Maciek Tomczak

Birmingham, UK
maciek-tomczak.github.io

Education:

2016–present PhD in Music Informatics for Music Creation - Birmingham City University
Dissertation: Automated rhythmic transformation of drum recordings
Committee: Dr Jason Hockman (advisor), Dr Ryan Stables, Prof Cham Athwal

2012–15 BSc Hons in Sound Engineering and Production - Birmingham City University
Dissertation: The salience of MFCC semantic classification on electric guitar recordings
Advisor: Dr Ryan Stables

2008–12 International Baccalaureate Diploma - International School of Düsseldorf

Research Interests: Music information retrieval, rhythm analysis, deep learning, audio style transfer, audio synthesis, onset detection, beat and metre detection, drum transcription, digital audio effects, computational musicology, interactive music systems, music performance systems

Employment History:

2020 **Research Intern**
National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan

Internship under Dr Masahiro Hamasaki and Dr Masataka Goto in Media Interaction Group to conduct research on automated rhythmic transformation of drum recordings using adversarial autoencoders

2019 **Studio Manager**
School of Computing and Digital Technology, Birmingham City University, United Kingdom

Management of recording studio bookings and equipment maintenance

2015–20 **Teaching Assistant**
School of Computing and Digital Technology, Birmingham City University, United Kingdom

Assistant instruction, grading, lab and individual tutoring for modules: digital signal processing, live sound engineering, acoustic fundamentals, music and sound for visual media, interactive music systems

2015 **Research Associate**
Digital Media Technology (DMT) Lab, Birmingham City University, United Kingdom

Development of evaluation toolbox in Matlab under supervision of Dr Ryan Stables for mixing experiment performed with console PRO2C in partnership with MIDAS Music Tribe

2013 **Studio Assistant**
Teatr Polskiego Radia, Polish Radio S.A., Warsaw, Poland

Assistance to the production team under supervision of Dr Andrzej Brzoska on audiobook Lux Perpetua by A. Sapkowski and other chosen radio drama recording sessions, organisation of recordings and post-production, synchronisation of the radio's dramas

Academic Service:

2018–2020	**Reviewer**
	International Society for Music Information Retrieval Conference (ISMIR)
2019	**Organising Committee Member and Reviewer**
	International Workshop on Folk Music Analysis (FMA)
2018	**Organising Committee Member and Reviewer**
	International Conference on Digital Audio Effects (DAFx)
2017	**Organising Committee Member and Reviewer**
	Rhythm Production and Perception Workshop (RPPW)
2017	**Reviewer**
	International Conference on Digital Audio Effects (DAFx)

Refereed Publications:

Tomczak, M., M. Goto and J. Hockman, Drum Synthesis and Rhythmic Transformation with Adversarial Autoencoders. 2020. In Proceedings of the ACM International Conference on Multimedia, Seattle, Washington, USA.

Drysdale, J., **M. Tomczak** and J. Hockman. 2020. Adversarial Drum Synthesis. In Proceedings of the International Conference on Digital Audio Effects, Vienna, Austria.

Tomczak, M., J. Drysdale and J. Hockman. 2019. Drum translation for timbral and rhythmic transformation. In Proceedings of the International Conference on Digital Audio Effects, Birmingham, United Kingdom.

Tomczak, M., C. Southall and J. Hockman. 2018. Audio style transfer with rhythmic constraints. In Proceedings of the International Conference on Digital Audio Effects, Aveiro, Portugal.

Ali-MacLachlan, I., C. Southall, **M. Tomczak** and J. Hockman. 2018. Player recognition for traditional Irish flute recordings. In Proceedings of the International Workshop on Folk Music Analysis, Thessaloniki, Greece.

Tomczak, M., C. Southall and J. Hockman. 2017. Rhythm modelling using convolutional neural networks. In Rhythm Production and Perception Workshop, Birmingham, United Kingdom.

Ali-MacLachlan, I., C. Southall, **M. Tomczak**, and J. Hockman. 2017. Improved onset detection for traditional Irish flute recordings using convolutional neural networks. In Proceedings of the International Workshop on Folk Music Analysis, Malaga, Spain.

Ali-MacLachlan, I., **M. Tomczak**, C. Southall, and J. Hockman. 2016. Note, cut and strike detection for traditional Irish flute recordings. In Proceedings of the International Workshop on Folk Music Analysis, Dublin, Ireland.

Language Fluency:

Polish – native proficiency
English – professional proficiency

Skills:

Programming languages – Python, Matlab, JavaScript
Machine learning packages – TensorFlow 1.2–2.x, PyTorch 1.4–1.x
Operating systems – OSX, Linux (server maintenance), Windows
Cloud Infrastructures – Distributed training on AI Bridging Cloud Infrastructure (ABCI) at AIST, Japan
Miscellaneous – Git version control, Docker (e.g., for TensorFlow installation)