

# Fabian C. Moss | Curriculum Vitae

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## Employment

<b>Julius-Maximilians-Universität Würzburg (JMU)</b> <i>Digital Music Philology and Music Theory, Würzburg, Germany</i>	<b>Assistant Professor</b> 2022/12–present
<b>University of Amsterdam (UvA)</b> <i>Cultural Analytics, Media Studies Department &amp; Data Science Center, Amsterdam, The Netherlands</i>	<b>Research Fellow</b> 2022/01–2022/11
<b>École Polytechnique Fédérale de Lausanne (EPFL)</b> <i>Digital and Cognitive Musicology Lab (DCML), Lausanne, Switzerland</i>	<b>Postdoctoral Researcher</b> 2020/02–2021/12
<b>École Polytechnique Fédérale de Lausanne (EPFL)</b> <i>Digital and Cognitive Musicology Lab (DCML), Lausanne, Switzerland</i>	<b>Doctoral Assistant</b> 2017-09–2020/01
<b>Technische Universität Dresden (TUD)</b> <i>Dresden Music Cognition Lab (DMCL), Dresden, Germany</i>	<b>Doctoral Assistant</b> 2015/01–2017/08
<b>Musikschule Leverkusen</b> <i>Project “Jedem Kind seine Stimme” (JEKISS), Leverkusen, Germany</i>	<b>Conductor and vocal coach</b> 2012/11–2014/12

## Education

<b>École Polytechnique Fédérale de Lausanne (EPFL)</b> <i>Digital and Cognitive Musicology Lab (DCML), Lausanne, Switzerland</i>	<b>PhD student</b> 2017/09–2019/12
<b>Massachusetts Institute of Technology (MIT)</b> <i>Department of Linguistics and Philosophy, Cambridge, MA, USA</i>	<b>Visiting Student</b> 2016/01–2016/03
<b>Technische Universität Dresden (TUD)</b> <i>Dresden Music Cognition Lab (DMCL), Dresden, Germany</i>	<b>PhD student</b> 2015/01–2017/08
<b>Escola Superior de Musica de Catalunya (ESMUC)</b> <i>Barcelona, Spain</i>	<b>ERASMUS Exchange Student</b> 2012/01–2012/04
<b>Hochschule für Musik und Tanz Köln (HfMT)</b> <i>Musicology, Cologne, Germany</i>	<b>Master of Arts</b> 2011/04–2013/09
<b>Hochschule für Musik und Tanz Köln (HfMT)</b> <i>Music Education (Piano Major), Cologne, Germany</i>	<b>Staatexamen [State Examination]</b> 2008/04–2013/09
<b>Universität zu Köln (UzK)</b> <i>Mathematics and Educational Sciences, Cologne, Germany</i>	<b>Staatexamen [State Examination]</b> 2006/10–2016/09
<b>Friedrich-Wilhelm-Gymnasium Köln (FWG)</b> <i>Cologne, Germany</i>	<b>Abitur [German High School Diploma]</b> 2002/09–2005/06

## Service

### Memberships

**06/2023–present** University of Wuerzburg Graduate School Humanities, classes “Digital Humanities” & “Philosophy, Languages, Arts”  
**12/2022–present** Deutsche Gesellschaft Juniorprofessur (DGJ); Arbeitskreis “Philologie und Digitalität” (JMU) **10/2022–present** European COST Action *EarlyMuse* (2022–2026), Working Groups 2 (Sources) & 3 (Publications) <https://www.cost.eu/actions/CA21161/>  
**11/2021–present** Deutscher Hochschulverband (DHV); **11/2021–present** European Society for the Cognitive Sciences of Music (ESCOM);  
**09/2021–present** International Society for Music Information Retrieval (ISMIR); **05/2020–12/2021** EPFL Data Champions Community;  
**10/2019–present** Gesellschaft für Musikforschung (GfM); **10/2018–present** Gesellschaft für Musiktheorie (GMTH); **02/2018–12/2022** UNIL-EPFL Centre for Digital Humanities (dhCenter); **03/2015–08/2017** Dresden Technical University Graduate Academy

### Responsibilities

**08/2023–present** Scientific advisory board of *Corpus Monodicum* project **2023** Program Committee Member for International Conference on Multimedia Retrieval **2022** Scientific Committee for Workshop on Computational Methods in the Humanities 2022 (COMHUM 2022); **2021** Programm Committee for 2nd Conference on Computational Humanities Research (CHR2021); **since 2020** Co-Chair of the Music Analysis Interest Group of the *Music Encoding Initiative* (MEI); **2018–2019** Co-founder and vice-president of the Digital Humanities Student Association *dhelta* at EPFL; **2012/10–2013/09** Financial officer for General Students’ Committee, HfMT

