

Publications by Björn W. Schuller

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Current h-index: **56** (source: Google Scholar)

Current citation count: **14052** (source: Google Scholar)

Citations are only provided for papers with citation count ≥ 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) SCHULLER, B. W. *I Know What You're Thinking: The Making of Emotional Machines*. Princeton University Press, 2018. to appear
- 2) BALAHUR-DOBRESCU, A., TABOADA, M., AND SCHULLER, B. W. *Computational Methods for Affect Detection from Natural Language*. Computational Social Sciences. Springer, 2017. to appear
- 3) SCHULLER, B. *Intelligent Audio Analysis*. Signals and Communication Technology. Springer, 2013. 350 pages
- 4) SCHULLER, B., AND BATLINER, A. *Computational Paralinguistics: Emotion, Affect and Personality in Speech and Language Processing*. Wiley, November 2013
- 5) KROSCHEL, K., RIGOLL, G., AND SCHULLER, B. *Statistische Informationstechnik*, 5th ed. Springer, Berlin/Heidelberg, 2011
- 6) SCHULLER, B. *Mensch, Maschine, Emotion – Erkennung aus sprachlicher und manueller Interaktion*. VDM Verlag Dr Müller, Saarbrücken, 2007. 239 pages

Books Edited (2):

- 7) OVIATT, S., SCHULLER, B., COHEN, P., SONNTAG, D., POTAMIANOS, G., AND KRÜGER, A., Eds. *Handbook of Multimodal-Multisensor Interfaces (3 volumes)*. ACM Books, Morgan & Claypool, 2017. to appear
- 8) D'MELLO, S., GRAESSER, A., SCHULLER, B., AND MARTIN, J.-C., Eds. *Proceedings of the 4th International HUMAINE Association Conference on Affective Computing and Intelligent Interaction 2011, ACII 2011* (Memphis, TN, October 2011), vol. 6974/6975, Part I / Part II of *Lecture Notes on Computer Science (LNCS)*, HUMAINE Association, Springer

Contributions to Books (42):

