classification, Coaching & Conversion," *EURASIP Journal on Audio, Speech, and Music Processing, Special Issue on Atypical Speech & Voices: Corpora, Classification, Coaching & Conversion*, 2015. to appear (IF: 0.630 (2012))

- 550) B. Schuller, P. Buitelaar, L. Devillers, C. Pelachaud, T. Declerck, A. Batliner, P. Rosso, and S. Gaines, eds., *Proceedings of the 5th International Workshop on Emotion Social Signals, Sentiment & Linked Open Data (ES<sup>3</sup>LOD 2014)*, (Reykjavik, Iceland), ELRA, ELRA, May 2014. Satellite of the 9th Language Resources and Evaluation Conference (LREC 2014), (acceptance rate: 72 %)
- 551) H. Gunes, B. Schuller, O. Celiktutan, E. Sariyanidi, and F. Eyben, eds., *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014)*, (Istanbul, Turkey), ACM, ACM, November 2014. Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)
- 552) H. Gunes, B. Schuller, O. Celiktutan, E. Sariyanidi, and F. Eyben, "MAPTRAITS'14 Foreword," in *Proceedings of the Personality Mapping Challenge & Workshop (MAPTRAITS 2014), Satellite of the 16th ACM International Conference on Multimodal Interaction (ICMI 2014)*, (Istanbul, Turkey), p. iii, ACM, ACM, November 2014
- 553) K. Hartmann, R. Böck, B. Schuller, and K. R. Scherer, eds., *Proceedings of the 2nd Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2014*, (Istanbul, Turkey), ACM, ACM, November 2013. held in conjunction with the 16th ACM International Conference on Multimodal Interaction, ICMI 2014
- 554) K. Hartmann, K. R. Scherer, B. Schuller, and R. Böck, "Welcome to the ERM4HCI 2014!," in *Proceedings of the 2nd Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2014* (K. Hartmann, R. Böck, B. Schuller, and K. Scherer, eds.), (Istanbul, Turkey), p. iii, ACM, ACM, November 2014. held in conjunction with the 16th ACM International Conference on Multimodal Interaction, ICMI 2014
- 555) L. Paletta, B. W. Schuller, P. Robinson, and N. Sabouret, "IDGEI 2014: 2nd international workshop on intelligent digital games for empowerment and inclusion," in *Proceedings of the companion publication of the 19th international conference on Intelligent User Interfaces, IUI Companion 2014*, (Haifa, Israel), pp. 49–50, ACM, ACM, February 2014
- 556) L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds., *IDGEI 2014 - 2nd International Workshop on Intelligent Digital Games for Empowerment and Inclusion*, (Haifa, Israel), ACM, ACM, February 2014. held in conjunction with the 19th International Conference on Intelligent User Interfaces, IUI 2014
- 557) L. Paletta, B. Schuller, P. Robinson, and N. Sabouret, eds., *Proceedings of the 2nd International Workshop on Digital Games for Empowerment and Inclusion, IDGEI 2014*, (Haifa, Israel), ACM, ACM, February 2014. held in conjunction with the 19th International Conference on Intelligent User Interfaces, IUI 2014
- 558) M. Valstar, B. Schuller, J. Krajewski, R. Cowie, and M. Pantic, "AVEC 2014: the 4th International Audio/Visual Emotion Challenge and Workshop," in *Proceedings of the 22nd ACM International Conference on Multimedia, MM 2014*, (Orlando, FL), pp. 1243–1244, ACM, ACM, November 2014
- 559) A. A. Salah, J. Cohn, B. Schuller, O. Aran, L.-P. Morency, and P. R. Cohen, "ICMI 2014 Chairs' Welcome," in *Proceedings of the 16th ACM International Conference on Multimodal Interaction, ICMI*, (Istanbul, Turkey), pp. iii–v, ACM, ACM, November 2014. editorial, (acceptance rate: 40 %, IF\* 1.77 (2010))
- 560) B. Schuller, L. Paletta, and N. Sabouret, "Intelligent Digital Games for Empowerment and Inclusion – An Introduction," in *Proceedings 1st International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2013) held in conjunction with the 8th Foundations of Digital Games 2013 (FDG)* (B. Schuller, L. Paletta, and N. Sabouret, eds.), (Chania, Greece), ACM, SASDG, May 2013. 2 pages
- 561) B. Schuller, M. Valstar, R. Cowie, J. Krajewski, and M. Pantic, eds., *Proceedings of the 3rd ACM international workshop on Audio/visual emotion challenge*, (Barcelona, Spain), ACM, ACM, October 2013. held in conjunction with the 21st ACM international conference on Multimedia, ACM MM 2013