## Reviewer activity

**Journals:** *Digital Scholarship in the Humanities*; *Empirical Musicology Review*; *Music and Science*; *Music Theory and Analysis*; *Royal Society Open Science*; *Transactions of the International Society of Music Information Retrieval*; *Zeitschrift der Gesellschaft für Musiktheorie*

**Conferences:** *Computational Humanities Research (CHR)*; *Conference of the European Society for the Cognitive Sciences of Music (ESCOM)*; *International Conference on Multimedia Retrieval (ICMR)*; *International Conference on Music Perception and Cognition (ICMPC)*; *International Conference of Students of Systematic Musicology (SysMus)*; *Jahrestagung der Gesellschaft für Informatik (GI)*, *Workshop zu Informatik und Digital Humanities (InfDH)*

## Organization

**2023:** Lecture series “CODAMUS: Computational and Digital Approaches to Music Scholarship”, 18 October, 2023–07 February, 2024. Zentrum für Philologie und Digitalität (ZPD), JMU, Würzburg, Germany. <https://codamus.pubpub.org/>

Kontrapunkt-Werkstatt “Latest Tools for Analyzing Early Music”, with Hansjörg Ewert, Florian Vogt, & Ugo Bindini, 20–21 October, Würzburg, Germany. <https://www.musikwissenschaft.uni-wuerzburg.de/diversa/tagungen/basel23/>

Open project space for 16 contributions “Methoden und Ziele digitaler Musikwissenschaft: Ein Marktplatz aktueller Forschung”, with Stefanie Acquavella-Rauch, Martin Albrecht-Hohmeier, Irmlind Capelle, Jürgen Diet, & Jens Dufner. Jahrestagung der Gesellschaft für Musikforschung, 4–7 October, 2023, Saarbrücken, Germany.

<https://www.uni-saarland.de/methoden-und-ziele-digitaler-musikwissenschaft-ein-marktplatz-aktueller-forschung.html>

**2022:** CREATE Salon on “Computational Creativity”, 23 November 2022, *Creative Amsterdam: An E-Humanities Perspective*, Media Studies Department, University of Amsterdam, The Netherlands. <https://www.create.humanities.uva.nl/events/computational-creativity/>

Workshop “Representing Harmony: Goals and Challenges”, with Johannes Hentschel, Markus Neuwirth & Martin Rohrmeier. 13–16 September 2022, Digital and Cognitive Musicology Lab, École Polytechnique Fédérale de Lausanne, Switzerland. <https://www.epfl.ch/labs/dcml/workshops/representing-harmony/>

**2021:** Workshop “Musik – Schrift – Digitalität” [Music – Writing – Digitality], with Dennis Ried and Daniel Fütterer. 13–14 December 2021, Hochschule für Musik, Karlsruhe, Germany.

**2019:** Workshop “Schenkerian and Tonfeld Theory for Music Analysis”. 12–15 December 2019, Digital and Cognitive Musicology Lab, École Polytechnique Fédérale de Lausanne, Switzerland.

<https://memento.epfl.ch/event/masterclass-schenkerian-and-tonfeld-theory-for-mus/>

First Swiss Digital Humanities Exchange, with Jessica Pidoux, Gerhad Lauer, and Stefan Münnich. 8–9 February 2019, DH Lab, University of Basel, Switzerland. <https://sites.google.com/view/dhexchange/>

**2015:** Co-organization of lecture series “Systematic Musicology: Perception and Cognition of Music”, lead: Martin Rohrmeier. Dresden Music Cognition Lab, Technical University Dresden, Germany.

**2013:** Co-organization of the international conference “Musical Metre in Comparative Perspective”, lead: Hans Neuhoof and Rainer Polak. 4–6 April 2013, Hochschule für Musik und Tanz Köln, Germany.

## Funding

### Grants

#### WueDIVE – Digitale Innovationen in der Lehre

EUR 3,915

*Virtual tonal spaces (VTS): towards an interactive digital environment for music theory*

2023/10–2024/06

Fabian C. Moss

#### Julius-Maximilians-Universität Würzburg

EUR 8,310

*Start-up funding to prepare grant application [Anschubförderung zur Antragsstellung]*

2022/12–2023/11

Fabian C. Moss

#### Durham University Seedcorn Grant

GBP 7,475

*Funding for proof-of-concept study to support larger grant application*

2022/06–2023/05

Tuomas Eerola, Fabian C. Moss

#### University of Amsterdam Data Science Centre Accelerate Program (Matching Funding)

EUR 192,000

*Data Scientists/Engineers Cultural Data Access & Visualization, Spatial Humanities, Cultural Data Analysis*