- 9) SCHULLER, B., ELKINS, A., AND SCHERER, K. 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. Cambridge University Press, 2017, ch. 6, pp. 56–68
- 10) SCHULLER, B. 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) SCHULLER, B., BENGIO, S., AND MORENCY, L.-P. 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) SCHULLER, B., ERNST, M., ROSS, A., AND RAMOS, F. 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) BENGIO, S., DENG, L., MORENCY, L.-P., AND SCHULLER, B. Multidisciplinary 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) ERNST, M., RAMOS, F., ROSS, A., AND SCHULLER, B. 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) GUNES, H., AND SCHULLER, B. Automatic Analysis of Aesthetics: Human Beauty, Attractiveness, and Likability. In *Social Signal Processing*, J. Burgoon, N. Magnenat-Thalmann, M. Pantic, and A. Vinciarelli, Eds. Cambridge University Press, 2017, ch. 14, pp. 183–201
- 16) GUNES, H., AND SCHULLER, B. Automatic Analysis of Social Emotions. In *Social Signal Processing*, J. Burgoon, N. Magnenat-Thalmann, M. Pantic, and A. Vinciarelli, Eds. Cambridge University Press, 2017, ch. 16, pp. 213–224
- 17) HANTKE, S., AMIRIPARIAN, S., SCHMITT, M., QIAN, K., GUO, J., MATSUOKA, S., AND SCHULLER, B. Big Data Multimedia Mining: Equipped for Victory facing Volume, Velocity, Variety, Veracity, and Value. In *Big Data Analytics for Large-Scale Multimedia Search*, S. Vrochidis, B. Huet, E. Chang, and I. Kompatsiaris, Eds. Wiley, 2017. to appear
- 18) SCHULLER, B. Acquisition of affect. In *Emotions and Personality in Personalized Services*, M. Tkalcic, B. De Carolis, M. de Gemmis, A. Odić, and A. Kosir, Eds., 1st ed., HumanComputer Interaction Series. Springer, 2016, pp. 57–80
- 19) BURKHARDT, F., PELACHAUD, C., SCHULLER, B., AND ZOVATO, E. Emotion Markup Language. In *Multimodal Interaction with W3C Standards: Towards Natural User Interfaces to Everything*, D. Dahl, Ed. Springer, Berlin/Heidelberg, 2017, pp. 65–80
- 20) KEREN, G., MOUSA, A. E.-D., PIETQUIN, O., ZAFEIRIOU, S., AND SCHULLER, B. 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
- 21) SCHMITT, M., AND SCHULLER, B. Machine-based decoding of paralinguistic vocal features. In *The Oxford Handbook of Voice Perception*, S. Frühholz and P. Belin, Eds. Oxford University Press, 2015, ch. 40. invited contribution, to appear
- 22) SCHULLER, B. 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*. Springer, Berlin Heidelberg, 2015, pp. 339–346. invited contribution
- 23) SCHULLER, B., AND WENINGER, F. Human Affect Recognition – Audio-Based Methods. In *Wiley Encyclopedia of Electrical and Electronics Engineering*, J. G. Webster, Ed. John Wiley & Sons, New York, 2015, pp. 1–13. invited contribution
- 24) SCHULLER, B. 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. Oxford University Press, 2015, ch. 23, pp. 323–333. invited contribution
- 25) SCHULLER, B. 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*. Springer, 2015, ch. 5, pp. 85–102. invited contribution
- 26) BATLINER, A., STEIDL, S., EYBEN, F., AND SCHULLER, B. On Laughter and Speech Laugh, Based on Observations of Child-Robot Interaction. In *Phonetics of Laughing*, J. Trouvain and N. Campbell, Eds. universaar – Saarland University Press, Saarbrücken, Germany, 2015. 29 pages, to appear
- 27) BRÜCKNER, R., AND SCHULLER, B. 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. Springer, Berlin/Heidelberg, 2015, pp. 403–429. invited contribution
- 28) CASTELLANO, G., GUNES, H., PETERS, C., AND SCHULLER, B. 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. Oxford University Press, 2015, ch. 17, pp. 246–260. invited contribution
