

# Publications by Björn W. Schuller

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Current h-index: **66** (source: Google Scholar)

Current citation count: **18929** (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. (> 100 citations)
- 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 (5):

- 7) H. N. Costin, B. W. Schuller, and A. M. Florea, eds., *Recent Advances in Intelligent Assistive Technologies: Paradigms and Applications*. Intelligent Systems Reference Library, Springer, 2018. to appear
- 8) S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds., *The Handbook of Multimodal-Multisensor Interfaces Volume 1 – Foundations, User Modeling, and Common Modality Combinations*. ACM Books, Morgan & Claypool, 2017. 661 pages
- 9) S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds., *The Handbook of Multimodal-Multisensor Interfaces Volume 2 – Signal Processing, Architectures, and Detection of Emotion and Cognition*. ACM Books, Morgan & Claypool, 2017. to appear
- 10) S. Oviatt, B. Schuller, P. Cohen, D. Sonntag, G. Potamianos, and A. Krüger, eds., *The Handbook of Multimodal-Multisensor Interfaces Volume 3 – Multimodal Language Processing, Software Tools, Commercial Applications and Emerging Directions*. ACM Books, Morgan & Claypool, 2017. to appear
- 11) 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):

- 12) S. Amiriparian, M. Schmitt, S. Hantke, V. Pandit, and B. Schuller, "Humans Inside: Cooperative Big Multimedia Data Mining," in *Innovations in Big Data Mining and Embedded Knowledge: Domestic and Social Context Challenges* (A. Esposito, A. M. Esposito, and L. C. Jain, eds.), Intelligent Systems

Reference Library (ISRL), Springer, 2018. 25 pages, invited contribution, to appear

- 13) D. Schuller and B. Schuller, "Audio Intelligence for Eating Behaviour Tracking," in *Recent Advances in Intelligent Assistive Technologies: Paradigms and Applications* (H. N. Costin, B. W. Schuller, and A. M. Florea, eds.), Intelligent Systems Reference Library, Springer, 2018. 30 pages, to appear
- 14) D. Schuller and B. Schuller, "Speech and Language in Mobile Health and Wellbeing Sensing: The Basics, Areas of Application, and Potentials," in *Mobile Sensing and Psychoinformatics* (H. Baumeister and C. Montag, eds.), Studies in Neuroscience, Psychology and Behavioral Economics, Berlin Heidelberg: Springer, 2018. 10 pages, invited contribution, to appear
- 15) 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
- 16) 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
- 17) 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
- 18) 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
- 19) 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
- 20) 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
- 21) 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
- 22) 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.), Human-Computer Interaction Series, pp. 57–80, Springer, 1st ed., 2016
- 23) F. Burkhardt, C. Pelachaud, B. Schuller, and E. Zovato, "EmotionML," in *Multimodal Interaction with W3C Standards: Towards Natural User Interfaces to Everything* (D. Dahl, ed.), pp. 65–80, Berlin/Heidelberg: Springer, 2017
- 24) 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
- 25) 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

- 26) 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
- 27) B. Schuller and F. Wenginger, "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
- 28) 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
- 29) 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
- 30) 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
- 31) 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
- 32) 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
- 33) 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
- 34) F. Wenginger, 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
- 35) 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
- 36) 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
- 37) B. Schuller and F. Wenginger, "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
- 38) 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
- 39) 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
- 40) 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
- 41) 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
- 42) 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
- 43) 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
- 44) 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
- 45) 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
- 46) 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
- 47) 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
- 48) 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, Proceed-*

