Fabian C. Moss | Curriculum Vitae

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Employment

École Polytechnique Fédérale de Lausanne (EPFL)	**Postdoctoral Researcher**
Digital and Cognitive Musicology Lab (DCML), *Lausanne, Switzerland*	*2020–today*
École Polytechnique Fédérale de Lausanne (EPFL)	**Doctoral Assistant**
Digital and Cognitive Musicology Lab (DCML), *Lausanne, Switzerland*	*2017–2019*
Technische Universität Dresden (TUD)	**Doctoral Assistant**
Dresden Music Cognition Lab (DMCL), *Dresden, Germany*	*2015–2017*

Education

École Polytechnique Fédérale de Lausanne (EPFL)	**PhD student**
Digital and Cognitive Musicology Lab (DCML), *Lausanne, Switzerland*	*2017–2019*
Massachusetts Institute of Technology (MIT)	**Visiting Student**
Department of Linguistics and Philosophy, Cambridge, MA, USA	*Jan–Mar 2016*
Technische Universität Dresden (TUD)	**PhD student**
Dresden Music Cognition Lab (DMCL), *Dresden, Germany*	*2015–2017*
Escola Superior de Musica de Catalunya (ESMUC)	**ERASMUS Exchange Student**
Barcelona, Spain	*Jan–Apr 2012*
Hochschule für Musik und Tanz Köln (HfMT)	**Master of Arts**
Musicology, Cologne, Germany	*2011–2013*
Hochschule für Musik und Tanz Köln (HfMT)	**Staatexamen [State Examination]**
Music Education (Piano Major), Cologne, Germany	*2008–2013*
Universität zu Köln (UzK)	**Staatexamen [State Examination]**
Mathematics and Educational Sciences, Cologne, Germany	*2006–2016*

Publications (*= Open Access)

Theses

PhD, 2019: *Transitions of Tonality: A Model-Based Corpus Study*, supervisors: Martin Rohrmeier & Markus Neuwirth

MA, 2012: *"Theorie der Tonfelder" nach Simon und "Neo-Riemannian Theory": Systematik, historische Bezüge und analytische Praxis im Vergleich*, supervisor: Hans Neuhoff

Journal Articles and Conference Papers

submitted: *Moss, F. C.**, & Rohrmeier, M. (submitted). Discovering Tonal Profiles Using Latent Dirichlet Allocation.

*Moss, F. C.**, & Rohrmeier, M. (submitted). The Line of Fifths and the Co-Evolution of Tonal Pitch-Classes.

in review: *Harasim, D., **Moss, F. C.**, Ramirez, M., & Rohrmeier, M. (in review). Exploring the foundations of tonality: Statistical cognitive modeling of modes in the history of Western classical music.

*Viaccoz, C., Harasim, D., **Moss, F. C.**, & Rohrmeier, M. (in review). Wavescapes: A Visual Hierarchical Analysis of Tonality Using the Discrete Fourier Transformation.

2020: *Lieck, R., **Moss, F. C.**, & Rohrmeier, M. (2020). The Tonal Diffusion Model. *Transactions of the International Society of Music Information Retrieval*, 3(1), 153–164. https://doi.org/10.5334/tismir.46

*Moss, F. C.**, de Souza, W. F., & Rohrmeier, M. (2020). Harmony and Form in Brazilian Choro: A Corpus-Driven Approach to Musical Style Analysis. *Journal of New Music Research*, 49(5), 416–437. https://doi.org/10.1080/09298215.2020.1797109

2019: *Moss, F. C.** (2019). *Transitions of Tonality: A Model-Based Corpus Study*. Doctoral dissertation. École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland. https://doi.org/10.5075/epfl-thesis-9808

*Moss, F. C.**, Neuwirth, M., Harasim, D., & Rohrmeier, M. (2019). Statistical characteristics of tonal harmony: A corpus study of Beethoven's string quartets. *PLOS ONE*, 14(6), e0217242. https://doi.org/10.1371/journal.pone.0217242

*Landnes, K., Mehrabyan, L., Wiklund, V., Lieck, R., **Moss, F. C.**, & Rohrmeier, M. (2019). A Model Comparison for Chord Prediction on the Annotated Beethoven Corpus. In I. Barbancho, L. J. Tardón, A. Peinado, & A. M. Barbancho (Eds.), *Proceedings of the 16th Sound and Music Computing Conference* (SMC 2019) (pp. 250–254). Málaga, Spain.