- 29) MARCHI, E., ZHANG, Y., EYBEN, F., RINGEVAL, F., AND SCHULLER, B. 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. De Gruyter, Berlin, 2015. invited contribution, to appear
- 30) WENINGER, F., WÖLLMER, M., AND SCHULLER, B. Emotion Recognition in Naturalistic Speech and Language - A Survey. In *Emotion Recognition: A Pattern Analysis Approach*, A. Konar and A. Chakraborty, Eds., 1st ed. Wiley, December 2015, ch. 10, pp. 237–267
- 31) MARCHI, E., RINGEVAL, F., AND SCHULLER, B. 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. De Gruyter, Boston/Berlin/Munich, 2014, pp. 207–236. invited contribution
- 32) SCHULLER, B. Prosody and Phonemes: On the Influence of Speaking Style. In *Prosody and Iconicity*, S. Hancil and D. Hirst, Eds. Benjamins, May 2013, ch. 13, pp. 233–250
- 33) SCHULLER, B., AND WENINGER, F. 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*. Springer, Berlin Heidelberg, 2012, pp. 35–49
- 34) ROTILI, R., PRINCIPI, E., WÖLLMER, M., SQUARTINI, S., AND SCHULLER, B. 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)*. Springer, Berlin Heidelberg, 2012, pp. 50–59
- 35) ROTILI, R., PRINCIPI, E., SQUARTINI, S., AND SCHULLER, B. 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)*. Springer, 2012, pp. 379–386
- 36) SCHULLER, B. 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. Springer, 2011, ch. 9, pp. 227–253
- 37) SCHULLER, B., AND KNAUP, T. 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., 1st ed., vol. 6456/2010 of *Lecture Notes on Computer Science (LNCS)*. Springer, Heidelberg, 2011, pp. 448–472
- 38) SCHULLER, B., WÖLLMER, M., EYBEN, F., AND RIGOLL, G. 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. Wiley, IEEE Computer Society Press, 2011, ch. 17, pp. 273–288
- 39) ARSIĆ, D., AND SCHULLER, B. 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)*. Springer, Heidelberg, 2011, pp. 1–18
- 40) SCHULLER, B., DIBIASI, F., EYBEN, F., AND RIGOLL, G. Music Thumbnailing 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)*. Springer, Berlin/Heidelberg, 2010, pp. 78–88
- 41) BATLINER, A., SCHULLER, B., SEPPI, D., STEIDL, S., DEVILLERS, L., VIDRASCU, L., VOGT, T., AHARONSON, V., AND AMIR, N. The Automatic Recognition of Emotions in Speech. In *Emotion-Oriented Systems: The HUMAINE Handbook*, R. Cowie, P. Petta, and C. Pelachaud, Eds., 1st ed., Cognitive Technologies. Springer, 2010, pp. 71–99
- 42) WÖLLMER, M., EYBEN, F., GRAVES, A., SCHULLER, B., AND RIGOLL, G. Improving Keyword Spotting with a Tandem BLSTM-DBN Architecture. In *Advances in Non-Linear Speech Processing: International Conference on Nonlinear Speech Processing, NOLISP 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)*. Springer, 2010, pp. 68–75
- 43) SCHULLER, B., WÖLLMER, M., EYBEN, F., AND RIGOLL, G. 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*. Peter Lang Publishing Group, 2009, pp. 285–307
- 44) SCHULLER, B., EYBEN, F., AND RIGOLL, G. 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)*. Springer, Berlin/Heidelberg, 2008, pp. 99–110
- 45) SCHULLER, B., WÖLLMER, M., MOOSMAYR, T., RUSKE, G., AND RIGOLL, G. 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)*. Springer, Berlin/Heidelberg, 2008, pp. 244–253. (acceptance rate: 39 %, IF* 1.13 (2010))
- 46) VLASENKO, B., SCHULLER, B., WENDEMUTH, A., AND RIGOLL, G. On the Influence of Phonetic Content Variation for Acoustic Emotion 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)*. Springer, Berlin/Heidelberg, 2008, pp. 217–220