2022/04–2024/12

Tobias Blanke, Fabian C. Moss, Julia Noordegraaf, & Thomas Poell

#### dhCenter UNIL-EPFL project fund

CHF 2'880

*Enabling interactive music visualization for a wider community*

2021/07–2021/09

Fabian C. Moss & Daniel Harasim

#### Collaborative Research on Science and Society (CROSS)

CHF 59'565

*Digitizing the Dualism Debate: A Case Study in the Computational Analysis of Historical Music Theory Sources*

2021/01–2021/12

Fabian C. Moss & François Bavaud

## Awards and scholarships

**2016–2017:** Konrad Adenauer Foundation, PhD Scholarship; **2016/08:** TUD Graduate Academy, Travel Award; **2016/01–03:** Deutscher Akademischer Austauschdienst (DAAD), great!ipid4all (group2group exchange for academic talents); **2014/09:** Society for Education and

## Publications

### Journal articles

- Moss, F. C.**, Neuwirth, M., & Rohrmeier, M. (2022). The line of fifths and the co-evolution of tonal pitch-classes. *Journal of Mathematics and Music*, 17(2), 173–197. <https://doi.org/10.1080/17459737.2022.2044927>
- Viaccos, C., Harasim, D., **Moss, F. C.**, & Rohrmeier, M. (2022). Wavescapes: A visual hierarchical analysis of tonality using the discrete Fourier transform. *Musicae Scientiae*, 10298649211034906. <https://doi.org/10.1177/10298649211034906>
- Harasim, D., **Moss, F. C.**, Ramirez, M., & Rohrmeier, M. (2021). Exploring the foundations of tonality: Statistical cognitive modeling of modes in the history of Western classical music. *Humanities and Social Sciences Communications*, 8(1), 1–11. <https://doi.org/10.1057/s41599-020-00678-6>
- Moss, F. C.**, & Neuwirth, M. (2021a). FAIR, Open, Linked: Introducing the Special Issue on Open Science in Musicology. *Empirical Musicology Review*, 16(1), 1–4. <https://doi.org/10.18061/emr.v16i1.8246>
- Moss, F. C.**, & Rohrmeier, M. (2021). Discovering Tonal Profiles with Latent Dirichlet Allocation. *Music & Science*, 4. <https://doi.org/10.1177/20592043211048827>
- Lieck, R., **Moss, F. C.**, & Rohrmeier, M. (2020). The Tonal Diffusion Model. *Transactions of the International Society for Music Information Retrieval*, 3(1), 153–164. <https://doi.org/10.5334/tismir.46>
- Moss, F. C.**, 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>
- 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>
- 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>
- 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>
- Moss, F. C.**, & Rohrmeier, M. (2018). The line of fifths and the co-evolution of tonal pitch-classes. *Journal of Mathematics and Music*, 17(2), 173–197. <https://doi.org/10.1080/17459737.2022.2044927>
- Bracks, C., & **Moss, F. C.** (2022). Totoli's Art of Lelegesan: Analyzing Sociocultural Context and Musical Content. In I. Ali-MacLachlan & A. Holzapfel (Eds.), *FMA2022: International Workshop on Folk Music Analysis* (pp. 1–5). <https://doi.org/10.31219/osf.io/5tsxa>
- Harasim, D., Affatato, G., & **Moss, F. C.** (2022). midiVERTO: A Web Application to Visualize Tonality in Real Time. In M. Montiel, O. A. Agustín-Aquino, F. Gómez, J. Kastine, E. Lluís-Puebla, & B. Milam (Eds.), *Mathematics and Computation in Music* (pp. 363–368). Springer International Publishing. [https://doi.org/10.1007/978-3-031-07015-0\\_31](https://doi.org/10.1007/978-3-031-07015-0_31)
- Hentschel, J., **Moss, F. C.**, McLeod, A., Neuwirth, M., & Rohrmeier, M. (2022). Towards a unified model of chords in Western harmony. In S. Münnich & D. Rizo (Eds.), *Music Encoding Conference Proceedings 2021* (pp. 143–149). Humanities Commons. <https://doi.org/10.17613/4crx-fr36>
- Moss, F. C.**, Affatato, G., & Harasim, D. (2022). Phantom Curves: Scientific Discovery through Interactive Music Visualization. In L. Pugin (Ed.), *9th International Conference on Digital Libraries for Musicology* (pp. 60–64). Association for Computing Machinery. <https://doi.org/10.1145/3543882.3543886>
- Moss, F. C.**, Nápoles López, N., Köster, M., & Rizo, D. (2022b). Challenging sources: A new dataset for OMR of diverse 19th-century music theory examples. In J. Calvo-Zaragoza, A. Pacha, & E. Shatri (Eds.), *Proceedings of the 4th International Workshop on Reading Music Systems (WoRMS 2022)* (pp. 4–8). <https://sites.google.com/view/worms2022/proceedings>
- Anzuoni, E., Ayhan, S., Dutto, F., McLeod, A., **Moss, F. C.**, & Rohrmeier, M. (2021). A Historical Analysis of Harmonic Progressions Using Chord Embeddings. In D. A. Mauro, S. Spagnol, & A. Valle (Eds.), *Proceedings of the 18th Sound and Music Computing Conference* (pp. 284–291). <https://doi.org/10.5281/zenodo.5038910>
- Hentschel, J., **Moss, F. C.**, Neuwirth, M., & Rohrmeier, M. (2021). A semi-automated workflow paradigm for the distributed creation and curation of expert annotations. In J. H. Lee, A. Lerch, Z. Duan, J. Nam, P. Rao, P. van Kranenburg, & A. Srinivasamurthy (Eds.), *Proceedings of the 22nd International Society for Music Information Retrieval Conference, ISMIR 2021, Online, November 7-12, 2021* (pp. 262–269). <https://archives.ismir.net/ismir2021/paper/000032.pdf>
- Moss, F. C.**, Köster, M., Femminis, M., Métrailler, C., & Bavaud, F. (2021). Digitizing a 19th-Century Music Theory Debate for Computational Analysis. In M. Ehrmann, F. Karsdorp, M. Wevers, T. L. Andrews, M. Burghardt, M. Kestemont, E. Manjavacas, M. Piotrowski, & J. van Zundert (Eds.), *CHR 2021: Computational Humanities Research Conference, November 17–19, 2021, Amsterdam, The Netherlands* (pp. 159–170).
- Rohrmeier, M., & **Moss, F. C.** (2021). A Formal Model of Extended Tonal Harmony. In J. H. Lee, A. Lerch, Z. Duan, J. Nam, P. Rao, P. van Kranenburg, & A. Srinivasamurthy (Eds.), *Proceedings of the 22nd International Society for Music Information Retrieval Conference, ISMIR 2021, Online, November 7-12, 2021* (pp. 569–578).