- 562) J. Epps, F. Chen, S. Oviatt, K. Mase, A. Sears, K. Jokinen, and B. Schuller, "ICMI 2013 Chairs' Welcome," in *Proceedings of the 15th ACM International Conference on Multimodal Interaction, ICMI*, (Sydney, Australia), pp. 3–4, ACM, ACM, December 2013. editorial, (acceptance rate: 37 %, IF\* 1.77 (2010))
- 563) K. Hartmann, R. Böck, C. Becker-Asano, J. Gratch, B. Schuller, and K. R. Scherer, eds., *Proceedings of the Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2013*, (Sydney, Australia), ACM, ACM, December 2013. held in conjunction with the 15th ACM International Conference on Multimodal Interaction, ICMI 2013
- 564) K. Hartmann, R. Böck, C. Becker-Asano, J. Gratch, B. Schuller, and K. R. Scherer, "ERM4HCI 2013 - The 1st Workshop on Emotion Representation and Modelling in Human-Computer-Interaction-Systems," in *Proceedings of the Workshop on Emotion representation and modelling in Human-Computer-Interaction-Systems, ERM4HCI 2013* (K. Hartmann, R. Böck, C. Becker-Asano, J. Gratch, B. Schuller, and K. R. Scherer, eds.), (Sydney, Australia), ACM, ACM, December 2013. held in conjunction with the 15th ACM International Conference on Multimodal Interaction, ICMI 2013
- 565) M. Müller, S. S. Narayanan, and B. Schuller, eds., *Report from Dagstuhl Seminar 13451 – Computational Audio Analysis*, vol. 3 of *Dagstuhl Reports*, (Dagstuhl, Germany), Schloss Dagstuhl, Leibniz-Zentrum fuer Informatik, Dagstuhl Publishing, November 2013. 28 pages
- 566) L. Paletta, L. Itti, B. Schuller, and F. Fang, eds., *Proceedings of the 6th International Symposium on Attention in Cognitive Systems 2013, ISACS 2013*, LNAI, (Beijing, P.R. China), arxiv.org, Springer, August 2013. held in conjunction with the 23rd International Joint Conference on Artificial Intelligence, IJCAI 2013
- 567) B. Schuller, M. Valstar, R. Cowie, and M. Pantic, "AVEC 2012: the continuous audio/visual emotion challenge – an introduction," in *Proceedings of the 14th ACM International Conference on Multimodal Interaction, ICMI* (L.-P. Morency, D. Bohus, H. K. Aghajan, J. Cassell, A. Nijholt, and J. Epps, eds.), (Santa Monica, CA), pp. 361–362, ACM, ACM, October 2012. (acceptance rate: 36 %, IF\* 1.77 (2010))
- 568) B. Schuller, S. Steidl, and A. Batliner, "Introduction to the Special Issue on Paralinguistics in Naturalistic Speech and Language," *Computer Speech and Language, Special Issue on Paralinguistics in Naturalistic Speech and Language*, vol. 27, pp. 1–3, January 2013. editorial (acceptance rate: 36 %, IF: 1.812, 5-year IF: 1.776 (2013))
- 569) H. Gunes and B. Schuller, "Introduction to the Special Issue on Affect Analysis in Continuous Input," *Image and Vision Computing, Special Issue on Affect Analysis in Continuous Input*, vol. 31, pp. 118–119, February 2013. (IF: 1.723, 5-Year IF: 1.743 (2011))
- 570) B. Schuller, E. Douglas-Cowie, and A. Batliner, "Guest Editorial: Special Section on Naturalistic Affect Resources for System Building and Evaluation," *IEEE Transactions on Affective Computing, Special Issue on Naturalistic Affect Resources for System Building and Evaluation*, vol. 3, pp. 3–4, January–March 2012. (IF: 3.466, 5-year IF: 3.871 (2013))
- 571) E. Cambria, A. Hussain, B. Schuller, and N. Howard, "Guest Editorial Introduction Affective Neural Networks and Cognitive Learning Systems for Big Data Analysis," *Neural Networks, Special Issue on Affective Neural Networks and Cognitive Learning Systems for Big Data Analysis*, vol. 58, pp. 1–3, October 2014. editorial (IF: 2.182, 5-year IF: 2.477 (2012))
- 572) E. Cambria, B. Schuller, B. Liu, H. Wang, and C. Havasi,

- “Guest Editor’s Introduction: Knowledge-based Approaches to Concept-Level Sentiment Analysis,” *IEEE Intelligent Systems Magazine, Special Issue on Statistical Approaches to Concept-Level Sentiment Analysis*, vol. 28, pp. 12–14, March/April 2013. (IF: 2.570, 5-year IF: 2.632 (2010))
- 573) E. Cambria, B. Schuller, B. Liu, H. Wang, and C. Havasi, “Guest Editor’s Introduction: Statistical Approaches to Concept-Level Sentiment Analysis,” *IEEE Intelligent Systems Magazine, Special Issue on Statistical Approaches to Concept-Level Sentiment Analysis*, vol. 28, pp. 6–9, May/June 2013. (IF: 2.570, 5-year IF: 2.632 (2010))