- 47) GRIMM, M., KROSCHER, K., HARRIS, H., NASS, C., SCHULLER, B., RIGOLL, G., AND MOOSMAYR, T. 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)*. Springer, Berlin/Heidelberg, 2007, pp. 126–138
- 48) VLASENKO, B., SCHULLER, B., WENDEMUTH, A., AND RIGOLL, G. 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)*. Springer, Berlin/Heidelberg, 2007, pp. 139–147
- 49) SCHRÖDER, M., DEVILLERS, L., KARPOUZIS, K., MARTIN, J.-C., PELACHAUD, C., PETER, C., PIRKER, H., SCHULLER, B., TAO, J., AND WILSON, I. 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)*. Springer, Berlin/Heidelberg, 2007, pp. 440–451
- 50) SCHULLER, B., ABLAMEIER, M., MÜLLER, R., REIFINGER, S., POITSCHKE, T., AND RIGOLL, G. Speech Communication and Multimodal Interfaces. In *Advanced Man Machine Interaction*, K.-F. Kraiss, Ed., Signals and Communication Technology. Springer, Berlin/Heidelberg, 2006, ch. 4, pp. 141–190

B) REFEREED JOURNAL PAPERS (94)

- 51) SCHULLER, B. Can Affective Computing Save Lives? Meet Mobile Health. *IEEE Computer Magazine* 50 (2017), 40. (IF: 1.438 (2013))
- 52) DENG, J., XU, X., ZHANG, Z., FRÜHHOLZ, S., AND SCHULLER, B. Universum Autoencoder-based Domain Adaptation for Speech Emotion Recognition. *IEEE Signal Processing Letters* 24 (2017). 5 pages, to appear (acceptance rate: 17 %, IF: 1.674, 5-year IF: 1.595 (2012))
- 53) GUO, J., QIAN, K., ZHANG, G., XU, H., AND SCHULLER, B. Accelerating biomedical signal processing using GPU: A case study of snore sounds feature extraction. *Interdisciplinary Sciences – Computational Life Sciences* 9 (2017). 11 pages, to appear (IF: 0.853 (2015))
- 54) JANOTT, C., SCHULLER, B., AND HEISER, C. Akustische Informationen von Schnarchgeräuschen. *HNO, Leitthemenheft “Schlafmedizin”* 22, 2 (February 2017), 1–10. (IF: 0.852 (2015))
- 55) MARCHI, E., VESPERINI, F., SQUARTINI, S., AND SCHULLER, B. Deep Recurrent Neural Network-based Autoencoders for Acoustic Novelty Detection. *Computational Intelligence and Neuroscience 2017* (2017). 14 pages (IF: 0.430 (2015))
- 56) MARSCHIK, P. B., POKORNY, F. B., PEHARZ, R., ZHANG, D., O’MUIRCHARTAIGH, J., ROEYERS, H., BÖLTE, S., SPITTLE, A. J., URLESBERGER, B., SCHULLER, B., POUSTKA, L., OZONOFF, S., PERNKOPF, F., POCK, T., TAMMIMIES, K., ENZINGER, C., KRIEBER, M., TOMANTSCHGER, I., BARTL-POKORNY, K. D., SIGAFOOS, J., ROCHE, L., ESPOSITO, G., GUGATSCHKA, M., NIELSEN-SAINES, K., EINSPIELER, C., KAUFMANN, W. E., 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* 17, 43 (2017). 15 pages (IF: 2.961, 5-year IF: 3.064 (2015))
- 57) QIAN, K., ZHANG, Z., BAIRD, A., AND SCHULLER, B. Active Learning for Bird Sounds Classification. *Acta Acustica united with Acustica 103* (April 2017), 361–364. (IF: 0.897 (2015))
- 58) RUDOVIC, O., LEE, J., MASCARELL-MARICIC, L., SCHULLER, B. W., AND PICARD, R. 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
- 59) TRIGEORGIS, G., BOUSMALIS, K., ZAFEIRIOU, S., AND SCHULLER, B. A deep matrix factorization method for learning attribute representations. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 39, 3 (March 2017), 417–429. (IF: 6.077, 5-year IF: 8.693 (2015))
- 60) TRIGEORGIS, G., NICOLAOU, M. A., ZAFEIRIOU, S., AND SCHULLER, B. Deep Canonical Time Warping for simultaneous alignment and representation learning of sequences. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 39 (2017). 12 pages, to appear (IF: 6.077, 5-year IF: 8.693 (2015))
- 61) XU, X., DENG, J., CUMMINS, N., ZHANG, Z., WU, C., ZHAO, L., AND SCHULLER, B. A Two-Dimensional Framework of Multiple Kernel Subspace Learning for Recognising Emotion in Speech. *IEEE/ACM Transactions on Audio, Speech and Language Processing* 25 (2017). 15 pages, to appear (acceptance rate: 25 %, IF: 2.625, 5-year IF: 2.583 (2013))
- 62) ZHANG, Z., CUMMINS, N., AND SCHULLER, B. Efficient Data Exploration for Automatic Speech Analysis: Challenges and State of the Art. *IEEE Signal Processing Magazine* 34 (2017). 15 pages, to appear (IF: 6.671 (2015))
- 63) SCHULLER, B. Can Virtual Human Interviewers “Hear” Real Humans’ Depression? *IEEE Computer Magazine* 49, 7 (July 2016), 8. (IF: 1.438 (2013))
- 64) SCHULLER, B. Speech Emotion Recognition: 20 Years and Beyond. *Communications of the ACM* (2016). 8 pages, to appear (IF: 3.301, 5-year IF: 4.425 (2015))
- 65) DENG, J., XU, X., ZHANG, Z., FRÜHHOLZ, S., AND SCHULLER, B. Exploitation of Phase-based Features for Whispered Speech Emotion Recognition. *IEEE Access* 4 (July 2016), 4299–4309. (IF: 1.270, 5-year IF: 1.276 (2015))
- 66) EYBEN, F., SCHERER, K., SCHULLER, B., SUNDBERG, J., ANDRÉ, E., BUSSO, C., DEVILLERS, L., EPPS, J., LAUKKA, P., NARAYANAN, S., AND TRUONG, K. The Geneva Minimalistic Acoustic Parameter Set (GeMAPS) for Voice Research and Affective Computing. *IEEE Transactions on Affective Computing* 7, 2 (April–June 2016), 190–202. (acceptance rate: 22 %, IF: 3.466, 5-year IF: 3.871 (2013))
- 67) GROSS, F., JORDAN, J., WENINGER, F., KLANNER, F., AND SCHULLER, B. Route and Stopping Intent Prediction at Intersections from Car Fleet Data. *IEEE Transactions on Intelligent Vehicles* 1, 2 (June 2016), 177–186
- 68) HAN, W., COUTINHO, E., RUAN, H., LI, H., SCHULLER, B., YU, X., AND ZHU, X. Semi-Supervised Active Learning for Sound Classification in Hybrid Learning Environments. *PLoS ONE* 11, 9 (2016). 23 pages (IF: 3.234 (2014))
- 69) HAN, J., ZHANG, Z., CUMMINS, N., RINGEVAL, F., AND SCHULLER, B. 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* 34 (2016). 12 pages, to appear (IF: 1.766, 5-Year IF: 2.584 (2015))
- 70) HANTKE, S., WENINGER, F., KURLE, R., RINGEVAL, F., BATLINER, A., EL-DESOKY MOUSA, A., AND SCHULLER, B. I Hear You Eat and Speak: Automatic Recognition of Eating Condition and Food Types, Use-Cases, and Impact on ASR Performance. *PLoS ONE* 11, 5 (May 2016), 1–24. (IF: 3.234 (2014))