### Conference papers

- Eipert, T., & **Moss, F. C.** (2023b). MonodiKit: A data model and toolkit for medieval monophonic chant. In M. E. Thomae (Ed.), *Proceedings of the 10th International Conference on Digital Libraries for Musicology* (pp. 67–71). Association for Computing Machinery. <https://doi.org/10.1145/3625135.3625145>
- Nakamura, E., Eipert, T., & **Moss, F. C.** (2023). Historical Changes of Modes and their Substructure Modeled as Pitch Distributions in Plainchant from the 1100s to the 1500s. In Kitahara, Tetsuro, Aramaki, Mitsuko, Kronland-Martinet, Richard, & Ystad, Sølvi (Eds.), *Proceedings of the 16th International Symposium on Computer*



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 & Music Computing Conference (SMC 2019)* (pp. 250–254). <https://doi.org/10.5281/zenodo.3249335>

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

## Book chapters

**Moss, F. C.** (2024). Transatlantic transformations: How Riemannian is Neo-Riemannian theory? In S. Keym & C. Hust (Eds.), *Kreative Missverständnisse oder universale Kunstgesetze? Hugo Riemann und der internationale Musikwissenstransfer* (pp. 371–381). Georg Olms Verlag.

## Edited volumes and chapters

Seipelt, A., & **Moss, F. C.** (Eds.). (2023). Analysis Markup and Harmonies. In J. Kepper & P. D. Roland (Eds.), *The Music Encoding Initiative Guidelines* (Version 5.0, pp. 299–324).

**Moss, F. C.**, & Neuwirth, M. (Eds.). (2021b). Special Issue on Open Science in Musicology. *Empirical Musicology Review*, 16(1), 1–4. <https://doi.org/10.18061/emr.v16i1.8246>

## Book reviews

**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/10.1111/MTA.4.1.71>

## Data sets

Eipert, T., & **Moss, F. C.** (2023a). *Corpus Troporum Dataset*. OSF. <https://doi.org/10.17605/OSF.IO/FKDDQ5>

## Outreach

### Invited talks and workshops

**2023:** **Moss, F. C.** *10 secret rules for a degree in DH—you won't believe no. 7!!*. 1st DH Alumni Event, 17 November 2023. Digital Humanities Institute, École Polytechnique Fédérale de Lausanne, Switzerland.

**Moss, F. C.** *Counting notes: Research questions and methods in music corpus studies*. Seminar “History and Theory of Digital Humanities”, Université de Lausanne, Lausanne, Switzerland, 12 October 2023.

