List of Publications

Dr.-Ing. Jakob Abeßer

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1 Theses

[the1] J. Abeßer, "Automatic transcription of bass guitar tracks applied for music genre classification and sound synthesis," Ph.D. dissertation, Technische Universität Ilmenau, 2014.

2 Books (Edited)

[books1] M. Pfleiderer, K. Frieler, J. Abeßer, W.-G. Zaddach, and B. Burkhart, Eds., *Inside the Jazzomat - New Perspectives for Jazz Research*. Schott Campus, 2017. [Online]. Available: https://schott-campus.com/jazzomat/

3 Proceedings (Edited)

[pro1] C. Dittmar, J. Abeßer, and M. Müller, Eds., *Proceedings of the AES International Conference on Semantic Audio*, 2017.

4 Journal Articles

[jou1] M. Taenzer, S. I. Mimilakis, and J. Abeßer, "Informing piano multi-pitch estimation with inferred local polyphony based on convolutional neural networks," *Electronics*, vol. 10, no. 7, 2021. [Online]. Available: https://www.mdpi.com/2079-9292/10/7/851

[jou2] J. Abeßer and M. Müller, "Jazz bass transcription using a U-Net architecture," *Electronics*, vol. 10, no. 6, 2021. [Online]. Available: https://www.mdpi.com/2079-9292/10/6/670

[jou3] J. Abeßer, "A review of deep learning based methods for acoustic scene classification," *Applied Sciences*, vol. 10, no. 6, 2020. [Online]. Available: https://www.mdpi.com/2076-3417/10/6/2020

[jou4] S. Balke, C. Dittmar, J. Abeßer, K. Frieler, M. Pfleiderer, and M. Müller, "Bridging the gap: Enriching YouTube videos with jazz music annotations," *Frontiers in Digital Humanities*, vol. 5, p. 1, 2018. [Online]. Available: https://www.frontiersin.org/article/10.3389/fdigh.2018.00001

[jou5] J. Abeßer and G. Schuller, "Instrument-centered music transcription of solo bass guitar recordings," *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, vol. 25, no. 9, pp. 1741–1750, Sep. 2017.

[jou6] J. Abeßer, K. Frieler, E. Cano, M. Pfleiderer, and W.-G. Zaddach, "Score-informed analysis of tuning, intonation, pitch modulation, and dynamics in jazz solos," *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, vol. 25, no. 1, pp. 168–177, Jan 2017.

[jou7] K. Frieler, M. Pfleiderer, J. Abeßer, and W.-G. Zaddach., "Midlevel analysis of monophonic jazz solos. A new approach to the study of improvisation," *Musicae Scientiae*, vol. 20, no. 2, pp. 143–162, 2016. [Online]. Available: https://doi.org/10.1177/1029864916636440

[jou8] ——, "Chasing the difference. Computer-aided comparison of improvisation in post-bop, hard bop, and bebop." *Jazzforschung / Jazz Research*, vol. 46, pp. 249–274, 2017.

[jou9] J. Abeßer, "Automatic string detection for bass guitar and electric guitar," in *From Sounds to Music and Emotions*, ser. Lecture Notes in Computer Science, M. Aramaki, M. Barthet, R. Kronland-Martinet, and S. Ystad, Eds. London, UK: Springer, 2012, vol. 7900, pp. 333–352.

[jou10] J. Abeßer, H. Lukashevich, and P. Bräuer, "Classification of Music Genres based on Repetitive Basslines," *Journal of New Music Research*, vol. 41, no. 3, pp. 239–257, 2012.

5 Conference Papers / Others

[co1] J. Abeßer, J. Chauhan, P. P. Pillai, M. Taenzer, and S. I. Mimilakis, "Predominant jazz instrument recognition: Empirical studies on neural network architectures," in *Proceedings of the European Signal Processing Conference (EUSIPCO)*, 2021.

[co2] J. Abeßer, S. Gourishetti, A. Kátai, T. Clauß, P. Sharma, and J. Liebetrau, "IDMT-Traffic: An open benchmark dataset for acoustic traffic monitoring research," in *Proceedings of the European Signal Processing Conference (EUSIPCO)*, 2021.

[co3] D. S. Johnson, W. Lorenz, M. Taenzer, S. Mimilakis, S. Grollmisch, J. Abeßer, and H. Lukashevich, "DESED-FL and URBAN-FL: Federated learning datasets for sound event detection," in *Proceedings of the European Signal Processing Conference (EUSIPCO)*, 2021. [Online]. Available: https://arxiv.org/abs/2102.08833

[co4] M. Nowakowsi, C. Weiß, and J. Abeßer, "Towards deep learning strategies for transcribing electroacoustic music," in *Proceedings of the 15th International Symposium on Computer Music Multidisciplinary Research (CMMR)*, 2020.

[co5] T. Clauß and J. Abeßer, "Identifikation urbaner Geräuschquellen mittels maschineller Lernverfahren," *Lärmbekämpfung*, no. 3, 2020.

[co6] M. Taenzer, J. Abeßer, S. I. Mimilakis, C. Weiß, M. Müller, and H. Lukashevich, "Investigating CNN-based instrument family recording for western classical music recordings," in *Proceedings of the 20th International Society for Music Information Retrieval Conference (ISMIR)*, Delft, Netherlands, 2019.

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[co10] J. Abeßer and S. Kepplinger, "Smart solutions to cope with urban noise pollution," *ERCIM*, 2019.

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[co12] C. Weiß, S. Balke, J. Abeßer, and M. Müller, "Computational corpus analysis: A case study on jazz solos," in *Proceedings of the 19th International Society for Music Information Retrieval Conference (ISMIR)*, Paris, France, 2018, pp. 416–423.

[co13] J. S. Gómez, J. Abeßer, and E. Cano, "Jazz solo instrument classification with convolutional neural networks, source separation, and transfer learning," in *Proceedings of the 19th International Society for Music Information Retrieval Conference (ISMIR)*, Paris, France, 2018, pp. 577–584.

[co14] T. Clauß, J. Abeßer, H. Lukashevich, R. Gräfe, F. Häuser, C. Kühn, and T. Sporer, "Stadtlärm - a distributed system for noise level measurement and noise source identification in a smart city environment," in *Proceedings of the Deutsche Jahrestagung für Akustik (DAGA)*, Munich, Germany, 2018, pp. 285–288.

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[co20] S. Balke, J. Driedger, J. Abeßer, and M. Müller, "Towards evaluating multiple predominant melody annotations in jazz recordings," in *Proceedings of the 17th International Society for Music Information Retrieval Conference (ISMIR)*, New York, USA, 2016, pp. 246–252.

[co21] C. Bönsel, J. Abeßer, S. Grollmisch, and S. I. Mimilakis, "Automatic best take detection for electric guitar and vocal studio recordings," in *Proceedings of the 2nd AES Workshop on Intelligent Music Production*, London, UK, 2016.

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