- 574) L. Devillers, B. Schuller, A. Batliner, P. Rosso, E. Douglas-Cowie, R. Cowie, and C. Pelachaud, eds., *Proceedings of the 4th International Workshop on EMOTION SENTIMENT & SOCIAL SIGNALS 2012 (ES 2012) – Corpora for Research on Emotion, Sentiment & Social Signals*, (Istanbul, Turkey), ELRA, ELRA, May 2012. held in conjunction with LREC 2012
- 575) J. Epps, R. Cowie, S. Narayanan, B. Schuller, and J. Tao, “Editorial Emotion and Mental State Recognition from Speech,” *EURASIP Journal on Advances in Signal Processing, Special Issue on Emotion and Mental State Recognition from Speech*, vol. 2012, no. 15, 2012. 2 pages (acceptance rate: 38%, IF: 1.012, 5-Year IF: 1.136 (2010))
- 576) S. Squartini, B. Schuller, and A. Hussain, “Cognitive and Emotional Information Processing for Human-Machine Interaction,” *Cognitive Computation, Special Issue on Cognitive and Emotional Information Processing for Human-Machine Interaction*, vol. 4, pp. 383–385, August 2012. (IF: 1.000 (2011))
- 577) B. Schuller, S. Steidl, and A. Batliner, “Introduction to the Special Issue on Sensing Emotion and Affect – Facing Realism in Speech Processing,” *Speech Communication, Special Issue Sensing Emotion and Affect - Facing Realism in Speech Processing*, vol. 53, pp. 1059–1061, November/December 2011. (acceptance rate: 38%, IF: 1.267, 5-year IF: 1.526 (2011))
- 578) B. Schuller, M. Valstar, R. Cowie, and M. Pantic, eds., *Proceedings of the First International Audio/Visual Emotion Challenge and Workshop, AVEC 2011*, vol. 6975, Part II of *Lecture Notes on Computer Science (LNCS)*, (Memphis, TN), HUMAINE Association, Springer, October 2011. held in conjunction with the International HUMAINE Association Conference on Affective Computing and Intelligent Interaction 2011, ACII 2011
- 579) L. Devillers, B. Schuller, R. Cowie, E. Douglas-Cowie, and A. Batliner, eds., *Proceedings of the 3rd International Workshop on EMOTION: Corpora for Research on Emotion and Affect*, (Valletta, Malta), ELRA, ELRA, May 2010. Satellite of 7th International Conference on Language Resources and Evaluation (LREC 2010) (acceptance rate: 69%, IF\* 1.37 (2010))
- Abstracts in Journals (6):*
- 580) F. B. Pokorny, B. W. Schuller, I. Tomantschger, D. Zhang, C. Einspieler, and P. B. Marschik, “Intelligent pre-linguistic vocalisation analysis: a promising novel approach for the earlier identification of Rett syndrome,” *Wiener Medizinische Wochenschrift*, vol. 166, pp. 382–383, July 2016. Rett Syndrome – RTT50.1 (IF: 0.56 (2015))
- 581) B. Schuller, “Approaching Cross-Audio Computer Audition,” *Dagstuhl Reports*, vol. 3, pp. 22–22, November 2013
- 582) F. Metze, X. Anguera, S. Ewert, J. Gemmeke, D. Kolossa, E. M. Provost, B. Schuller, and J. Serrà, “Learning of Units and Knowledge Representation,” *Dagstuhl Reports*, vol. 3, pp. 13–13, November 2013
- 583) B. Schuller, S. Fridenzon, S. Tal, E. Marchi, A. Batliner, and O. Golan, “Learning the Acoustics of Autism-Spectrum Emotional Expressions – A Children’s Game?,” *Neuropsychiatrie de l’Enfance et de l’Adolescence*, vol. 60, p. 32, July 2012. invited contribution
- 584) B. Schuller, “Next Gen Music Analysis: Some Inspirations from Speech,” *Dagstuhl Reports*, vol. 1, no. 1, pp. 93–93, 2011
- 585) S. Ewert, M. Goto, P. Grosche, F. Kaiser, K. Yoshii, F. Kurth, M. Mauch, M. Müller, G. Peeters, G. Richard, and B. Schuller, “Signal Models for and Fusion of Multimodal Information,” *Dagstuhl Reports*, vol. 1, no. 1, pp. 97–97, 2011
- Abstracts in Conference/Challenge Proceedings (22)*
- 586) N. Cummins, S. Hantke, S. Schlieder, J. Krajewski, and B. Schuller, “Classifying the Context and Emotion of Dog Barks: A Comparison of Acoustic Feature Representations,” in *Proceedings Pre-Conference on Affective Computing 2017 SAS Annual Conference*, (Boston, MA), pp. 14–15, Society for Affective Science (SAS), April 2017
- 587) J. Guo, K. Qian, B. Schuller, and S. Matsuoka, “GPU Processing Accelerates Training Autoencoders for Bird Sounds Data,” in *Proceedings 2017 GPU Technology Conference (GTC)*, (San Jose, CA), NVIDIA, May 2017. 1 page