**Moss, F. C.** *Töne zählen: Forschungsfragen und Methoden musikwissenschaftlicher Korpusstudien in historischer und epistemologischer Perspektive*. Talk in lecture series “Transdisziplinäre Aspekte digitaler Methodik in den Geistes- und Kulturwissenschaften”, Leibniz-Institut für Europäische Geschichte, Mainz, Germany, 28 June, 2023.

**Moss, F. C.** *Musik Er-Zählen: Einblicke in die digitale Korpusforschung*. Vortrag im Institutskolloquium des Instituts für Musikforschung, JMU, 20 June, 2023.

**Moss, F. C.** Respondent to Sanja Kiš Žuvela: *Musical Terminology, Digital Corpus Management and Translation*. GMTH International

**Moss, F. C.**, Nápoles López, N., Köster, M., & Rizo, D. (2022a). *19MT-OMR: A dataset for multimodal Optical Music Recognition* (Data Report). Data Report. OSF. <https://doi.org/10.17605/osf.io/QM9Z5>

**Moss, F. C.** (2020a, June 6). *Choro Songbook Corpus*. Zenodo. <https://doi.org/10.5281/zenodo.3881347>

**Moss, F. C.**, Neuwirth, M., & Rohrmeier, M. (2020). *Tonal Pitch-Class Counts Corpus (TP3C)*. Zenodo. <https://doi.org/10.5281/zenodo.3600088>

**Moss, F. C.**, Loayza, T., & Rohrmeier, M. (2019, July 1). *Pitchplots*. <https://doi.org/10.5281/zenodo.3265393>

## Blog posts

**Moss, F. C.** (2023, September 26). *Vorsicht, Sackgasse! Ein Plädoyer für mehr Intradisziplinarität*. musiconn.kontrovers – Blog des FID Musikwissenschaft. [https://kontrovers.musiconn.de/2023/09/26/digitalitaet\\_moss/](https://kontrovers.musiconn.de/2023/09/26/digitalitaet_moss/)

English version: <https://osf.iohttps://osf.io/98zxn/>.

**Moss, F. C.** (2020b, October 5). *A computational model for note distributions in musical pieces*. Digital and Cognitive Musicology Lab News Blog. <https://www.epfl.ch/labs/dcml/computational-model-note-dists/>

**Moss, F. C.** (2020c, September 28). *Tracing historical changes in the exploration of tonal space*. Digital and Cognitive Musicology Lab News Blog. <https://www.epfl.ch/labs/dcml/tracing-historical-changes/>

## Theses

**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.** (2012). *“Theorie der Tonfelder” nach Simon und “Neo-Riemannian Theory”: Systematik, historische Bezüge und analytische Praxis im Vergleich* [Master's thesis, Hochschule für Musik und Tanz Köln]. <https://doi.org/10.5281/zenodo.4748512>

Music Theory Lectures. 9 February, 2023.

Workshop “Decoding Musical Structure: Theory, Computation, and Neuroscience”. Congressi Stefano Franscini, Monte Verità, 5–9 February, 2023.

**2022:** **Moss, F. C.** *Music Stylometry—the Case of Choro*. Music Cognition Lab Meeting, Princeton University [online], 2 November, 2022.

**Moss, F. C.** *Learning about Machine Learning with CRIM*. Digital Counterpoints: Exploring Similarity in Renaissance Music, October 20–22, 2022, Haverford College, Department of Music, Haverford, PA.

**Moss, F. C.** *midivERTO: A web-based tool to make computational music analysis more accessible*. Institute für Musik und Musikwissenschaft, Technische Universität Dortmund, Germany, 28 April.

**Moss, F. C.** *Interactive Music Analysis using the DFT and Pitch-Class Distributions extracted from MIDI files*. Faculdade de Engenharia da Universidade do Porto (FEUP), Porto, Portugal, 4 April 2022.

**Moss, F. C.** *Music Theory and the Discrete Fourier Transform*. Cognitive and Systematic Musicology Lab Meeting, The Ohio State University, Columbus, USA [online], 25 March 2022.