- ings (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
- 49) 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))
- 50) B. Vlasenko, B. Schuller, A. Wendemuth, and G. Rigoll, “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)*, pp. 217–220, Berlin/Heidelberg: Springer, 2008
- 51) 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
- 52) 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
- 53) 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
- 54) 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 (126)
- 55) B. Schuller, F. Weninger, Y. Zhang, F. Ringeval, A. Batliner, S. Steidl, F. Eyben, E. Marchi, A. Vinciarelli, K. Scherer, M. Chetouani, and M. Mortillaro, “Affective and Behavioural Computing: Lessons Learnt from the First Computational Paralinguistics Challenge,” *Computer Speech and Language*, vol. 32, 2018. 48 pages, to appear (IF: 1.900, 5-year IF: 1.938 (2016))
- 56) B. Schuller, “What Affective Computing Reveals about Autistic Children’s Facial Expressions of Joy or Fear,” *IEEE Computer Magazine*, vol. 51, pp. 40–41, June 2018. (IF: 1.940, 5-year IF: 2.113 (2017))
- 57) A. Baird, S. H. Jorgensen, E. Parada-Cabaleiro, S. Hantke, N. Cummins, and B. Schuller, “Listener Perception of Vocal Traits in Synthesized Voices: Age, Gender, and Human-Likeness,” *Journal of the Audio Engineering Society, Special Issue on Augmented and Participatory Sound and Music Interaction using Semantic Audio*, vol. 66, 2018. 8 pages, to appear (IF: 0.707, 5-year IF: 0.832 (2016))
- 58) J. Deng, X. Xu, Z. Zhang, S. Frühholz, and B. Schuller, “Semi-Supervised Autoencoders for Speech Emotion Recognition,” *IEEE/ACM Transactions on Audio, Speech and Language Processing*, vol. 26, no. 1, pp. 31–43, 2018. (IF: 2.950, 5-year IF: 3.253 (2017))
- 59) M. Freitag, S. Amiriparian, S. Pugachevskiy, N. Cummins, and B. Schuller, “auDeep: Unsupervised Learning of Representations from Audio with Deep Recurrent Neural Networks,” *Journal of Machine Learning Research*, vol. 18, pp. 1–5, April 2018. (IF: 5.000, 5-year IF: 7.649 (2016))
- 60) S. Hantke, T. Olenyi, C. Hausner, and B. Schuller, “Introducing VoiLA: An Online Intelligent Speech Analysis and Collection Platform,” *International Journal of Automation and Computing*, vol. 15, 2018. 10 pages, invited as one of 8% best papers of ACII Asia 2018, to appear
- 61) S. Hantke, A. Abstreiter, N. Cummins, and B. Schuller, “Trustability-based Dynamic Active Learning for Crowdsourced Labelling of Emotional Audio Data,” *IEEE Access*, vol. 6, 2018. 12 pages, to appear (IF: 3.557, 5-year IF: 4.199 (2017))
- 62) C. Janott, M. Schmitt, Y. Zhang, K. Qian, V. Pandit, Z. Zhang, C. Heiser, W. Hohenhorst, M. Herzog, W. Hemmert, and B. Schuller, “Snoring Classified: The Munich Passau Snore Sound Corpus,” *Computers in Biology and Medicine*, 2018. 27 pages, to appear (IF: 2.115, 5-year IF: 2.168 (2017))
- 63) F. B. Pokorny, K. D. Bartl-Pokornya, C. Einspieler, D. Zhang, R. Vollmann, S. Bölte, H. Tager-Flusberg, M. Gugatschka, B. W. Schuller, and P. B. Marschik, “Typical vs. atypical: Combining auditory Gestalt perception and acoustic analysis of early vocalisations in Rett syndrome,” *Research in Developmental Disabilities*, 2018. 12 pages, to appear (IF: 1.820, 5-year IF: 2.344 (2017))
- 64) K. Qian, C. Janott, Z. Zhang, J. Deng, A. Baird, C. Heiser, W. Hohenhorst, M. Herzog, W. Hemmert, and B. Schuller, “Teaching Machines on Snoring: A Benchmark on Computer Audition for Snore Sound Excitation Localisation,” *Archives of Acoustics*, vol. 43, 2018. 17 pages, to appear (IF: 0.917, 5-year IF: 0.819 (2017))
- 65) Z. Ren, K. Qian, Z. Zhang, V. Pandit, A. Baird, and B. Schuller, “Deep Scalogram Representations for Acoustic Scene Classification,” *IEEE/CAA Journal of Automatica Sinica*, vol. 5, no. 3, pp. 662–669, 2018. invited contribution
- 66) O. Rudovic, J. Lee, M. Dai, B. Schuller, and R. W. Picard, “Personalized machine learning for robot perception of affect and engagement in autism therapy,” *Science Robotics*, vol. 3, June 2018. 12 pages
- 67) D. Schuller and B. Schuller, “Automatic Speech Emotion Recognition in Dialogue and Human-Computer Interaction: A Survey,” *International Journal of Automation and Computing*, vol. 15, 2018. 10 pages, invited contribution, to appear
- 68) D. Schuller and B. Schuller, “The Age of Artificial Emotional Intelligence,” *IEEE Computer Magazine, Special Issue on The Future of Artificial Intelligence*, vol. 51, September 2018. (IF: 1.940, 5-year IF: 2.113 (2017))
- 69) G. Trigeorgis, M. A. Nicolaou, B. Schuller, and S. Zafeiriou, “Deep Canonical Time Warping for simultaneous alignment and representation learning of sequences,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 40, pp. 1128–1138, May 2018. (IF: 9.455, 5-year IF: 13.229 (2017))
- 70) Z. Zhang, J. T. Geiger, J. Pohjalainen, A. E. Mousa, W. Jin, and B. Schuller, “Deep Learning for Environmentally Robust Speech Recognition: An Overview of Recent Developments,” *ACM Transactions on Intelligent Systems and Technology*, 2018. 23 pages, to appear (IF: 2.973, 5-year IF: 3.381 (2017))
- 71) Z. Zhang, J. Han, J. Deng, X. Xu, F. Ringeval, and B. Schuller, “Leveraging Unlabelled Data for Emotion Recognition with Enhanced Collaborative Semi-Supervised Learning,” *IEEE Access*, vol. 6, 2018. 13 pages, to appear (IF: 3.557, 5-year IF: 4.199 (2017))
- 72) B. Schuller, Y. Zhang, and F. Weninger, “Three Recent Trends in