- 71) LINGENFELSER, F., WAGNER, J., DENG, J., BRUECKNER, R., SCHULLER, B., AND ANDRÉ, E. Asynchronous and Event-based Fusion Systems for Affect Recognition on Naturalistic Data in Comparison to Conventional Approaches. *IEEE Transactions on Affective Computing* 7 (2016). 13 pages, to appear (IF: 3.466, 5-year IF: 3.871 (2013))
- 72) MARCHI, E., FRÜHHOLZ, S., AND SCHULLER, B. The Effect of Narrow-band Transmission on Recognition of Paralinguistic Information from Human Vocalizations. *IEEE Access* 4 (October 2016), 6059–6072. (IF: 1.270, 5-year IF: 1.276 (2015))
- 73) MENCATTINI, A., MARTINELLI, E., RINGEVAL, F., SCHULLER, B., AND DI NATALE, C. Continuous Estimation of Emotions in Speech by Dynamic Cooperative Speaker Models. *IEEE Transactions on Affective Computing* 7 (2016). 14 pages, to appear (IF: 3.466, 5-year IF: 3.871 (2013))
- 74) QIAN, K., JANOTT, C., PANDIT, V., ZHANG, Z., HEISER, C., HOHENHORST, W., HERZOG, M., HEMMERT, W., AND SCHULLER, B. 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))
- 75) RYNKIEWICZ, A., SCHULLER, B., MARCHI, E., PIANA, S., CAMURRI, A., LASSALLE, A., AND BARON-COHEN, S. An investigation of the ‘female camouflage effect’ in autism using a computerized ADOS-2, and a test of sex/gender differences. *Molecular Autism* 7, 10 (2016). 10 pages (IF: 5.413 (2014))
- 76) SAGHA, H., CUMMINS, N., AND SCHULLER, B. Autoencoders for Sentiment Analysis: A Review. *WIREs Data Mining and Knowledge Discovery* 7 (2017). to appear, invited review article (IF: 1.759 (2015))
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- 569) POKORNY, F. B., SCHULLER, B. W., PEHARZ, R., PERNKOPF, F., BARTL-POKORNY, K. D., EINSPIELER, C., AND MARSCHIK, P. B. 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
- 570) RUDOVIC, O., EVERS, V., PANTIC, M., SCHULLER, B., AND PETROVIC, S. DE-ENIGMA Robots: Playfully Empowering Children with Autism. In *Proceedings XI Autism-Europe International Congress* (Edinburgh, Scotland, September 2016), Autism Europe, The National Autistic Society. 1 page
- 571) RUDOVIC, O., LEE, J., SCHULLER, B., AND PICARD, R. Automated Measurement of Engagement of Children with Autism Spectrum Conditions during Human-Robot Interaction (HRI). In *Proceedings XI Autism-Europe International Congress* (Edinburgh, Scotland, September 2016), Autism Europe, The National Autistic Society. 1 page
- 572) SCHULLER, B. 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, March 2015), ACM, ACM, pp. 443–446
- 573) POKORNY, F. B., EINSPIELER, C., ZHANG, D., KIMMERLE, A., BARTL-POKORNY, K. D., SCHULLER, B. W., AND BÖLTE, S. The Voice of Autism: An Acoustic Analysis of Early Vocalisations. In *COST ESSEA Conference 2014 Book of Abstracts* (Toulouse, France, September 2014). 1 page
- 574) SCHULLER, B. 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, November 2013), The Rank Prize Funds, The Rank Prize Funds. invited contribution, 1 page
- 575) FERRONI, G., MARCHI, E., EYBEN, F., SQUARTINI, S., AND SCHULLER, B. 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, November 2013), ISMIR, ISMIR. 3 pages
- 576) FERRONI, G., MARCHI, E., EYBEN, F., GABRIELLI, L., SQUARTINI, S., AND SCHULLER, B. 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, November 2013), ISMIR, ISMIR. 4 pages
- 577) GUNES, H., AND SCHULLER, B. 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, October 2012), ACM, ACM. 2 pages
- 578) SCHRÖDER, M., PAMMI, S., GUNES, H., PANTIC, M., VALSTAR, M., COWIE, R., MCKEOWN, G., HEYLEN, D., TER MAAT, M., EYBEN, F., SCHULLER, B., WÖLLMER, M., BEVACQUA, E., PELACHAUD, C., AND DE SEVIN, E. Come and Have an Emotional Workout with Sensitive Artificial Listeners! In *Proceedings 9th IEEE International Conference on Auto-*