*Popescu, T., Neuser, M. P., Neuwirth, M., Bravo, F., Mende, W., Boneh, O., **Moss, F. C.**, & Rohrmeier, M. (2019). The pleasantness of sensory dissonance is mediated by musical style and expertise. *Scientific Reports*, 9(1), 1070. `https://doi.org/10.1038/s41598-018-35873-8`

2018: *Neuwirth, M., Harasim, D., **Moss, F. C.**, & Rohrmeier, M. (2018). The Annotated Beethoven Corpus (ABC): A Dataset of Harmonic Analyses of All Beethoven String Quartets. *Frontiers in Digital Humanities*, 5(July), 1–5. `https://doi.org/10.3389/fdigh.2018.00016`

earlier: **Moss, F. C.** (2017). [Review of David Huron. Voice Leading: The Science behind a Musical Art]. Music Theory & Analysis, 4(1), 119–130. `https://doi.org/10.11116/MTA.4.1.7`

***Moss, F. C.** (2014). Tonality and functional equivalence: A multi-level model for the cognition of triadic progressions in 19th century music. In *International Conference of Students of Systematic Musicology – Proceedings* (pp. 1–8). London, UK.

***Moss, F. C.** *Albert Simons* Theorie der Tonfelder *und John Cloughs* Flip-Flop Circles *im Vergleich*. Zenodo. `http://doi.org/10.5281/zenodo.3944462`

As editor

forthcoming: Special Issue on "Open Science in Musicology" in *Empirical Musicology Review*, with Markus Neuwirth.

Datasets and Code

2020: ***Moss, F. C.**, Neuwirth, M., & Rohrmeier, M. (2020). Tonal Pitch-Class Counts Corpus (TP3C) [Data set]. *Zenodo*. `https://doi.org/10.5281/zenodo.3600080`

2019: ***Moss, F. C.**, Loayza, T., & Rohrmeier, M. (2019). pitchplots. *Zenodo*. `https://doi.org/10.5281/zenodo.3265392`

2018: ***Moss, F. C.**, de Souza, W. F., & Rohrmeier, M. (2018). Choro Songbook Corpus [Data set]. *Zenodo*. `https://doi.org/10.5281/zenodo.1442764`

Talks, Conference Presentations, Posters, and Workshops

Workshops

2020: **Moss, F. C.** *Data-Driven Music History*. International Conference of Students of Systematic Musicology, York University, September 14, 2020, York, UK [online].

2018: **Moss, F. C.** *Corpus Research in Digital Musicology*. Seminar "Willkommen in der Matrix: Digitale Anwendungen für die Musikanalyse in Theorie und Praxis", University of Basel, Basel, Switzerland.

Talks

2020: **Moss, F. C.** *Analyzing musical pieces on the Tonnetz using the* pitchplots *Python library*. 20. Jahreskongress der Gesellschaft für Musiktheorie (GMTH), Hochschule für Musik Detmold, October 1–4, 2020, Detmold, Germany [online].

Moss, F. C. *Computational Musicology and the Digital Humanities: Problems, Practices, and Prospects*. CRETA-Werkstatt #9, Center for Reflected Text Analytics, University of Stuttgart, February 18, 2020, Stuttgart, Germany.

2019: **Moss, F. C.** *Transitions of Tonality: Perspectives on the Historical Changes of Tonal Pitch Relations from Computational Musicology, Music Theory, and the Digital Humanities*. University of Cologne, November 29, 2019, Cologne, Germany.

Moss, F. C. *Tracing the History of Tonality with Note Distributions*. "Corpus Research as a Means of Unlocking Musical Grammar" International Research Workshop, July 1–4, 2019, Tel-Aviv, Israel.

Moss, F. C. *Inferring Tonality from Note Distributions – Why Models Matter (Poster)*. SEMPRE Graduate Conference 2019, Cambridge, UK.

Moss, F. C. *Analyzing Tonality with Note Distributions*. First Swiss Digital Humanities Student Exchange DHX2019, Basel, Switzerland.

2018: **Moss, F. C.**, Souza, W. F. & Rohrmeier, M. *Harmony and Form in Brazilian Choro: A Corpus Study*. 15th International Conference on Music Perception and Cognition & 10th triennial conference of the European Society for the Cognitive Sciences of Music, Graz, Austria.

Aitken, C., O'Donnell, T. & Rohrmeier, M. [Poster presented by **Moss, F. C.**]. *A Maximum Likelihood Model for the Harmonic Analysis of Symbolic Music*. 15th Sound and Music Computing Conference "Sonic Crossings". Limassol, Cyprus.

Moss, F. C. *Corpus Research in Digital Musicology*. Seminar "Willkommen in der Matrix: Digitale Anwendungen für die Musikanalyse in Theorie und Praxis", University of Basel, Basel, Switzerland.

Harasim, D., **Moss, F. C.** & Ramirez, M. *A Brief History of Tonality* (Poster). Applied Machine Learning Days, EPFL, Switzerland.

2017: **Moss, F. C.** *Formal Grammars and Ambiguity in Extended Tonality*. Workshop and Symposium on Schenkerian Analysis "Wege der Kreativität – Zwischen Erfindung und Rekonstruktion", Universität der Künste, Berlin, Germany.