- Paralinguistics on the Way to Omniscient Machine Intelligence,” *Journal on Multimodal User Interfaces, Special Issue on Speech Communication*, vol. 10, 2017. 10 pages, to appear (IF: 1.140, 5-year IF: 0.872 (2017))
- 73) B. Schuller, “Can Affective Computing Save Lives? Meet Mobile Health,” *IEEE Computer Magazine*, vol. 50, p. 40, 2017. (IF: 1.940, 5-year IF: 2.113 (2017))
- 74) B. Schuller, “Maschinelle Profilierung durch KI,” *digma – Zeitschrift für Datenrecht und Informationssicherheit*, vol. 1, no. 4, pp. 204–210, 2017. invited contribution
- 75) B. W. Schuller and N. Cummins, “Speech Analysis for early and remote diagnosis: An Overview,” *Methods, Special Issue on Translational data analytics and health informatics*, 2017. to appear (IF: 3.998, 5-year IF: 3.936 (2017))
- 76) B. Schuller, “Speech Emotion Recognition: 20 Years in a Nutshell, Benchmarks, and Ongoing Trends,” *Communications of the ACM*, vol. 61, pp. 91–99, May 2017. Feature Article (IF: 4.027, 5-year IF: 6.469 (2016))
- 77) P. Buitelaar, I. D. Wood, S. Negi, M. Arcan, J. P. McCrae, A. Abele, C. Robin, V. Andryushechkin, H. Sagha, M. Schmitt, B. W. Schuller, J. F. Sánchez-Rada, C. A. Iglesias, C. Navarro, A. Giefer, N. Heise, V. Masucci, F. A. Danza, C. Caterino, P. Smrz, M. Hradis, F. Povolný, M. Klimes, P. Matejka, and G. Tummarello, “MixedEmotions: An Open-Source Toolbox for Multi-Modal Emotion Analysis,” *IEEE Transactions on Multimedia*, vol. 20, 2017. 15 pages, to appear (IF: 3.509, 5-year IF: 4.103 (2016))
- 78) E. Coutinho, K. Gentsch, J. van Peer, K. R. Scherer, and B. Schuller, “Evidence of Emotion-Antecedent Appraisal Checks in Electroencephalography and Facial Electromyography,” *PLoS ONE*, vol. 12, 2017. 24 pages, to appear (IF: 2.806 (2016))
- 79) E. Coutinho and B. Schuller, “Shared Acoustic Codes Underlie Emotional Communication in Music and Speech – Evidence from Deep Transfer Learning,” *PLoS ONE*, vol. 12, June 2017. 24 pages (IF: 2.806 (2016))
- 80) 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: 3.557, 5-year IF: 4.199 (2017))
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- 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 %)
- 310) 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
- 311) 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))
- 312) 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 %)
- 313) J. F. 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. F. Sánchez-Rada and B. Schuller, eds.), (Portoroz, Slovenia), pp. 48–54, ELRA, ELRA, May 2016. (acceptance rate: 42 % for long papers)
- 314) 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 12th 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)
- 315) 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 %)
- 316) M. Schmitt, E. Marchi, F. Ringeval, and B. Schuller, “Towards Cross-lingual Automatic Diagnosis of Autism Spectrum Condition in Children’s Voices,” in *Proceedings 12th ITG Conference on Speech Communication*, vol. 267 of *ITG-Fachbericht*, (Paderborn, Germany), pp. 264–268, ITG/VDE, IEEE/VDE, October 2016
- 317) 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))
- 318) 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))
- 319) G. Trigeorgis, M. A. Nicolaou, B. Schuller, and S. Zafeiriou, “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))
- 320) 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
- 321) 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))
- 322) 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))
- 323) 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
- 324) 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. F. Sánchez-Rada and B. Schuller, eds.), (Portoroz, Slovenia), pp. 80–84, ELRA, ELRA, May 2016. (acceptance rate: 74 %)
- 325) 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 %)
- 326) 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 %)
- 327) 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))
- 328) 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))
- 329) 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 %)
- 330) 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))
- 331) 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 %)
- 332) 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))
- 333) 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
- 334) 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
- 335) 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
- 336) 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. Sabouret, eds.), (Atlanta, GA), ACM, ACM, March 2015. 9 pages, best paper award (long talk acceptance rate: 36 %)
- 337) 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 %)
- 338) 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 %)
- 339) 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 %)
- 340) 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. 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
- 341) 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))
- 342) 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 %)
- 343) 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 %)
- 344) 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
- 345) S. Hantke, F. Eyben, T. Appel, and B. Schuller, "iHEARuPLAY: 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 %)
- 346) E. Marchi, F. Vesperini, 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))
- 347) 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
- 348) 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 %)
- 349) 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 %)
- 350) 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
- 351) 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
- 352) 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