- 588) F. B. Pokorny, B. W. Schuller, K. D. Bartl-Pokorny, D. Zhang, C. Einspieler, and P. B. Marschik, “In a bad mood? Automatic audio-based recognition of infant fussing and crying in videotaped vocalisations,” in *Proceedings 2017 13th International Infant Cry Workshop*, (Castel Noarna-Rovereto, Italy), July 2017. 1 page
- 589) B. Schuller, “Engage to Empower: Emotionally Intelligent Computer Games & Robots for Autistic Children,” in *Proceedings “The world innovations combining medicine, engineering and technology in autism diagnosis and therapy”* (A. Rynkiewicz and K. Grabowski, eds.), (Rzeszow, Poland), pp. 65–67, SOLIS RADIUS, September 2016
- 590) B. Schuller, “Zaangazowanie aby wzmacniac kompetencje: emocjonalnie inteligentne roboty i gry komputerow dla dzieci z autyzmem,” in *Proceedings “Swiatowe innowacje laczące medycynę, inżynierie oraz technologie w diagnozowaniu i terapii autyzmu”* (A. Rynkiewicz and K. Grabowski, eds.), (Rzeszow, Poland), pp. 62–64, SOLIS RADIUS, September 2016
- 591) F. B. Pokorny, B. W. Schuller, K. D. Bartl-Pokorny, C. Einspieler, and P. B. Marschik, “Contributing to the early identification of Rett syndrome: Automated analysis of vocalisations from the pre-regression period,” in *Proceedings Symposium of the Austrian Physiological Society 2016*, (Graz, Austria), ÖPG, ÖPG, October 2016. 1 page, Best Poster award 3rd place
- 592) F. B. Pokorny, B. W. Schuller, R. Peharz, F. Pernkopf, K. D. Bartl-Pokorny, C. Einspieler, and P. B. Marschik, “Contributing to the early identification of neurodevelopmental disorders: The retrospective analysis of pre-linguistic vocalisations in home video material,” in *Proceedings IX Congreso Internacional y XIV Nacional de Psicología Clínica*, (Santander, Spain), November 2016. 1 page
- 593) F. B. Pokorny, B. W. Schuller, R. Peharz, F. Pernkopf, K. D. Bartl-Pokorny, C. Einspieler, and P. B. Marschik, “Retrospektive Analyse frühkindlicher Lautäußerungen in „Home-Videos“: Ein signalanalytischer Ansatz zur Früherkennung von Entwicklungsstörungen,” in *Proceedings 42. Österreichische Linguistiktagung, ÖLT*, (Graz, Austria), November 2016. 1 page
- 594) O. Rudovic, V. Evers, M. Pantic, B. Schuller, and S. Petrovic, “DE-ENIGMA Robots: Playfully Empowering Children with Autism,” in *Proceedings XI Autism-Europe International Congress*, (Edinburgh, Scotland), Autism Europe, The National Autistic Society, September 2016. 1 page
- 595) O. Rudovic, J. Lee, B. Schuller, and R. Picard, “Automated Measurement of Engagement of Children with Autism Spectrum Conditions during Human-Robot Interaction (HRI),” in *Proceedings XI Autism-Europe International Congress*, (Edinburgh, Scotland), Autism Europe, The National Autistic Society, September 2016. 1 page
- 596) B. Schuller, “Modelling User Affect and Sentiment in Intelligent User Interfaces: a Tutorial Overview,” in *Proceedings of the 20th ACM International Conference on Intelligent User Interfaces, IUI 2015*, (Atlanta, GA), pp. 443–446, ACM, ACM, March 2015

- 597) F. B. Pokorny, C. Einspieler, D. Zhang, A. Kimmerle, K. D. Bartl-Pokorny, B. W. Schuller, and S. Bölte, "The Voice of Autism: An Acoustic Analysis of Early Vocalisations," in *COST ESSEA Conference 2014 Book of Abstracts*, (Toulouse, France), September 2014. 1 page
- 598) B. Schuller, "Interfaces Seeing and Hearing the User," in *Proceedings The Rank Prize Funds Symposium on Natural User Interfaces, Augmented Reality and Beyond: Challenges at the Intersection of HCI and Computer Vision*, (Grasmere, UK), The Rank Prize Funds, The Rank Prize Funds, November 2013. invited contribution, 1 page
- 599) G. Ferroni, E. Marchi, F. Eyben, S. Squartini, and B. Schuller, "Onset Detection Exploiting Wavelet Transform with Bidirectional Long Short-Term Memory Neural Networks," in *Proceedings Annual Meeting of the MIREX 2013 community as part of the 14th International Conference on Music Information Retrieval*, (Curitiba, Brazil), ISMIR, ISMIR, November 2013. 3 pages