- matic Face & Gesture Recognition and Workshops, FG 2011* (Santa Barbara, CA, March 2011), IEEE, IEEE, pp. 646–646
- 579) EYBEN, F., AND SCHULLER, B. 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, August 2010), ISMIR, ISMIR. 2 pages (acceptance rate: 61 %)
- 580) EYBEN, F., AND SCHULLER, B. 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, August 2010), ISMIR, ISMIR. 1 page (acceptance rate: 61 %)
- 581) BÖCK, S., EYBEN, F., AND SCHULLER, B. 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, August 2010), ISMIR, ISMIR. 2 pages (acceptance rate: 61 %)
- 582) BÖCK, S., EYBEN, F., AND SCHULLER, B. 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, August 2010), ISMIR, ISMIR. 2 pages (acceptance rate: 61 %)
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- Invited Papers (30):*
- 584) SCHULLER, B., WÖLLMER, M., EYBEN, F., RIGOLL, G., AND ARSIĆ, D. Semantic Speech Tagging: Towards Combined Analysis of Speaker Traits. In *Proceedings AES 42nd International Conference* (Ilmenau, Germany, July 2011), K. Brandenburg and M. Sandler, Eds., AES, Audio Engineering Society, pp. 89–97. invited contribution
- 585) SCHULLER, B., CAN, S., AND FEUSSNER, H. Robust Keyword 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, July 2009), pp. 121–123. invited contribution
- 586) SCHULLER, B., LEHMANN, A., WENINGER, F., EYBEN, F., AND RIGOLL, G. Blind Enhancement of the Rhythmic and Harmonic Sections by NMF: Does it help? In *Proceedings International Conference on Acoustics including the 35th German Annual Conference on Acoustics, NAG/DAGA 2009* (Rotterdam, The Netherlands, March 2009), Acoustical Society of the Netherlands, DEGA, DEGA, pp. 361–364. invited contribution
- 587) SCHULLER, B. Speaker, Noise, and Acoustic Space Adaptation for Emotion Recognition in the Automotive Environment. In *Proceedings 8th ITG Conference on Speech Communication* (Aachen, Germany, October 2008), vol. 211 of *ITG-Fachbericht*, ITG, VDE-Verlag. invited contribution, 4 pages
- 588) SCHULLER, B., WÖLLMER, M., MOOSMAYR, T., AND RIGOLL, G. Robust Spelling and Digit Recognition in the Car: Switching Models and Their Like. In *Proceedings 34. Jahrestagung für Akustik, DAGA 2008* (Dresden, Germany, March 2008), DEGA, DEGA, pp. 847–848. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 589) SCHULLER, B., EYBEN, F., AND RIGOLL, G. Beat-Synchronous Data-driven Automatic Chord Labeling. In *Proceedings 34. Jahrestagung für Akustik, DAGA 2008* (Dresden, Germany, March 2008), DEGA, DEGA, pp. 555–556. invited contribution, Structured Session Music Processing
- 590) SCHULLER, B., CAN, S., SCHEUERMANN, C., FEUSSNER, H., AND RIGOLL, G. 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, July 2008), pp. 197–201. invited contribution
- 591) SCHULLER, B., MÜLLER, R., HÖRNLER, B., HÖTHKER, A., KONOSU, H., AND RIGOLL, G. Audiovisual Recognition of Spontaneous Interest within Conversations. In *Proceedings 9th ACM International Conference on Multimodal Interfaces, ICMI 2007* (Nagoya, Japan, November 2007), ACM, ACM, pp. 30–37. invited contribution, Special Session on Multimodal Analysis of Human Spontaneous Behaviour (acceptance rate: 56 %, IF* 1.77 (2010))
- 592) SCHULLER, B., RIGOLL, G., GRIMM, M., KROSCHEL, K., MOOSMAYR, T., AND RUSKE, G. Effects of In-Car Noise-Conditions on the Recognition of Emotion within Speech. In *Proceedings 33. Jahrestagung für Akustik, DAGA 2007* (Stuttgart, Germany, March 2007), DEGA, DEGA, pp. 305–306. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 593) SCHULLER, B., STADERMANN, J., AND RIGOLL, G. Affect-Robust Speech Recognition by Dynamic Emotional Adaptation. In *Proceedings 3rd International Conference on Speech Prosody, SP 2006* (Dresden, Germany, May 2006), ISCA, ISCA. invited contribution, Special Session Prosody in Automatic Speech Recognition, 4 pages
- 594) SCHULLER, B., LANG, M., AND RIGOLL, G. Recognition of Spontaneous Emotions by Speech within Automotive Environment. In *Proceedings 32. Jahrestagung für Akustik, DAGA 2006* (Braunschweig, Germany, March 2006), DEGA, DEGA, pp. 57–58. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 595) SCHULLER, B., AND RIGOLL, G. Self-learning Acoustic Feature Generation and Selection for the Discrimination of Musical Signals. In *Proceedings 32. Jahrestagung für Akustik, DAGA 2006* (Braunschweig, Germany, March 2006), DEGA, DEGA, pp. 285–286. invited contribution, Structured Session Music Processing
- 596) SCHULLER, B., MÜLLER, R., LANG, M., AND RIGOLL, G. Speaker Independent Emotion Recognition by Early Fusion of Acoustic and Linguistic Features within Ensembles. In *Proceedings Interspeech 2005, Eurospeech* (Lisbon, Portugal, September 2005), ISCA, ISCA, pp. 805–809. invited contribution, Special Session Emotional Speech Analysis and Synthesis: Towards a Multimodal Approach (acceptance rate: 61 %, IF* 1.05 (2010), > 100 citations)
- 597) SCHULLER, B., LANG, M., AND RIGOLL, G. Robust Acoustic Speech Emotion Recognition by Ensembles of Classifiers. In *Proceedings 31. Jahrestagung für Akustik, DAGA 2005* (Munich, Germany, March 2005), DEGA, DEGA, pp. 329–330. invited contribution, Structured Session Automatische Spracherkennung in gestörter Umgebung
- 598) SCHULLER, B., RIGOLL, G., AND LANG, M. Matching Monophonic Audio Clips to Polyphonic Recordings. In *Proceedings 31. Jahrestagung für Akustik, DAGA 2005* (Munich, Germany, March 2005), DEGA, DEGA, pp. 299–300. invited contribution, Structured Session Music Processing
- 599) ZHANG, Z., WENINGER, F., AND SCHULLER, B. Towards Automatic Intoxication Detection from Speech in Real-Life Acoustic Environments. In *Proceedings of Speech Communication; 10. ITG Symposium* (Braunschweig, Germany, September 2012), T. Fingscheidt and W. Kellermann, Eds., ITG, IEEE, pp. 1–4. invited contribution
- 600) JODER, C., AND SCHULLER, B. Exploring Nonnegative Matrix Factorisation for Audio Classification: Application to Speaker Recognition. In *Proceedings of Speech Communication; 10. ITG Symposium* (Braunschweig, Germany, September 2012), T. Fingscheidt and W. Kellermann, Eds., ITG, IEEE, pp. 1–4. invited contribution
- 601) DENG, J., HAN, W., AND SCHULLER, B. Confidence Measures