Moss, F. C., Souza, W. F. & Rohrmeier, M. *Brazilian Choro: A New Data Set of Chord Transcriptions and Analyses of Harmonic and Formal Features*. 17. Jahreskongress der Gesellschaft für Musiktheorie (GMTH) & 27. Arbeitstagung der Gesellschaft für Popularmusikforschung (GfPM) "Populäre Musik und ihre Theorien: Begegnungen – Perspektivwechsel – Transfers", Graz, Austria.

Moss, F. C., Harasim, D., Neuwirth, M. & Rohrmeier, M. *Beethovens Streichquartette – ein XML-basierter Korpus harmonischer Analysen in einem neuen Annotationssystem.* Jahrestagung der Gesellschaft für Musikforschung, Kassel, Germany.

Moss, F. C., Rohrmeier, M. *Integrating Transformational and Hierarchical Models of Extended Tonality.* 9th European Music Analysis Conference (EuroMAC), Strasbourg, France.

Rom, U., Jeßulat, A., **Moss, F. C.** & Guter, I. *Ambiguity, Illusion & Timelessness in Late and Post-Tonal Harmony.* Panel discussion at the 9th European Music Analysis Conference (EuroMAC), Strasbourg, France.

Moss, F. C. *Musik und Sprache.* Talk for Student Association "Denkzettel", TUD, Dresden, Germany.

Moss, F. C., Rohrmeier, M. & Bravo, F. *Emotional Associations Evoked by Structural Properties of Musical Scales and Abstract Visual Shapes.* KOSMOS Dialogue "Music, Emotion, and Visual Imagery", Berlin, Germany.

Harasim, D., **Moss, F. C.**, Neuwirth, M. & Rohrmeier M. *Beethoven's String Quartets: Introducing an XML-Based Corpus of Harmonic Labels Using a New Annotation System.* Music Encoding Conference, Tours, France.

2016: **Moss, F. C.** *Extended Tonality: Theoretical Challenges and their Relation to the Neuroscientific Study of Musical Syntax.* Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany.

Moss, F. C., Rohrmeier, M. *Structural Ambiguities in Language and Music* (Poster). Helsinki Summer School for Cognitive Neuroscience 2016 (HSSCN 2016).

Moss, F. C., Rohrmeier, M. *A grammatical approach to tension-resolution patterns in extended tonal harmony.* Meeting of the Computational Cognitive Science Group, Massachusetts Institute of Technology, Department of Brain and Cognitive Sciences, Cambridge, USA.

Moss, F. C., Rohrmeier, M. *Towards a syntactic account for harmonic sequences in extended tonality.* Syntax Square Meeting, Massachusetts Institute of Technology, Department of Linguistics and Philosophy, Cambridge, USA.

Moss, F. C. *Syntax of Extended Tonality: Towards a Grammar of Generalized Harmonic Functions.* Music Theory Colloquium, Boston University, College of Fine Arts, School of Music, Boston, USA.

Moss, F. C. *Generalizing Harmonic Functions: A Grammatical Approach to Extended Tonality.* Yale University, Department of Music, New Haven, USA.

Moss, F. C. & Harasim, D. *Extended Tonality and Music Cognition.* Symposium "Towards a World Music Theory", University of Hamburg, Institute for Systematic Musicology, Hamburg, Germany.

Moss, F. C. *Music Cognition and Extended Tonality: Theoretical Challenges and Empirical Implications.* Research Colloquium, University of Cologne, Cologne, Germany.

2015: **Moss, F. C.** *On generative modelling of musical form.* Seminar "Mathematics and Music", TUD, Dresden, Germany.

Moss, F. C. *'The terror of sanctity.' Tonal cues for resolving dramatic ambiguities in Wagner's Parsifal.* Seminar "Understanding Musical Structures", TUD, Dresden Germany.

2014: **Moss, F. C.** *Tonality and functional equivalence: A multi-level model for the cognition of triadic progressions in 19th century music.* International conference of Students of Systematic Musicology, Goldsmiths University, London, UK.

Moss, F. C. *Language, music and the brain: a resource-sharing framework* (*Patel, 2012*). Seminar "Cognitive Neuroscience of Music", Institut for Musicology, University of Cologne, Cologne, Germany.

Teaching

Fall 2020: "Introduction to Musical Corpus Studies", UzK.

Spring 2020: "Musical improvisation, invention and creativity", teaching assistant, EPFL.

"Musical Diversity across Historical Time", lecture in class "Digital Musicology", EPFL.

Spring 2018: "Digital Musicology", teaching assistant, EPFL.

2016–2017: "Reading Class Musicology", with Christoph Wald, TUD.

2015–2016: "Introduction to Musicology", with Christoph Wald, TUD.

