Publications

Dr. Jakob Abeßer

Book Chapters

[1] Jakob Abeßer. Automatic string detection for bass guitar and electric guitar. In Mitsuko Aramaki, Mathieu Barthet, Richard Kronland-Martinet, and Sølvi Ystad, editors, *From Sounds to Music and Emotions*, volume 7900 of *Lecture Notes in Computer Science*, pages 333–352. Springer, London, UK, 2012.

[2] Christian Dittmar, Estefanía Cano, Jakob Abeßer, and Sascha Grollmisch. Music Information Retrieval Meets Music Education. In Meinard Müller, Masataka Goto, and Markus Schedl, editors, *Multimodal Music Processing*, volume 3 of *Dagstuhl Follow-Ups*, pages 95–120. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, Dagstuhl, Germany, 2012.

[3] Karlheinz Brandenburg, Christian Dittmar, Matthias Gruhne, Jakob Abeßer, Hanna Lukashevich, Peter Dunker, Daniel Gärtner, Kay Wolter, Stefanie Nowak, and Holger Großmann. Music search and recommendation. In Borko Furth, editor, *Handbook of multimedia for digital entertainment and arts*, pages 349–384. Springer, 2009.

Journal Publications

[4] Jakob Abeßer, Hanna Lukashevich, and Paul Bräuer. Classification of Music Genres based on Repetitive Basslines. *Journal of New Music Research*, 41(3):239–257, 2012.

[5] Klaus Frieler, Martin Pfleiderer, Jakob Abeßer, and Wolf-Georg Zaddach. Midlevel analysis of monophonic jazz solos. a new approach to the study of improvisation. *Musicae Scientiae*, 20(2):143–162, 2016.

[6] Klaus Frieler, Martin Pfleiderer, Jakob Abeßer, and Wolf-Georg Zaddach. Chasing the difference. computer-aided comparison of improvisation in post-bop, hard bop, and bebop. *(to appear in) Jazzforschung / Jazz Research*, 2016.

Conference Publications

[7] Stefan Balke, Jonathan Driedger, Jakob Abeßer, and Meinard Müller. Towards evaluating multiple predominant melody annotations in jazz recordings. In *Proceedings of the 17th International Society for Music Information Retrieval Conference (ISMIR)*, pages 246–252, New York, USA, 2016.

[8] Jakob Abeßer, Estefanía Cano, Klaus Frieler, Martin Pfleiderer, and Wolf-Georg Zaddach. Score-informed analysis of intonation and pitch modulation in jazz solos. In *Proceedings of the International Society for Music Information Retrieval Conference (ISMIR)*, pages 823–829, Málaga, Spain, 2015.

[9] Daniel Matz, Estefanía Cano, and Jakob Abeßer. New sonorities for early jazz recordings using sound source separation and automatic mixing tools. In *Proceedings of the International Society for Music Information Retrieval Conference (ISMIR)*, pages 749–755, Málaga, Spain, 2015.

[10] Gerald Schuller, Jakob Abeßer, and Christian Kehling. Parameter extraction for bass guitar sound models including playing styles. In *Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Brisbane, Australia, 2015.

[11] Jakob Abeßer, Martin Pfleiderer, Klaus Frieler, and Wolf-Georg Zaddach. Score-informed tracking and contextual analysis of fundamental frequency contours in trumpet and saxophone jazz solos. In *Proceedings of the International Conference on Digital Audio Effects (DAFx)*, pages 181–186, Erlangen, Germany, 2014.

[12] Jakob Abeßer and Gerald Schuller. Instrument-centered Music Transcription of Bass Guitar Tracks. In *Proceedings of the AES Conference on Semantic Audio*, London, UK, 2014.

[13] Jakob Abeßer, Estefanía Cano, Klaus Frieler, and Martin Pfleiderer. Dynamics in jazz improvisation - score-informed estimation and contextual analysis of tone intensities in trumpet and saxophone solos. In *Proceedings of the Conference on Interdisciplinary Musicology (CIM)*, pages 156–161, Berlin, Germany, 2014.

[14] Arndt Eppler, Andreas Männchen, Jakob Abeßer, Christof Weiß, and Klaus Frieler. Automatic style classification of jazz records with respect to rhythm, tempo, and tonality. In *Proceedings of the Conference on Interdisciplinary Musicology (CIM)*, pages 162–167, Berlin, Germany, 2014.