- 600) G. Ferroni, E. Marchi, F. Eyben, L. Gabrielli, S. Squartini, and B. Schuller, "Onset Detection Exploiting Adaptive Linear Prediction Filtering in DWT Domain with Bidirectional Long Short-Term Memory Neural Networks," in *Proceedings Annual Meeting of the MIREX 2013 community as part of the 14th International Conference on Music Information Retrieval*, (Curitiba, Brazil), ISMIR, ISMIR, November 2013. 4 pages
- 601) H. Gunes and B. Schuller, "Dimensional and Continuous Analysis of Emotions for Multimedia Applications: a Tutorial Overview," in *Proceedings of the 20th ACM International Conference on Multimedia, MM 2012*, (Nara, Japan), ACM, ACM, October 2012. 2 pages
- 602) M. Schröder, S. Pammi, H. Gunes, M. Pantic, M. Valstar, R. Cowie, G. McKeown, D. Heylen, M. ter Maat, F. Eyben, B. Schuller, M. Wöllmer, E. Bevacqua, C. Pelachaud, and E. de Sevin, "Come and Have an Emotional Workout with Sensitive Artificial Listeners!," in *Proceedings 9th IEEE International Conference on Automatic Face & Gesture Recognition and Workshops, FG 2011*, (Santa Barbara, CA), pp. 646–646, IEEE, IEEE, March 2011
- 603) F. Eyben and B. Schuller, "Music Classification with the Munich openSMILE Toolkit," in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 2 pages (acceptance rate: 61 %)
- 604) F. Eyben and B. Schuller, "Tempo Estimation from Tatum and Meter Vectors," in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 1 page (acceptance rate: 61 %)
- 605) S. Böck, F. Eyben, and B. Schuller, "Beat Detection with Bidirectional Long Short-Term Memory Neural Networks," in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 2 pages (acceptance rate: 61 %)
- 606) S. Böck, F. Eyben, and B. Schuller, "Onset Detection with Bidirectional Long Short-Term Memory Neural Networks," in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 2 pages (acceptance rate: 61 %)
- 607) S. Böck, F. Eyben, and B. Schuller, "Tempo Detection with Bidirectional Long Short-Term Memory Neural Networks," in *Proceedings Annual Meeting of the MIREX 2010 community as part of the 11th International Conference on Music Information Retrieval*, (Utrecht, Netherlands), ISMIR, ISMIR, August 2010. 3 pages (acceptance rate: 61 %)
- 608) B. Schuller, M. Wöllmer, F. Eyben, G. Rigoll, and D. Arsić, "Semantic Speech Tagging: Towards Combined Analysis of Speaker Traits," in *Proceedings AES 42nd International Conference on Bio-Medical Engineering, RBC-BME 2009*, (Ilmenau, Germany), pp. 89–97, AES, Audio Engineering Society, July 2011. invited contribution
- 609) B. Schuller, S. Can, and H. Feussner, "Robust Key-Word Spotting in Field Noise for Open-Microphone Surgeon-Robot Interaction," in *Proceedings 5th Russian-Bavarian Conference on Bio-Medical Engineering, RBC-BME 2009*, (Munich, Germany), pp. 121–123, July 2009. invited contribution
- 610) B. Schuller, A. Lehmann, F. Weninger, F. Eyben, and G. Rigoll, "Blind Enhancement of the Rhythmic and Harmonic Sections by NMF: Does it help?," in *Proceedings International Conference on Acoustics, NAG/DAGA 2009*, (Rotterdam, The Netherlands), pp. 361–364, Acoustical Society of the Netherlands, DEGA, DEGA, March 2009. invited contribution
- 611) B. Schuller, "Speaker, Noise, and Acoustic Space Adaptation for Emotion Recognition in the Automotive Environment," in *Proceedings 8th ITG Conference on Speech Communication*, vol. 211 of *ITG-Fachbericht*, (Aachen, Germany), ITG, VDE-Verlag, October 2008. invited contribution, 4 pages
- 612) B. Schuller, M. Wöllmer, T. Moosmayr, and G. Rigoll, "Robust Spelling and Digit Recognition in the Car: Switching Models and Their Like," in *Proceedings 34. Jahrestagung für Akustik, DAGA 2008*, (Dresden, Germany), pp. 847–848, DEGA, DEGA, March 2008. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 613) B. Schuller, F. Eyben, and G. Rigoll, "Beat-Synchronous Data-driven Automatic Chord Labeling," in *Proceedings 34. Jahrestagung für Akustik, DAGA 2008*, (Dresden, Germany), pp. 555–556, DEGA, DEGA, March 2008. invited contribution, Structured Session Music Processing
