

Katerina Kosta, Ph.D.

1. Personal Information

Tel. : 0044(0)7818958018
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Occupation : Machine Learning Research, Music Information Retrieval, Computational Musicology
LinkedIn : www.linkedin.com/in/katerinakosta
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2. Industry Experience

2016-present : Machine Learning Researcher, Jukedeck
2015 (Oct-Dec) : Research Intern, Intelligent Music System Group, R&D Division, YAMAHA Corp. Japan

3. Studies

2012-2016 : Ph.D. research, Centre for Digital Music, Electronic Engineering and Computer Science Department, Queen Mary University of London, UK
Title: "Computational Modelling and Quantitative Analysis of Dynamics in Performed Music"
Supervisors: Prof. Elaine Chew, Dr. Oscar F. Bandtlow
2010-2011 : Post-graduate Program "Sound and Music Computing", Music Technology Group, Department of Information and Communication Technologies, Universitat Pompeu Fabra, Barcelona, Spain
2004-2010 : Graduate Degree in Mathematics, Specified Field: Applied Mathematics, Specializations: Computational Mathematics and Didactics of Mathematics, National and Kapodistrian University of Athens, Greece
2005-2010 : Final Degree in Classical Piano, Full Music Theory Studies, Filippou Nakas Conservatory, Athens, Greece
1998-2003 : Classical Piano Studies, Apolonio Conservatory, Athens, Greece

4. Knowledge & Skills

a. IT Knowledge

Great Command of : Computational packages: MATLAB, OCTAVE
Programming languages: Python, R
Markup languages: LaTeX, html, css
Development platforms: GitHub, EasyMercurial
Software: Sonic Visualizer, MuseScore
Good Knowledge of : Programming languages: C, JAVA
Computer hardware basics

b. Languages

Greek : Native language
English : Expert knowledge, First Certificate in English, University of Cambridge
Spanish : Beginner level

5. Awards

- Internship position in YAMAHA corporation, Music Information Retrieval group, Japan (2015)
- Principal's Interdisciplinary Studentship (fully funded Ph.D. studies) (2012)
- Best Presentation award, Audio Engineering Society (AES) 53rd International Conference (2014)
- Queen Mary University of London Platform Grant Funding for Research Visit at the Music Technology Group, Universitat Pompeu Fabra, Barcelona, Spain (2015)
- Awards from 7Digital and SonicAPI for the team hack "[Brutalize Me](#)", Music Hack Day, Paris (2013)

6. University Activities

- Centre for Digital Music Ph.D. representative, Queen Mary University of London (2012-2013)
- Co-planner and co-presenter of the workshop "[Learn to Hack Web Audio API with G-Hack](#)", Sónar Festival, Barcelona, Spain (2014)
- "Research Open Day 2013" Sponsorship Coordinator, Queen Mary University of London (2013)
- Mathemusical Conversations International Workshop Posters Chair, Singapore (2015)
- Teaching Assistant of the undergraduate courses:
 - Department of Computer Science, Queen Mary University of London:
 - "Procedural Programming-JAVA" (Fall 2013),
 - "Probability and Matrices" (Fall 2013, Fall 2014),
 - "Business Modelling" (Fall 2012)
 - Department of Mathematics, University of Athens:
 - "Informatics I-MATLAB" (Fall 2011)
- Volunteer at the Computer Lab, Department of Mathematics, University of Athens:
 - Computer Lab assistant (2007-2009)
 - Moderator of the official Internet Forum (2009-2010)
 - Participation in the development of the Internet based radio station "[Lab Radio](#)" (2009-2010)

7. Music Activities

- Filippou Nakas conservatory:
 - Member of chamber music groups (2005-2007)
 - Member of the conservatory classical choir-soprano (2007-2009)
 - Member of modern music groups-keyboards, vocals (2005-2007)
- Local Athenian theatrical team:
 - Composition, songs arrangements for piano and music execution in plays (2006 & 2009)
 - Member as an actor (2000-2002)
- Member of the advanced choir "Song birds" of City Academy Choir-soprano, London (2012-2014)