[15] Klaus Frieler, Wolf-Georg Zaddach, and Jakob Abeßer. Exploring phrase form structures. pt. II: Monophonic jazz solos. In *Proceedings of the International Workshop on Folk Music Analysis (FMA)*, pages 48–51, Instanbul, Turkey, 2014.

[16] Anna M. Kruspe, Jakob Abeßer, and Christian Dittmar. A GMM approach to singing language identification. In *Proceedings of the AES International Conference on Semantic Audio*, pages 140–148, London, UK, 2014.

[17] Christian Kehling, Jakob Abeßer, Christian Dittmar, and Gerald Schuller. Automatic tablature transcription of electric guitar recordings by estimation of score- and instrument-related parameters. In *Proceedings of the International Conference on Digital Audio Effects (DAFx)*, Erlangen, Germany, 2014.

[18] Jakob Abeßer, Klaus Frieler, Martin Pfleiderer, and Wolf-Georg Zaddach. Introducing the Jazzomat project - Jazz solo analysis using Music Information Retrieval methods. In *Proceedings of the International Symposium on Computer Music Multidisciplinary Research (CMMR)*, Marseilles, France, 2013.

[19] Jakob Abeßer, Johannes Hasselhorn, Christian Dittmar, Andreas Lehmann, and Sascha Grollmisch. Automatic Quality Assessment of Vocal and Instrumental Performances of Ninth-grade and Tenth-grade Pupils. In *Proceedings of the International Symposium on Computer Music Multidisciplinary Research (CMMR)*, Marseilles, France, 2013.

[20] Jakob Abeßer, Patrick Kramer, Christian Dittmar, and Gerald Schuller. Parametric Audio Coding of Bass Guitar Recordings using a Tuned Physical Modeling Algorithm. In *Proceedings of the International Conference on Digital Audio Effects (DAFx)*, Maynooth, Ireland, 2013.

[21] Mikus Grasis, Jakob Abeßer, Christian Dittmar, and Hanna Lukashevich. A Multiple-Expert Framework for Instrument Recognition. In *Proceedings of the International Symposium on Computer Music Multidisciplinary Research (CMMR)*, Marseilles, France, 2013.

[22] Christian Dittmar, Andreas Männchen, and Jakob Abeßer. Real-time guitar string detection for music education software. In *Proceedings of the nternational Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS)*, Paris, France, 2013.

[23] Klaus Frieler, Jakob Abeßer, Wolf-Georg Zaddach, and Martin Pfleiderer. Introducing the Jazzomat Project and the Melo(S)py Library. In *Proceedings of the International Workshop on Folk Music Analysis (FMA)*, pages 76–78, Utrecht, Netherlands, 2013.

[24] Anna Marie Kruspe, Jakob Abeßer, and Christian Dittmar. Towards coarse-scale event detection in music. In *Proceedings of the Audio Mostly Conference on Interaction with Sound*, Piteå, Sweden, 2013.

[25] Vedant Dhandhania, Jakob Abeßer, Anna Kruspe, and Holger Großmann. Automatic and manual annotation of time-varying perceptual properties in movie soundtracks. In *Proceedings of the Sound and Music Computing Conference (SMC)*, pages 461–466, Copenhagen, Denmark, 2012.

[26] Christian Dittmar, Jakob Abeßer, Sascha Grollmisch, Johannes Hasselhorn, and Andreas Lehmann. Automatic singing assessment of pupil performances. In *Proceedings of the International Conference on Music Perception and Cognition and the 8th Triennial conference of the European Society for the Cognitive Sciences of Music (ICMPC-ESCOM)*, pages 263–264, Thessaloniki, Greece, 2012.

[27] Patrick Kramer, Jakob Abeßer, Christian Dittmar, and Gerald Schuller. A Digital Waveguide Model of the Electric Bass Guitar Including Different Playing Techniques. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pages 353–356, Kyoto, Japan, 2012.

[28] Johannes Krasser, Jakob Abeßer, Holger Großmann, Christian Dittmar, and Estefanía Cano. Improved Music Similarity Computation based on Tone Objects. In *Proceedings of the Audio Mostly Conference on Interaction with Sound*, Corfu, Greece, 2012.

[29] Jakob Abeßer, Christian Dittmar, and Gerald Schuller. Automatic Recognition and Parametrization of Frequency Modulation Techniques in Bass Guitar Recordings. In *Proceedings of the Audio Engineering Society (AES) International Conference on Semantic Audio*, pages 1–8, Ilmenau, Germany, 2011.