- 614) B. Schuller, S. Can, C. Scheuermann, H. Feussner, and G. Rigoll, "Robust Speech Recognition for Human-Robot Interaction in Minimal Invasive Surgery," in *Proceedings 4th Russian-Bavarian Conference on Bio-Medical Engineering, RBC-BME 2008*, (Zelenograd, Russia), pp. 197–201, July 2008. invited contribution
- 615) B. Schuller, R. Müller, B. Hörnler, A. Höthker, H. Konosu, and G. Rigoll, "Audiovisual Recognition of Spontaneous Interest within Conversations," in *Proceedings 9th ACM International Conference on Multimodal Interfaces, ICMI 2007*, (Nagoya, Japan), pp. 30–37, ACM, ACM, November 2007. invited contribution, Special Session on Multimodal Analysis of Human Spontaneous Behaviour (acceptance rate: 56 %, IF\* 1.77 (2010))
- 616) B. Schuller, G. Rigoll, M. Grimm, K. Kroschel, T. Moosmayr, and G. Ruske, "Effects of In-Car Noise-Conditions on the Recognition of Emotion within Speech," in *Proceedings 33. Jahrestagung für Akustik, DAGA 2007*, (Stuttgart, Germany), pp. 305–306, DEGA, DEGA, March 2007. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 617) B. Schuller, J. Stadermann, and G. Rigoll, "Affect-Robust Speech Recognition by Dynamic Emotional Adaptation," in *Proceedings 3rd International Conference on Speech Prosody, SP 2006*, (Dresden, Germany), ISCA, ISCA, May 2006. invited contribution, Special Session Prosody in Automatic Speech Recognition, 4 pages
- 618) B. Schuller, M. Lang, and G. Rigoll, "Recognition of Spontaneous Emotions by Speech within Automotive Environment," in *Proceedings 32. Jahrestagung für Akustik, DAGA 2006*, (Braunschweig, Germany), pp. 57–58, DEGA, DEGA, March 2006. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 619) B. Schuller and G. Rigoll, "Self-learning Acoustic Feature Generation and Selection for the Discrimination of Musical Signals," in *Proceedings 32. Jahrestagung für Akustik, DAGA 2006*, (Braunschweig, Germany), pp. 285–286, DEGA, DEGA, March 2006. invited contribution, Structured Session Music

#### Invited Papers (30):

- 608) B. Schuller, M. Wöllmer, F. Eyben, G. Rigoll, and D. Arsić,

- Processing
- 620) B. Schuller, R. Müller, M. Lang, and G. Rigoll, "Speaker Independent Emotion Recognition by Early Fusion of Acoustic and Linguistic Features within Ensembles," in *Proceedings Interspeech 2005, Eurospeech*, (Lisbon, Portugal), pp. 805–809, ISCA, ISCA, September 2005. invited contribution, Special Session Emotional Speech Analysis and Synthesis: Towards a Multimodal Approach (acceptance rate: 61 %, IF\* 1.05 (2010), > 100 citations)
- 621) B. Schuller, M. Lang, and G. Rigoll, "Robust Acoustic Speech Emotion Recognition by Ensembles of Classifiers," in *Proceedings 31. Jahrestagung für Akustik, DAGA 2005*, (Munich, Germany), pp. 329–330, DEGA, DEGA, March 2005. invited contribution, Structured Session Automatische Spracherkennung in gestörter Umgebung
- 622) B. Schuller, G. Rigoll, and M. Lang, "Matching Monophonic Audio Clips to Polyphonic Recordings," in *Proceedings 31. Jahrestagung für Akustik, DAGA 2005*, (Munich, Germany), pp. 299–300, DEGA, DEGA, March 2005. invited contribution, Structured Session Music Processing
- 623) Z. Zhang, F. Weninger, and B. Schuller, "Towards Automatic Intoxication Detection from Speech in Real-Life Acoustic Environments," in *Proceedings of Speech Communication; 10. ITG Symposium* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 624) C. Joder and B. Schuller, "Exploring Nonnegative Matrix Factorisation for Audio Classification: Application to Speaker Recognition," in *Proceedings of Speech Communication; 10. ITG Symposium* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 625) J. Deng, W. Han, and B. Schuller, "Confidence Measures for Speech Emotion Recognition: a Start," in *Proceedings of Speech Communication; 10. ITG Symposium* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 626) M. Wöllmer, M. Kaiser, F. Eyben, F. Weninger, B. Schuller, and G. Rigoll, "Fully Automatic Audiovisual Emotion Recognition – Voice, Words, and the Face," in *Proceedings of Speech Communication; 10. ITG Symposium* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 627) F. Weninger, M. Wöllmer, and B. Schuller, "Sparse, Hierarchical and Semi-Supervised Base Learning for Monaural Enhancement of Conversational Speech," in *Proceedings 10th ITG Conference on Speech Communication* (T. Fingscheidt and W. Kellermann, eds.), (Braunschweig, Germany), pp. 1–4, ITG, IEEE, September 2012. invited contribution