- 353) 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 %)
- 354) 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 %)
- 355) 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 %)
- 356) 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 %)
- 357) 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
- 358) 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
- 359) H. Sagha, 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 %)
- 360) 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
- 361) 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
- 362) 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)*, (Montréal, QC), NIPS, NIPS, December 2015. 4 pages
- 363) 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
- 364) 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 %)
- 365) 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
- 366) 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 %)
- 367) 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))
- 368) 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
- 369) 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 %)
- 370) 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
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- 656) 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
- 657) 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))
- 658) 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
- 659) 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: 2.596, 5-year IF: 3.759 (2017))
- 660) 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: 2.596, 5-year IF: 3.759 (2017))
- 661) 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))
- 662) 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: 2.671, 5-year IF: 2.939 (2016))
- 663) 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
- 664) 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
- 665) 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
- 666) 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
- 667) 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))
- 668) 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))
- 669) 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
- 670) 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))
- 671) 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: 3.479, 5-year IF: 2.767 (2017))
- 672) 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))
- 673) 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
- 674) 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):*
- 675) 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))
- 676) B. Schuller, “Approaching Cross-Audio Computer Audition,” *Dagstuhl Reports*, vol. 3, pp. 22–22, November 2013
- 677) F. Metzke, 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
- 678) 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
- 679) B. Schuller, “Next Gen Music Analysis: Some Inspirations from Speech,” *Dagstuhl Reports*, vol. 1, no. 1, pp. 93–93, 2011
- 680) 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 (27)*
- 681) B. Schuller, “Emotion Sensing at Your Wrist,” in *2nd Workshop on emotion awareness for pervasive computing with mobile and wearable devices (EmotionAware 2018) in conjunction with the 2018 IEEE International Conference on Pervasive Computing and Communications (PerCom 2018)*, (Athens, Greece), IEEE, IEEE, March 2018. 1 page, to appear
- 682) A. Baird, S. Amiriparian, A. Rynkiewicz, and B. Schuller, “Echolalic Autism Spectrum Condition Vocalisations: Brute-Force and Deep Spectrum Features,” in *Proceedings International Paediatric Conference (IPC 2018)*, (Rzeszów, Poland), Polish Society of Social Medicine and Public Health, May 2018. 2 pages, to appear
- 683) Z. Zhang, A. Warlaumont, B. Schuller, G. Yetish, C. Scaff, H. Collieran, J. Stieglitz, and A. Cristia, “Developing computational measures of vocal maturity from daylong recordings,” in *16èmes Rencontres du Réseau Français de Phonologie (RFP 2018)*, (Paris, France), RFP, RFP, June 2018. 1 page, to appear
- 684) B. Schuller, “Mental health monitoring in the pocket as a life changer? The AI view,” in *Proceedings 9th Scientific Meeting of the International Society for Research on Internet Interventions, ISRII 2017*, (Berlin, Germany), Society for Research on Internet Interventions (SRII), Elsevier, October 2017. 1 page
- 685) A. Rynkiewicz, K. Grabowski, A. Lassalle, S. Baron-Cohen, B. Schuller, N. Cummins, A. Baird, N. Hadjikhani, J. Podgrska-Bednarz, A. Pieniek, I. ucka, A. Mazur, and J. Tabarkiewicz, “Humanoid Robots and Modern Technology in ADOS-2 and BOSCC to Support the Clinical Evaluation and Therapy of Patients with Autism Spectrum Condition (ASC) / Roboty humanoidalne oraz nowe technologie w ADOS-2 i BOSCC, wspierające diagnostykę kliniczną i terapię osób ze stanami ze spektrum autyzmu,” in *Proceedings XXIX Ogólnopolska Konferencja Sekcji Naukowej Psychiatrii Dzieci i Mózgów Polskiego Towarzystwa Psychiatrycznego*, (Katowice, Poland), Polskie Towarzystwo Psychiatryczne, PTP, November 2017. 3 pages, to appear
- 686) N. Cummins, S. Hantke, S. Schnieder, 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
- 687) 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
- 688) 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
- 689) Y. Zhang and B. Schuller, “Towards Human-like Holistic Machine Perception of Affective Social Behaviour,” in *Proceedings 12th Workshop on Women in Machine Learning (WiML 2017), satellite event of NIPS 2017*, (Long Beach, CA), NIPS, NIPS, December 2017. 1 page, to appear
- 690) 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.), (Rzeszów, Poland), pp. 65–67, SOLIS RADIUS, September 2016
- 691) B. Schuller, “Zaangażowanie aby wzmocnić kompetencje: emocjonalnie inteligentne roboty i gry komputerowe dla dzieci z