8. Publications

- Kosta, K., O. F. Bandtlow, E. Chew (2018). Dynamics and relativity: Practical implications of dynamic markings in the score. *Journal of New Music Research*, 0(0): 1-24. ([link](#))
- Kosta, K., R. Ramirez, O. F. Bandtlow, E. Chew (2016). Mapping between dynamic markings and performed loudness: A machine learning approach. *Journal of Mathematics and Music*, 10(2): 149-172. ([link](#))
- Kosta, K. (2017). Computational Modelling and Quantitative Analysis of Dynamics in Performed Music. Ph.D. Thesis. Centre for Digital Music, Queen Mary University of London, London, UK. ([link](#))
- Medeot, G., Cherla, S., Kosta, K., McVicar, M., Abdallah, S., Selvi, M., Newton-Rex, E., & Webster, K. (2018). StructureNet: Inducing Structure in Generated Melodies. In *Proceedings of the 19th International Society for Music Information Retrieval Conference (ISMIR)*. (To appear)
- Kosta, K., O. F. Bandtlow, E. Chew (2018). MazurkaBL: Score-aligned loudness, beat, and expressive markings data for 2000 Chopin Mazurka recordings. In *Proceedings of the 4th International Conference on Technologies for Music Notation and Representation (TENOR)*, pp. 85-94, Montreal, Canada. ([link](#))
- Kosta, K., O. F. Bandtlow, E. Chew (2017). Dynamic change points in music audio capture dynamic markings in score. *18th International Society for Music Information Retrieval Conference (ISMIR)*, Late-Breaking and Demo Session, Suzhou, China. ([link](#))
- Kosta, K., O. F. Bandtlow, E. Chew (2016). Outliers in Performed Loudness Transitions: An Analysis of Chopin Mazurka Recordings. In *Proceedings of the 14th International Conference for Music Perception and Cognition (ICMPC)*, pp. 601-604, July 5-9, 2016, San Francisco, California, USA. ([link](#))
- Kosta, K., R. Ramirez, O. F. Bandtlow, E. Chew (2015). Predicting loudness levels and classifying dynamic markings in recorded music. In *Proceedings of 8th International Workshop on Machine Learning and Music (MML2015)*, Machine Learning for Music Generation, Vancouver, Canada. ([link](#))
- Kosta, K., O. F. Bandtlow, E. Chew (2015). A Change-point Approach Towards Representing Musical Dynamics. In T. Collins, D. Meredith, A. Volk (eds.): *Mathematics and Computation in Music: 5th International Conference, MCM 2015, London, UK, June 22-25, 2015, Proceedings*, pp. 179-184, Lecture Notes in Computer Science 9110, Berlin: Springer. ([link](#))
- Kosta, K., Li, S. (2014). 2013 Performance Studies Network International Conference. *Computer Music Journal*, 38(2): 78-80. ([link](#))
- Kosta, K., O. F. Bandtlow and E. Chew (2014). A Study of Score Context-dependent Dynamics in Piano Performance (abstract). In *Proceedings of the Performance Studies Network International Conference (PSN3)*, Jul 17-20, Cambridge, UK. ([link](#))
- Kosta, K., O. F. Bandtlow, E. Chew (2014). Practical Implications of Dynamic Markings in the Score: Is piano always piano? In *Proceedings of the 53rd Audio Engineering Society (AES) Meeting on Semantic Audio*, Jan 26-29, London, UK. ([link](#))
- Kosta, K., Y. Song, G. Fazekas, M. Sandler (2013). A Study of Cultural Dependence of Perceived Mood in Greek Music. In *Proceedings of the 14th International Society for Music Information Retrieval (ISMIR)*, pp. 317-322, Nov 4-8, Curitiba, Brazil. ([link](#))
- Kosta, K., M. Marchini, H. Purwins (2012). Unsupervised Chord-Sequence Generation from an Audio Example. In *Proceedings of the 13th International Society for Music Information Retrieval (ISMIR)*, pp. 481-486, Porto, Portugal. ([link](#))