- 628) W. Han, Z. Zhang, J. Deng, M. Wöllmer, F. Weninger, and B. Schuller, "Towards Distributed Recognition of Emotion in Speech," in *Proceedings 5th International Symposium on Communications, Control, and Signal Processing, ISCCSP 2012*, (Rome, Italy), pp. 1–4, IEEE, IEEE, May 2012. invited contribution, Special Session Interactive Behaviour Analysis
- 629) F. Weninger and B. Schuller, "Fusing Utterance-Level Classifiers for Robust Intoxication Recognition from Speech," in *Proceedings MMCogEmS 2011 Workshop (Inferring Cognitive and Emotional States from Multimodal Measures)*, held in conjunction with the 13th International Conference on Multimodal Interaction, ICMI 2011, (Alicante, Spain), ACM, ACM, November 2011. invited contribution, 2 pages (acceptance rate: 39 %, IF\* 1.77 (2010))
- 630) F. Weninger, B. Schuller, C. Liem, F. Kurth, and A. Hanjalic, "Music Information Retrieval: An Inspirational Guide to Transfer from Related Disciplines," in *Multimodal Music Processing* (M. Müller and M. Goto, eds.), vol. Seminar 11041 of *Dagstuhl Follow-Ups*, (Schloss Dagstuhl, Germany), pp. 195–215, 2012. invited contribution
- 631) M. Wöllmer, N. Klebert, and B. Schuller, "Switching Linear Dynamic Models for Recognition of Emotionally Colored and Noisy Speech," in *Proceedings 9th ITG Conference on Speech Communication*, vol. 225 of *ITG-Fachbericht*, (Bochum, Germany), ITG, VDE-Verlag, October 2010. invited contribution, Special Session Bayesian Methods for Speech Enhancement and Recognition, 4 pages
- 632) L. Devillers and B. Schuller, "The Essential Role of Language Resources for the Future of Affective Computing Systems: A Recognition Perspective," in *Proceedings 2nd European Language Resources and Technologies Forum: Language Resources of the future – the future of Language Resources*, (Barcelona, Spain), FLaReNet, February 2010. invited contribution, 2 pages
- 633) S. Steidl, B. Schuller, D. Seppi, and A. Batliner, "The Hinterland of Emotions: Facing the Open-Microphone Challenge," in *Proceedings 3rd International Conference on Affective Computing and Intelligent Interaction and Workshops, ACII 2009*, vol. I, (Amsterdam, The Netherlands), pp. 690–697, HUMAINE Association, IEEE, September 2009. invited contribution, Special Session Recognition of Non-Prototypical Emotion from Speech – The final frontier?
- 634) P. Baggia, F. Burkhardt, C. Pelachaud, C. Peter, B. Schuller, I. Wilson, and E. Zovato, "Elements of an EmotionML 1.0," tech. rep., W3C, November 2008
- 635) A. Batliner, D. Seppi, B. Schuller, S. Steidl, T. Vogt, J. Wagner, L. Devillers, L. Vidrascu, N. Amir, and V. Aharonson, "Patterns, Prototypes, Performance," in *Pattern Recognition in Medical and Health Engineering, Proceedings HSS-Cooperation Seminar Ingenieurwissenschaftliche Beiträge für ein leistungsfähigeres Gesundheitssystem* (J. Hornegger, K. Höller, P. Ritt, A. Borsdorf, and H.-P. Niedermeier, eds.), (Wildbad Kreuth, Germany), pp. 85–86, July 2008. invited contribution
- 636) M. Grimm, K. Kroschel, B. Schuller, G. Rigoll, and T. Moosmayr, "Acoustic Emotion Recognition in Car Environment Using a 3D Emotion Space Approach," in *Proceedings 33. Jahrestagung für Akustik, DAGA 2007*, (Stuttgart, Germany), pp. 313–314, DEGA, DEGA, March 2007. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 637) G. Rigoll, R. Müller, and B. Schuller, "Speech Emotion Recognition Exploiting Acoustic and Linguistic Information Sources," in *Proceedings 10th International Conference Speech and Computer, SPECOM 2005* (G. Kokkinakis, ed.), vol. 1, (Patras, Greece), pp. 61–67, October 2005. invited contribution

