Andrew McLeod

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Academic Experience

Oct 2018–Present	**Researcher**, *Kyoto University*. Working with Kazuyoshi Yoshii Topic: Language modelling for automatic music transcription
July–Sept 2018	**Research Associate**, *University of Edinburgh*. Working with Mark Steedman Topic: Language modelling for automatic music transcription
August 2017	**Academic Visitor**, *Queen Mary University of London*, Centre for Digital Music. Hosts: Emmanouil Benetos and Rodrigo Schramm
2013–2014	**Research Associate**, *Emory University*, Atlanta, GA, USA. Working with James Lu Topic: Patchwriting and general NLP

Education

2014–2018	**Informatics PhD**, *University of Edinburgh*, School of Informatics, Edinburgh, UK. Supervisors: Mark Steedman (Primary), and Simon King (Assistant) Thesis: *The Language of Music: A Computational Model of Music Interpretation*. Examiners: Chris Lucas (internal) and David Temperley, Eastman School of Music (external).
2009–2013	**Math/CS joint BS/MS with Highest Honors**, *Emory University*, Atlanta, USA. Advisor: Li Xiong *Automatic Transcription of Polyphonic Musical Signals with Linear Matching Pursuit*. Examiners: Ken Mandelberg and Shun Yan Cheung. ○ Dean's List in Fall 2009, Spring 2010, Spring 2011, Fall 2011, and Spring 2012. ○ 2012 and 2013 Deborah Jackson Award winner for outstanding performance by an undergraduate student. ○ 2013 Trevor Evans Award winner for outstanding performance by a Math/CS major.

Industry Experience

2013–2014	**Technical Assistant**, *Math/CS Department*, Emory University, Atlanta, GA, USA. ○ Developed programs and tools in PHP to assist admin and IT staff members. ○ Developed a M68000 emulator in C and a backend to allow remote GDB debugging.
Summer 2012	**Technical Intern**, *Suntrust Banks, Inc.*, Atlanta, GA, USA. ○ Designed and implemented strategy for knowledge gathering and knowledge management of testing data. ○ Assisted in the updating of EIS Solutions Framework terms. ○ Coded an excel macro to aid in the tracking of training courses.

2010–2012	**Technical Intern**, *Career Center*, Emory University, Atlanta, GA, USA.

- ○ Assisted in redesign of Center website providing insight in user functionality and site aesthetics.
- ○ Maintain website features including the development of interactive PowerPoint downloads, integration of career development instructional videos, and general content management.

Teaching & Mentorship

2018	**MSc Supervision**, *University of Edinburgh*, Anna Greer, "Automatic Musical Key Recognition", Music recommendation using harmonic intervals (co-supervised with Mark Steedman).
2017	**MInf Supervision**, *University of Edinburgh*, Finlay McAfee, "Automatic Harmonic Analysis of Jazz Solos" (co-supervised with Mark Steedman).
2015	**MSc Supervision**, *University of Edinburgh*, Catherine Sweetman, "Parsing of Polyphonic Rhythm" (co-supervised with Mark Steedman).

Service

2017–2018	**Reviewer**, *18th International Society for Music Information Retrieval Conference*.
2015–Present	**Member**, *International Society for Music Information Retrieval*.
20 July, 2016	**Organizer: 1st UK Music Informatics and Cognition (MIC) 2016 Workshop**, *University of Edinburgh*.

- ○ Brought together music researchers from around the UK.
- ○ See `http://homepages.inf.ed.ac.uk/s1331854/mic2016.html`

2015-2016	**Reviewer**, *Journal of New Music Research*.

Outreach

2015–2016	**Crew Member: CompuCast, the computer science podcast**, *University of Edinburgh*.

- ○ Bi-monthly podcast featuring computer science news and interviews with researchers.
- ○ See `http://compucast.io/`

2016	**Demonstrator: Primary school age classes, teaching basic programming**, *University of Edinburgh*.

- ○ INSPIRE Summer School 2016
- ○ Sutton Trust Summer School 2016
- ○ Edinburgh Science Festival 2016

Refereed Journal Articles

Andrew McLeod, Rodrigo Schramm, Mark Steedman, and Emmanouil Benetos. Automatic transcription of polyphonic vocal music. *Applied Sciences*, 7(12), 2017.

Andrew McLeod and Mark Steedman. HMM-based voice separation of MIDI performance. *Journal of New Music Research*, 45(1):17–26, 2016.

Refereed Conference Papers

Andrew McLeod, Eita Nakamura, and Kazuyoshi Yoshii. Improved metrical alignment of MIDI performance based on a repetition-aware online-adapted grammar. In *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2019, to appear.

Andrew McLeod and Mark Steedman. Evaluating automatic polyphonic music transcription. In *International Society for Music Information Retrieval Conference (ISMIR)*, pages 42–49, 2018.

Andrew McLeod and Mark Steedman. Meter detection and alignment of MIDI performance. In *ISMIR*, pages 113–119, 2018.

Rodrigo Schramm, Andrew McLeod, Mark Steedman, and Emmanouil Benetos. Multi-pitch detection and voice assignment for a cappella recordings of multiple singers. In *ISMIR*, pages 552–559, 2017.

Andrew McLeod and Mark Steedman. Meter detection in symbolic music using a lexicalized PCFG. In *Sound and Music Computing Conference (SMC)*, pages 373–379, 2017.

Posters

Musical Meter Detection Using Context-Free Grammars.
○ At the 1st UK Music Informatics and Cognition (MIC) 2016 Workshop, University of Edinburgh, (20 July, 2016).

Meter Identification of MIDI Using Pattern Detection.
○ At the Late Breaking Demo session at ISMIR 2015, Malaga, Spain, (30 Oct, 2015).

Presentations

Meter Detection From Music Data.
○ Joint work with Mark Steedman
○ At DMRN+11: Digital Music Research Network One-day Workshop 2016, Queen Mary University of London, (20 December, 2016).

Symbolic Music Analysis for Music Transcription.
○ At the 1st UK Music Informatics and Cognition (MIC) 2016 Workshop, University of Edinburgh, (20 July, 2016).