- autyzmem,” in *Proceedings “Swiatowe innowacje laczące medycyne, inzynierie oraz technologie w diagnozowaniu i terapii autyzmu”* (A. Rynkiewicz and K. Grabowski, eds.), (Rzeszow, Poland), pp. 62–64, SOLIS RADIUS, September 2016
- 692) 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
- 693) 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
- 694) 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
- 695) O. Rudovic, V. Evers, M. Pantic, B. Schuller, and S. Petrović, “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
- 696) 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
- 697) 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
- 698) 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
- 699) 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
- 700) 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
- 701) 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
- 702) 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
- 703) 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
- 704) 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 %)
- 705) 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 %)
- 706) 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 %)
- 707) 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 %)
- 708) 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 %)
- Invited Papers (30):*
- 709) S. Amiriparian, S. Julka, N. Cummins, and B. Schuller, “Deep Convolutional Recurrent Neural Networks for Rare Sound Event Detection,” in *Proceedings 44. Jahrestagung für Akustik, DAGA 2008*, (Munich, Germany), DEGA, DEGA, March 2018. 4 pages, to appear, invited contribution, Structured Session Deep Learning for Audio
- 710) M. Schmitt and B. Schuller, “Deep Recurrent Neural Networks for Emotion Recognition in Speech,” in *Proceedings 44. Jahrestagung für Akustik, DAGA 2008*, (Munich, Germany), DEGA, DEGA, March 2018. 4 pages, to appear, invited contribution, Structured Session Deep Learning for Audio
- 711) 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* (K. Brandenburg and M. Sandler, eds.), (Ilmenau, Germany), pp. 89–97, AES, Audio Engineering Society, July 2011. invited contribution
- 712) 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
- 713) 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 including the 35th German Annual Conference on Acoustics, NAG/DAGA 2009*, (Rotterdam, The Netherlands), pp. 361–364, Acoustical Society of the Netherlands, DEGA, DEGA, March 2009. invited contribution
- 714) 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
- 715) 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
- 716) 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
- 717) 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
- 718) 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))
- 719) 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
- 720) 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
- 721) 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
- 722) 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 Processing
- 723) 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)
- 724) 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
- 725) 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
- 726) 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
- 727) 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
- 728) 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
- 729) 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
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