Spring 2013: "Academic Writing and Research Techniques", HfMT.

Supervision

Spring 2020: Co-supervision of Digital Humanities MSc thesis.

Fall 2019: Supervision of Machine Learning graduate student project, EPFL.

Fall 2018: Supervision of three Machine Learning graduate student projects, EPFL.

Spring 2018: Supervision of four Digital Musicology graduate student projects, EPFL.

Spring 2017: Peer-mentoring visiting PhD student in music theory/composition, TUD.

Fall 2015: Joint supervision of interdisciplinary project of technical design undergraduate, TUD.

Funding

Project grants

Collaborative Research on Science and Society (CROSS)
Digitizing the Dualism Debate: A Case Study in the Computational Analysis of Historical Music Theory Sources 2021
PIs: Fabian C. Moss, François Bavaud (Université de Lausanne), CHF 59'565

Awards and scholarships

2016–2017: Konrad Adenauer Foundation, PhD Scholarship.

Aug 2016: TUD Graduate Academy, Travel Award.

Jan–Mar 2016: Deutscher Akademischer Austauschdienst (DAAD), great!$_{ipid4all}$ (group2group exchange for academic talents).

Sep 2014: Society for Education and Music Psychology (SEMPRE), Travel Award.

Jan–Apr 2012: European Union (EU), ERASMUS Scholarship.

2008–2013: Konrad Adenauer Foundation, Student Scholarship.

Administration

Organization

2019: Workshop "Schenkerian and Tonfeld Theory for Music Analysis", EPFL.

First Swiss Digital Humanities Exchange, in collaboration with University of Basel.

2015: Co-organization of lecture series "Systematic Musicology: Perception and Cognition of Music", TUD.

2013: Co-organization of the international conference "Musical Meter in Comparative Perspective", HfMT.

Reviewer activity

Music and Science, Empirical Musicology Review, Music Theory and Analysis, Zeitschrift der Gesellschaft für Musiktheorie [Journal of the German-speaking Society of Music Theory], International Conference of Students of Systematic Musicology.

Responsibilities and memberships

since 2020: Co-Chair of the Music Analysis Interest Group of the *Music Encoding Initiative* (MEI).

since 2019: UNIL-EPFL Centre for Digital Humanities (dhCenter); EPFL Data Champions Community; Gesellschaft für Musikforschung (GfM).

2018–2019: Co-founder and vice-president of the Digital Humanities Student Association *dhelta* at EPFL.

since 2017: Gesellschaft für Musiktheorie (GMTH).

2012–2013: Financial officer for General Students' Commitee [Finanzreferent AStA], HfMT.

Media coverage

Aug 2020: "Bringing computational music analysis beyond the traditional canon"
https://actu.epfl.ch/news/bringing-computational-music-analysis-beyond-the-t/

Jun 2019: "A Data Science Analysis Finds Beethoven's Style In His String Quartets"
https://www.forbes.com/sites/evaamsen/2019/06/06/a-data-science-analysis-finds-beethovens-style-in-his-string-quartets/

"Decoding Beethoven's music style using data science"
https://actu.epfl.ch/news/decoding-beethoven-s-music-style-using-data-scienc/

Mar 2019: "Creating connections in a growing digital humanities community"
https://actu.epfl.ch/news/creating-connections-in-a-growing-digital-humani-2/

Workshops and summer schools attended

2020: Workshop "Musikalische Schrift und Digitalität", Basel, Switzerland, September 22–23.

edirom summer school (text and music encoding). Universtity of Paderborn. Paderborn, Germany, August 31–September 4 [online].

2019: Workshop "Research Data Management: introduction", EPFL Library, October 10.

2018: Workshop "Voice-leading schemata in theory, corpus research, and practical composition (Compose your own Chopin!)", EPFL, September 18–20.

Symposium "Archiving Intangible Cultural Heritage & Performing Arts: A Symposium and Summer School for Living Traditions", EPFL, August 6–7.

2017: Workshop "Meaning in Music: Bridging Musicological, Linguistic, and Neuroscientific Perspectives", EPFL, December 4–6.

Summer School "Exploring Edges: An International Colloquium between the Digital Humanities, Architecture, Artistic Research, and Critical Technical Practice", EPFL, July 11–14.

2016: Summer School "Cognitive Neuroscience of Music", University of Helsinki, August 11–17.

Skills

Languages: Python, Latex, HTML/CSS
German (native), English (fluent), French (conversational), Spanish (basic)
Utilities: Git, GitHub, Jupyter Notebook/Lab

Musical activities

2014–2017: Classical vocal octet *Vokalexkursion*

2013–2015: Cologne Cathedral Chamber Choir

2011–2013: Cologne Conservatory Chamber Choir

2008–2013: Pop a-capella group *gezwungenermaßen*

since 1994: Guitar

since 1993: Piano