#### Forewords (4):

- 638) B. Schuller, "A decade of encouraging speech processing "outside of the box" - a Foreword.," in *Recent Advances in Nonlinear Speech Processing – 7th International Conference, NOLISP 2015, Vietri sul Mare, Italy, May 18–19, 2015, Proceedings* (A. Esposito, M. Faundez-Zanuy, A. M. Esposito, G. Cordasco, T. Drugman, J. Sol-Casals, and C. F. Morabito, eds.), vol. 48, *Smart Innovation, Systems and Technologies of Smart Innovation Systems and Technologies*, pp. 3–4, Springer, 2015. invited
- 639) R. Cowie, Q. Ji, J. Tao, J. Gratch, and B. Schuller, "Foreword ACII 2015 – Affective Computing and Intelligent Interaction at Xi'an," in *Proc. 6th biannual Conference on Affective Computing and Intelligent Interaction (ACII 2015)*, (Xi'an, P.R. China), AAC, IEEE, September 2015. 2 pages
- 640) B. Schuller, "Foreword," in *Sentic Computing – A Common-Sense-Based Framework for Concept-Level Sentiment Analysis* (E. Cambria and A. Hussain, eds.), pp. v–vi, Springer, 2 ed., 2015. invited foreword
- 641) B. Schuller, "Supervisor's Foreword," in *Real-time Speech and Music Classification by Large Audio Feature Space Extraction* (F. Eyben, ed.), Springer, 2015. invited foreword, 2 pages

*Reviewed Technical Newsletter Contributions (5):*

- 642) F. Eyben and B. Schuller, “openSMILE:) The Munich Open-Source Large-Scale Multimedia Feature Extractor,” *ACM SIGMM Records*, vol. 6, December 2014
- 643) B. Schuller, S. Steidl, and A. Batliner, “The INTERSPEECH 2013 Computational Paralinguistics Challenge – A Brief Review,” *Speech and Language Processing Technical Committee (SLTC) Newsletter*, November 2013
- 644) B. Schuller, S. Steidl, A. Batliner, F. Schiel, and J. Krajewski, “The INTERSPEECH 2011 Speaker State Challenge – A review,” *Speech and Language Processing Technical Committee (SLTC) Newsletter*, February 2012
- 645) B. Schuller and L. Devillers, “Emotion 2010 - On Recent Corpora for Research on Emotion and Affect,” *ELRA Newsletter, LREC 2010 Special Issue*, vol. 15, no. 1–2, pp. 18–18, 2010
- 646) B. Schuller, S. Steidl, A. Batliner, and F. Jurcicek, “The INTERSPEECH 2009 Emotion Challenge – Results and Lessons Learnt,” *Speech and Language Processing Technical Committee (SLTC) Newsletter*, October 2009

*Technical Reports (11):*

- 647) G. Keren, S. Sabato, and B. Schuller, “Fast Single-Class Classification and the Principle of Logit Separation,” *arxiv.org*, May 2017. 11 pages
- 648) D. L. Tran, R. Walecki, O. Rudovic, S. Eleftheriadis, B. Schuller, and M. Pantic, “DeepCoder: Semi-parametric Variational Autoencoders for Facial Action Unit Intensity Estimation,” *arxiv.org*, April 2017. 11 pages
- 649) P. Tzirakis, G. Trigeorgis, M. A. Nicolaou, B. Schuller, and S. Zafeiriou, “End-to-End Multimodal Emotion Recognition using Deep Neural Networks,” *arxiv.org*, April 2017. 9 pages
- 650) Z. Zhang, J. Geiger, J. Pohjalainen, A. E.-D. Mousa, and B. Schuller, “Deep Learning for Environmentally Robust Speech Recognition: An Overview of Recent Developments,” *arxiv.org*, May 2017. 14 pages
- 651) G. Keren and B. Schuller, “Convolutional RNN: an Enhanced Model for Extracting Features from Sequential Data,” *arxiv.org*, February 2016. 8 pages
- 652) G. Keren, S. Sabato, and B. Schuller, “Tunable Sensitivity to Large Errors in Neural Network Training,” *arxiv.org*, November 2016. 10 pages
- 653) M. Schmitt and B. Schuller, “openXBOW – Introducing the Pasau Open-Source Crossmodal Bag-of-Words Toolkit,” *arxiv.org*, May 2016. 9 pages
- 654) I. Abdić, L. Fridman, E. Marchi, D. E. Brown, W. Angell, B. Reimer, and B. Schuller, “Detecting Road Surface Wetness from Audio: A Deep Learning Approach,” *arxiv.org*, December 2015. 5 pages
- 655) A. E.-D. Mousa, E. Marchi, and B. Schuller, “The IC-STM+TUM+UP Approach to the 3rd CHIME Challenge: Single-Channel LSTM Speech Enhancement with Multi-Channel Correlation Shaping Dereverberation and LSTM Language Models,” *arxiv.org*, October 2015. 9 pages
- 656) G. Trigeorgis, K. Bousmalis, S. Zafeiriou, and B. Schuller, “A deep matrix factorization method for learning attribute representations,” *arxiv.org*, September 2015. 15 pages
- 657) F. Weninger, B. Schuller, F. Eyben, M. Wöllmer, and G. Rigoll, “A Broadcast News Corpus for Evaluation and Tuning of German LVCSR Systems,” *arxiv.org*, December 2014. 4 pages