- for Speech Emotion Recognition: a Start. In *Proceedings of Speech Communication; 10. ITG Symposium* (Braunschweig, Germany, September 2012), T. Fingscheidt and W. Kellermann, Eds., ITG, IEEE, pp. 1–4. invited contribution
- 602) WÖLLMER, M., KAISER, M., EYBEN, F., WENINGER, F., SCHULLER, B., AND RIGOLL, G. Fully Automatic Audiovisual Emotion Recognition – Voice, Words, and the Face. In *Proceedings of Speech Communication; 10. ITG Symposium* (Braunschweig, Germany, September 2012), T. Fingscheidt and W. Kellermann, Eds., ITG, IEEE, pp. 1–4. invited contribution
- 603) WENINGER, F., WÖLLMER, M., AND SCHULLER, B. Sparse, Hierarchical and Semi-Supervised Base Learning for Monaural Enhancement of Conversational Speech. In *Proceedings 10th ITG Conference on Speech Communication* (Braunschweig, Germany, September 2012), T. Fingscheidt and W. Kellermann, Eds., ITG, IEEE, pp. 1–4. invited contribution
- 604) HAN, W., ZHANG, Z., DENG, J., WÖLLMER, M., WENINGER, F., AND SCHULLER, B. Towards Distributed Recognition of Emotion in Speech. In *Proceedings 5th International Symposium on Communications, Control, and Signal Processing, ISCCSP 2012* (Rome, Italy, May 2012), IEEE, IEEE, pp. 1–4. invited contribution, Special Session Interactive Behaviour Analysis
- 605) WENINGER, F., AND SCHULLER, B. 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, November 2011), ACM, ACM. invited contribution, 2 pages (acceptance rate: 39 %, IF* 1.77 (2010))
- 606) WENINGER, F., SCHULLER, B., LIEM, C., KURTH, F., AND HANJALIC, A. Music Information Retrieval: An Inspirational Guide to Transfer from Related Disciplines. In *Multimodal Music Processing* (Schloss Dagstuhl, Germany, 2012), M. Müller and M. Goto, Eds., vol. Seminar 11041 of *Dagstuhl Follow-Ups*, pp. 195–215. invited contribution
- 607) WÖLLMER, M., KLEBERT, N., AND SCHULLER, B. Switching Linear Dynamic Models for Recognition of Emotionally Colored and Noisy Speech. In *Proceedings 9th ITG Conference on Speech Communication* (Bochum, Germany, October 2010), vol. 225 of *ITG-Fachbericht*, ITG, VDE-Verlag. invited contribution, Special Session Bayesian Methods for Speech Enhancement and Recognition, 4 pages
- 608) DEVILLERS, L., AND SCHULLER, B. 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, February 2010), FLaReNet. invited contribution, 2 pages
- 609) STEIDL, S., SCHULLER, B., SEPPI, D., AND BATLINER, A. The Hinterland of Emotions: Facing the Open-Microphone Challenge. In *Proceedings 3rd International Conference on Affective Computing and Intelligent Interaction and Workshops, ACII 2009* (Amsterdam, The Netherlands, September 2009), vol. I, HUMAINE Association, IEEE, pp. 690–697. invited contribution, Special Session Recognition of Non-Prototypical Emotion from Speech – The final frontier?
- 610) BAGGIA, P., BURKHARDT, F., PELACHAUD, C., PETER, C., SCHULLER, B., WILSON, I., AND ZOVATO, E. Elements of an EmotionML 1.0. Tech. rep., W3C, November 2008
- 611) BATLINER, A., SEPPI, D., SCHULLER, B., STEIDL, S., VOGT, T., WAGNER, J., DEVILLERS, L., VIDRASCU, L., AMIR, N., AND AHARONSON, V. Patterns, Prototypes, Performance. In *Pattern Recognition in Medical and Health Engineering, Proceedings HSS-Cooperation Seminar Ingenieurwissenschaftliche Beiträge für ein leistungsfähigeres Gesundheitssystem* (Wildbad Kreuth, Germany, July 2008), J. Hornegger, K. Höller, P. Ritt, A. Borsdorf, and H.-P. Niedermeier, Eds., pp. 85–86. invited contribution
- 612) GRIMM, M., KROSCHER, K., SCHULLER, B., RIGOLL, G., AND MOOSMAYR, T. Acoustic Emotion Recognition in Car Environment Using a 3D Emotion Space Approach. In *Proceedings 33. Jahrestagung für Akustik, DAGA 2007* (Stuttgart, Germany, March 2007), DEGA, DEGA, pp. 313–314. invited contribution, Structured Session Sprachakustik im Kraftfahrzeug
- 613) RIGOLL, G., MÜLLER, R., AND SCHULLER, B. Speech Emotion Recognition Exploiting Acoustic and Linguistic Information Sources. In *Proceedings 10th International Conference Speech and Computer, SPECOM 2005* (Patras, Greece, October 2005), G. Kokkinakis, Ed., vol. 1, pp. 61–67. invited contribution