- 2021: Moss, F. C.** *The Science of Music*. EPFL Information Days, 24–25 November 2021, Lausanne, Switzerland. <https://youtu.be/y5TQN09zDVI>
- Rohrmeier, M. & **Moss, F. C.** *Music, Mathematics, and the Geometry of Jazz*. Montreux Jazz Festival, July 11, 2021, Montreux, Switzerland.
- Moss, F. C.** *Boosting Open Research in Empirical Musicology*. EPFL Data Champions Meeting (DCBreak#3). March 18, 2021, Lausanne, Switzerland [online].
- 2020: Moss, F. C.** *The Importance of Modeling in Computational Musicology*. Round-table on “Probability and Music”, 5th International Congress of Music and Mathematics (MusMat 2020) – Perspectives and Applications of Mathematics in Post-Tonal Theories («Homage to Jamary Oliveira»), December 8–12, Rio de Janeiro, Brazil [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.** *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.
- 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.
- 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.** *From Beethoven to Brazil: Digital Musicology at EPFL*. Digital Synergies: Ca’ Foscari meets École Polytechnique Fédérale de Lausanne. Global Challenges Seminar – Team “Creative arts, cultural heritage and digital humanities”, Venice, Italy.
- Moss, F. C.** *Musik und Sprache*. Talk for Student Association “Denkzettel”, TUD, Dresden, Germany.
- 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.** *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. & Harasim, D.** *Extended Tonality and Music Cognition*. Symposium “Towards a World Music Theory”, University of Hamburg, Institute for Systematic Musicology, Hamburg, Germany.
- Conference presentations**
- 2023: Nakamura, E., Eipert, T. & Moss, F. C.** *Historical Changes of Modes and their Substructure Modeled as Pitch Distributions in Plainchant from the 1100s to the 1500s*. 16th International Symposium on Computer Music Multidisciplinary Research (CMMR2023), 13–17 November 2023, Tokyo, Japan.
- Eipert, T. & **Moss, F. C.** *MonodiKit: A data model and toolkit for the Corpus Monodicum*. The 10th International Conference on Digital Libraries for Musicology (DLfM ’23), 10 November 2022, Milano, Italy.
- Eipert, T. & **Moss, F. C.** *Communities in Medieval Troper Networks are Shaped by Carolingian Politics*. Poster. The 10th International Conference on Digital Libraries for Musicology (DLfM ’23), 10 November 2022, Milano, Italy.
- Yust, J., Affatato, G., & **Moss, F. C.** *Animated Harmonic Analysis Using DFT Phase Spaces and Coefficient Products*. Joint Annual Meeting of the American Musicological Society (AMS) and the Society for Music Theory (SMT), 9–12 November 2023, Denver, Colorado.
- Moss, F. C.** *Korpusforschung und Digitale Edition: ein Plädoyer für stärkere Intradisziplinarität*. Beitrag im Panel “Musikalische Korpusforschung: Aktuelle Trends und Herausforderungen”, mit Markus Neuwirth, Martin Rohrmeier, Christof Weiß, Johannes Hentschel & Maik Köster. Jahrestagung der Gesellschaft für Musikforschung, 4–7 October, 2023, Saarbrücken, Germany.
- Eipert, T., Frieler, K., & **Moss, F. C.** *Inside or Outside: The Use of Scales in Jazz Solo Improvisations*. Poster. Jahrestagung der Gesellschaft für Musikforschung, 4–7 October, 2023, Saarbrücken, Germany.
- Moss, F. C.** [Cancelled.] *Star Plots: eine neue Methode zur Visualisierung harmonischer Pfade für vierstimmige Kompositionen*. 23. Jahreskongress der Gesellschaft für Musiktheorie (GMTH) “Musiktheorie und Künstlerische Forschung”, 22–24 September 2023, Hochschule für Musik Freiburg, Freiburg im Breisgau, Germany.
- Roeder, T., Köster, M., & **Moss, F. C.** *Music-Text Interlinking as a Challenge for Digital Encodings of Music-Theoretical Writings*. Encoding Cultures – Joint MEC and TEI Conference 2023, 4–8 September 2023, Zentrum Musik – Edition – Medien (ZenMEM), Paderborn, Germany.
- Eipert, T. & **Moss, F. C.** *A system of trope elements: using network models to understand interrelations within the transmission of trope complexes*. Annual International Medieval and Renaissance Music Conference (MedRen) 2023, 24–28 July, 2023, Munich, Germany.
- 2022: Moss, F. C., Nápoles López, N., Köster, M. & Rizo, D.** *Challenging sources: a new dataset for OMR of diverse 19th-century music theory examples*. 4th International Workshop on Reading Music Systems (WoRMS 2022), 18 November 2022 [online].
- Köster, M. & **Moss, F. C.** *Der harmonische Dualismus und seine Entwicklung zum ‘Streit- und Angelpunkt der Musiktheorie’ – eine Diskursanalyse*. Jahrestagung der Gesellschaft für Musikforschung. Nach der Norm: Musikwissenschaft im 21. Jahrhundert, 29 September – 1 October 2022, Humboldt-Universität Berlin, Berlin, Germany.
- Moss, F. C. & Métrailler, C.** [Cancelled.] *Reading Music Theory from a Distance: A Corpus Study of the Thesaurus Musicarum Italicarum*. 21st Quinquennial Congress of the International Musicological Society (IMS2022), 22–26 August 2022, Athens, Greece.
- Moss, F. C., Affatato, G. & Harasim, D.** *Phantom Curves: Scientific Discovery through Interactive Music Visualization*. The 9th International Conference on Digital Libraries for Musicology (DLfM), In association with the annual conference of the International Association of Music Libraries (IAML), 28 July 2022, Prague, Czech Republic.
- Harasim, D., Affatato, G., & **Moss, F. C.** *midivERTO: A Web Application to Visualize Tonality in Real Time*. 8th International Conference on Mathematics and Computation in Music (MCM2022).