[30] Jakob Abeßer and Olivier Lartillot. Modelling Musical Attributes to Characterize Two-Track Recordings with Bass and Drums. In *Proceedings of the International Society for Music Information Retrieval Conference (ISMIR)*, pages 209–214, Miami, US, 2011.

[31] Jakob Abeßer, Olivier Lartillot, Christian Dittmar, Tuomas Eerola, and Gerald Schuller. Modeling Musical Attributes to Characterize Ensemble Recordings using Rhythmic Audio Features. In *Proceedings of the IEEE Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pages 189–192, Praha, Czech Republic, 2011.

[32] Holger Großmann, Anna Kruspe, Jakob Abeßer, and Hanna Lukashevich. Towards Cross-Modal Search and Synchronization of Music and Video Streams. In *Proceedings of the International Congress on Computer Science: Information Systems and Technology (CSIST)*, 2011.

[33] Anna Kruspe, Hanna Lukashevich, and Jakob Abeßer. Artist Filtering for Non-western Music Classification. In *Proceedings of the Audio Mostly Conference: A Conference on Interaction with Sound*, pages 82–87, Coimbra, Portugal, 2011.

[34] Anna Kruspe, Hanna Lukashevich, Jakob Abeßer, Holger Großmann, and Christian Dittmar. Automatic classification of music pieces into global cultural areas. In *Proceedings of the AES International Conference on Semantic Audio*, pages 44–53, Ilmenau, Germany, 2011.

[35] Jakob Abeßer, Paul Bräuer, Hanna Lukashevich, and Gerald Schuller. Bass Playing Style Detection Based on High-level Features and Pattern Similarity. In *Proceedings of the International Society for Music Information Retrieval Conference (ISMIR)*, pages 93–98, Utrecht, Netherlands, 2010.

[36] Jakob Abeßer, Hanna Lukashevich, Christian Dittmar, Paul Bräuer, and Fabienne Krause. Rule-based classification of musical genres from a global cultural background. In *Proceedings of the International Symposium on Computer Music Modeling and Retrieval (CMMR)*, Málaga, Spain, 2010.

[37] Jakob Abeßer, Hanna Lukashevich, and Gerald Schuller. Feature-based Extraction of Plucking and Expression Styles of the Electric Bass Guitar. In *Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pages 2290–2293, Dallas, USA, 2010.

[38] Michael Stein, Jakob Abeßer, Christian Dittmar, and Gerald Schuller. Automatic Detection of Audio Effects in Guitar and Bass Recordings. In *Proceedings of the Audio Engineering Society (AES) Convention*, pages 522–533, London, UK, 2010.

[39] Thomas Völkel, Jakob Abeßer, Christian Dittmar, and Holger Großmann. Automatic Genre Classification of Latin American Music using Characteristic Rhythmic Patterns. In *Proceedings of the Audio Mostly Conference on Interaction with Sound*, Piteå, Sweden, 2010.

[40] Christian Dittmar, Sascha Grollmisch, Hanna Lukashevich, Holger Großmann, Estefanía Cano, and Jakob Abeßer. Songs2See and GlobalMusic2One: Two Ongoing Projects in Music Information Retrieval Research at Fraunhofer IDMT. In *Proceeding of the International Symposium on Computer Music Modeling and Retrieval (CMMR)*, pages 259–272, Málaga, Spain, 2010. Springer-Verlag.

[41] Jakob Abeßer, Hanna Lukashevich, Christian Dittmar, and Gerald Schuller. Genre Classification using Bass-Related High-Level Features and Playing Styles. In *Proceedings of the International Society for Music Information Retrieval Conference (ISMIR)*, pages 453–458, Kobe, Japan, 2009.

[42] Hanna Lukashevich, Jakob Abeßer, Christian Dittmar, and Holger Großmann. From Multi-Labeling to Multi-Domain-Labeling: A Novel Two-Dimensional Approach to Music Genre Classification. In *Proceedings of the International Society for Music Information Retrieval Conference (ISMIR)*, pages 459–464, Kobe, Japan, October 26-30 2009.

[43] Christian Dittmar and J. Abeßer. Automatic Music Transcription with User Interaction. In *Proceedings of the Deutsche Jahrestagung für Akustik (DAGA)*, Dresden, Germany, 2008.

[44] Jakob Abeßer, Christian Dittmar, and Holger Großmann. Automatic Genre and Artist Classification by Analyzing Improvised Solo Parts from Musical Recordings. In *Proceedings of the Audio Mostly Conference on Interaction with Sound*, pages 127–131, Piteå, Sweden, 2008.