Forewords (4):

- 614) SCHULLER, B. 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. Springer, 2015, pp. 3–4. invited
- 615) COWIE, R., JI, Q., TAO, J., GRATCH, J., AND SCHULLER, B. 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, September 2015), AAAC, IEEE. 2 pages
- 616) SCHULLER, B. Foreword. In *Sentic Computing – A Common-Sense-Based Framework for Concept-Level Sentiment Analysis*, E. Cambria and A. Hussain, Eds., 2 ed. Springer, 2015, pp. v–vi. invited foreword
- 617) SCHULLER, B. 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):

- 618) EYBEN, F., AND SCHULLER, B. openSMILE:) The Munich Open-Source Large-Scale Multimedia Feature Extractor. *ACM SIGMM Records* 6, 4 (December 2014)
- 619) SCHULLER, B., STEIDL, S., AND BATLINER, A. The INTERSPEECH 2013 Computational Paralinguistics Challenge – A Brief Review. *Speech and Language Processing Technical Committee (SLTC) Newsletter* (November 2013)
- 620) SCHULLER, B., STEIDL, S., BATLINER, A., SCHIEL, F., AND KRAJEWSKI, J. The INTERSPEECH 2011 Speaker State Challenge – A review. *Speech and Language Processing Technical Committee (SLTC) Newsletter* (February 2012)
- 621) SCHULLER, B., AND DEVILLERS, L. Emotion 2010 - On Recent Corpora for Research on Emotion and Affect. *ELRA Newsletter, LREC 2010 Special Issue* 15, 1–2 (2010), 18–18
- 622) SCHULLER, B., STEIDL, S., BATLINER, A., AND JURCICEK, F. The INTERSPEECH 2009 Emotion Challenge – Results and Lessons Learnt. *Speech and Language Processing Technical Committee (SLTC) Newsletter* (October 2009)

Technical Reports (7):

- 623) KEREN, G., AND SCHULLER, B. Convolutional RNN: an Enhanced Model for Extracting Features from Sequential Data. *arxiv.org*, 1602.05875 (February 2016). 8 pages
- 624) KEREN, G., SABATO, S., AND SCHULLER, B. Tunable Sensitivity to Large Errors in Neural Network Training. *arxiv.org*, arXiv:1611.07743 (November 2016). 10 pages

- 625) SCHMITT, M., AND SCHULLER, B. openXBOW – Introducing the Passau Open-Source Crossmodal Bag-of-Words Toolkit. *arxiv.org*, 1605.06778 (May 2016). 9 pages
- 626) ABDIĆ, I., FRIDMAN, L., MARCHI, E., BROWN, D. E., ANGELL, W., REIMER, B., AND SCHULLER, B. Detecting Road Surface Wetness from Audio: A Deep Learning Approach. *arxiv.org*, 1511.07035 (December 2015). 5 pages
- 627) MOUSA, A. E.-D., MARCHI, E., AND SCHULLER, B. The ICSTM+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*, 1510.00268 (October 2015). 9 pages
- 628) TRIGEORGIS, G., BOUSMALIS, K., ZAFEIRIOU, S., AND SCHULLER, B. A deep matrix factorization method for learning attribute representations. *arxiv.org*, 1509.03248 (September 2015). 15 pages
- 629) WENINGER, F., SCHULLER, B., EYBEN, F., WÖLLMER, M., AND RIGOLL, G. A Broadcast News Corpus for Evaluation and Tuning of German LVCSR Systems. *arxiv.org*, 1412.4616 (December 2014). 4 pages