- Georgia State University, Atlanta, USA, 21–24 June 2022.
- Bracks, C. & **Moss, F. C.** *Totoli's Art of Lelegesan: Analyzing Sociocultural Context and Musical Content*. 10th International Workshop on Folk Music Analysis 2022 (FMA2022), University of Sheffield, Sheffield, UK, June 14–17, 2022.
- Meng, S., **Moss, F. C.**, & Rohrmeier, M. *Revisiting Tong Yun San Gong theory in Chinese music: a corpus study of Chinese folksongs*. 7th Analytical Approaches to World Music Conference (AAWM2022), University of Sheffield, Sheffield, UK, June 14–17, 2022.
- 2021: Moss, F. C.**, Köster, M., Femminis, M., Métrailler, C., & Bavaud, F. *Digitizing a 19th-century music theory debate for computational analysis*. CHR 2021: Computational Humanities Research Conference, November 17–19, 2021, Amsterdam, The Netherlands [online].
- Moss, F. C.** *Polytonality and the Emergence of Tone Fields in Tailleferre's Pastorale*. 21. Jahreskongress der Gesellschaft für Musiktheorie (GMTH) – Tonsysteme und Stimmungen. October 1–3, 2021, Musik-Akademie Basel/Hochschule für Musik (FHNW), Basel, Switzerland.
- Hentschel, J., **Moss, F. C.**, Markus Neuwirth, & Rohrmeier, M. *Die Entwicklung der tonalen Sprache in Beethovens Streichquartetten: Eine vergleichende Korpusstudie der Schaffensphasen*. XVII. Internationaler Kongress der Gesellschaft für Musikforschung, Universität Bonn, Abteilung für Musikwissenschaft/Sound Studies und Beethoven-Archiv des Beethoven-Hauses Bonn Bonn, Germany, September 28 – October 1 2021, Bonn, Germany.
- Moss, F. C.** *Digitizing the Dualism Debate: a case study in the computational analysis of historical music theory sources*. CROSS 2021 Event. 16 September 2021, École Polytechnique Fédérale de Lausanne/Université de Lausanne, Lausanne, Switzerland.
- Moss, F. C.**, Herff, S. A., & Rohrmeier, M. *Modeling perceived tonal stability of individual and aggregated listener responses for scales and cadences*. 16th International Conference on Music Perception and Cognition & 11th triennial conference of the European Society for the Cognitive Sciences of Music. July 28–31, Sheffield, UK [online].
- Moss, F. C.**, Herff, S. A., & Rohrmeier, M. *Individual perception of diatonic scales predicts perceived tonal fit in octatonic and hexatonic contexts*. 16th International Conference on Music Perception and Cognition & 11th triennial conference of the European Society for the Cognitive Sciences of Music. July 28–31, Sheffield, UK [online].
- Hentschel, J., **Moss, F. C.**, McLeod, A., & Rohrmeier, M. *Towards a Unified Model of Chords in Western Harmony*. Music Encoding Conference [online].
- Anzuoni, E., Ayhan, S., Dutto, F., McLeod, A., **Moss, F. C.**, & Rohrmeier, M. *A Historical Analysis of Harmonic Progressions Using Chord Embeddings*. 18th Sound and Music Computing Conference [online].
- Moss, F. C.** *Discovering the line of fifths in a large historical corpus*. Future Directions of Music Cognition, The Ohio State University, March 6–7, 2021, Columbus, OH [online]. <https://doi.org/10.17605/OSF.IO/J5W6T>
- 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.** *Data-Driven Music History*. Workshop for the International Conference of Students of Systematic Musicology, York University, September 14, 2020, York, UK [online].
- 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.** *Inferring Tonality from Note Distributions – Why Models Matter (Poster)*. SEMPRES 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.
- Harasim, D., **Moss, F. C.** & Ramirez, M. *A Brief History of Tonality (Poster)*. Applied Machine Learning Days, EPFL, Switzerland.
- 2017: 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 Populärmusikforschung (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.**, 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.**, 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.** *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.** *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.

## Teaching

**Fall 2023:** "CODAMUS: Computational and Digital Approaches to Music Scholarship" (international lecture series); "Die Entstehung von 'Tonalität' im 19. Jahrhundert", JMU

**Spring 2023:** "Musikalische Korpusforschung"; "Konzepte und Anwendungen der Pitch-Class Set Theory"; "Digitale Tools (nicht nur) für Musikwissenschaftliche Projektarbeiten", JMU

**Fall 2022:** "Neo-Riemannian Theories: Analysemethoden für erweiterte Tonalität von der Spätromantik bis zur Filmmusik"; "Music Memes: Quantitative Zugänge und Theorien zu kultureller Transmission von Musik", JMU

**Spring 2021:** "Musical Diversity across Historical Time", lecture in class "Digital Musicology", EPFL

**Fall 2020:** "Introduction to Musical Corpus Studies"; "Tonality: Perspectives of historical musicology and corpus studies", lecture in "Ringvorlesung Musikwissenschaft", UzK

**Spring 2020:** "Musical improvisation, invention and creativity", teaching assistant; "Musical Diversity across Historical Time", lecture in class "Digital Musicology", EPFL

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

**2015–2017:** "Introduction to Musicology" and "Reading Class Musicology", with Christoph Wald, TUD

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

## Supervision and mentoring

### PhD thesis supervision

**10/2023–today:** Adrian Nachtwey: "Eine Studie zur textkritischen Analyse von Musikeditionsvarianten im 19. Jahrhundert unter Anwendung von digitalen Methoden" (Musicology), JMU

Tim Eipert: "A Quantitative Perspective on Transmission, Structure, and Modality of Medieval Chant", Graduate School Humanities (Digital Humanities), JMU

Lucas Hofmann: "Computational modeling of complex temporal and tonal structures in early twentieth-century music", Graduate School Humanities (Digital Humanities), JMU

**07/2022–today:** Shuxin Meng, Digital Humanities, EPFL (1st supervisor: Martin Rohrmeier)

**Spring 2017:** Willian Fernandes de Souza (peer-mentoring): "Estilo e Sintaxe: quatro ensaios analíticos em práticas do choro" (Music Theory/Composition), Universidade Federal do Rio de Janeiro (UFRJ)

### Master thesis supervision

**Fall 2023:** Francesco Paolo Leonardo La Barbera: "Proportionen, Transformationen oder Tonfelder? Die vergleichende Anwendung dreier musiktheoretischer Ansätze" (Musicology), Universität Leipzig (1st supervisor: Stefan Keym)

**Spring 2023:** Julia Groblewski-Meiser: "Narration und Interpretation: Allegorische Darstellungen einer musikalischen Harmonie im Kuppelfresko von Santa Maria del Fiore von Giorgio Vasari" (Musicology), JMU

Oscar Aquite Pena: "Between millo and picó: music as discursive masking in *La Puntica No Ma'*, costume troupe of the Barranquilla Carnival (Colombia)" (Ethnomusicology), JMU (1st supervisor: Nepomuk Riva)

**Spring 2020:** Cédric Viaccoz (3rd supervisor): "Visual Hierarchical Analysis of Tonality using the Discrete Fourier Transform" (Digital Humanities), EPFL

### Bachelor thesis supervision

**Spring 2023:** Corinna Bongartz: "Musik und Künstliche Intelligenz: Eine Untersuchung der Zuordnung festgelegter Prompts zu durch Sprachmodellen erzeugt Musiksnippets", Musicology, JMU

**Spring 2022:** Iris Folpmers (2nd supervisor): "Data Sonification: Turning Climate Data into Music" (Artificial Intelligence), UvA, [https://scripties.uba.uva.nl/search?id=record\\_29490](https://scripties.uba.uva.nl/search?id=record_29490)

### Other mentoring

**Fall 2020:** 3 Machine Learning graduate student projects on vector embeddings of harmony (EPFL)



**Fall 2019:** Machine Learning graduate student project on vector embeddings of harmony (EPFL)  
**Fall 2018:** 3 Machine Learning graduate student projects on chord prediction with neural networks (EPFL)  
**Spring 2018:** 4 Digital Musicology graduate student projects (EPFL)  
**Fall 2015:** interdisciplinary project of technical design undergraduate, Technische Universität Dresden (TUD)

## Media coverage

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**Mar 2023:** “Harmonie modellieren”

<https://www.uni-wuerzburg.de/aktuelles/einblick/single/news/harmonie-modellieren/>

**Jan 2021:** “Machine learning helps retrace evolution of classical music”

<https://actu.epfl.ch/news/machine-learning-helps-retrace-evolution-of-clas-2/>

**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-humanities/>

## Skills

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**Languages:** Python, Latex, HTML, CSS, JavaScript  
German (native), English (fluent), French (fluent), Spanish (basic),  
Portuguese (basic)

**Utilities:** Git, GitHub/Lab, Jupyter Notebook/Lab

## Musical activities

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**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