

Elaine Chew

Position	Professor of Digital Media Queen Mary, University of London School of Electronic Engineering and Computer Science Mile End Road, London E1 4NS, United Kingdom
Address	elaine.chew@qmul.ac.uk www.eecs.qmul.ac.uk/~eniale
Research Interest	Study and modeling of music performance, and aspects of musicianship related to performance—including musical prosody, music cognition, music analysis, composition/improvisation, ensemble interaction, and performance rendering—using both quantitative (mathematical and computational) and qualitative scientific methods.
Performance Interest	Music science/technology concert-conversations; chamber and solo performances of classical and eclectic post-tonal music.

Education

Ph.D. 2000	Massachusetts Institute of Technology Operations Research Center Dissertation: <i>Towards a Mathematical Model of Tonality</i> Thesis Supervisor: Jeanne Bamberger OR Advisor: Georgia Perakis
S.M. 1998	Massachusetts Institute of Technology Operations Research Center Thesis: <i>Multiperiod Portfolio Opt – Approx Dynamic Programming & Feynman Diag</i> Thesis Supervisor: Dimitris Bertsimas
B.A.S. 1992	Stanford University Mathematical and Computational Sciences (honors), Music Performance (distinction) Report: <i>Testing a Polynomially Bounded Algorithm Derived from a Converging Alg</i> Research Supervisor: George B. Dantzig
F.T.C.L. 1987	Trinity College, London Fellowship in Piano Performance (equiv. to completing conservatoire postgrad course) Teacher: Lip-Tat Ong
L.T.C.L. 1985	Trinity College, London Licentiate in Piano Performance (equiv. to completing conservatoire undergrad course) Teacher: Lip-Tat Ong

Awards and Fellowships

2007 – 2008	Edward, Frances, and Shirley B. Daniels Fellow, Radcliffe Institute for Advanced Study 51 fellows (13 scientists, 12 artists, 8 social scientists) selected from over 775 applicants
2007 – 2008	Fulbright Fellowship to IRCAM, Paris, France (declined)
2005 – 2007	Viterbi Early Career Chair, University of Southern California
2005	(U.S.) Presidential Early Career Award in Science and Engineering Highest honor accorded early career scientists and engineers in the U.S. Of the 60 presidential honorees, 20 are selected from NSF Career awardees
2004 – 2012	(U.S.) National Science Foundation Early Career Development Award Approximately 400 selected from 1600 proposals annually

- 1999 Josephine de Kármán Dissertation Fellowship
- 1998 Laya and Jerome B. Wiesner Student Art Award, MIT Council for the Arts
2-3/year awarded for outstanding achievements in and contribution to the arts at MIT
- 1992 – 1996 Office of Naval Research Graduate Research Fellowship
- 1992 – 1995 National Science Foundation Graduate Research Fellowship (declined)
- 1992 – 1995 Air Force Office of Scientific Research Graduate Research Fellowship (declined)
- 1992 – 1995 Army Research Office Graduate Research Fellowship (declined)
- 1991 Stanford University Summer Undergraduate Research Fellowship
- 1989 Singapore Public Service Commission Overseas Merit Scholarship
- 1989 First Prize (chamber music, open division), National Music Competition, Singapore
prizewinners' concert at the Victoria Concert Hall
- 1987 Finalist (piano, open division), Rolex Piano Performance Awards, Singapore
one of three pianists selected through auditions and semi-finals
- 1986 Finalist (recital/concerto, open), Diners Club Pianist of the Year Competition, Singapore
one of four (and youngest) finalist selected through auditions and semi-finals
youngest soloist selected to play with the Singapore Symphony Orchestra

Honors

- 2011 Jefferson Science Fellowship of the National Academies (Finalist)
- 2010 Invited Speaker, De-mystifying Music and Its Performance. U.S. Frontiers of Engineering Symposium, National Academy of Engineering, Engineering and Music Session, September 23–25, Armonk, New York
- 2008 – 2009 Organizing Committee, Fifteenth Annual German-American Kavli Frontiers of Science Symposium, U.S. National Academy of Sciences – Alexander von Humboldt-Stiftung, June 4–7, Irvine, California
Session Chair (with Stefan Bornholdt): Reductionism of Complex Systems
- 2007 – 2008 Organizing Committee, Fourteenth Annual German-American Kavli Frontiers of Science Symposium, Alexander von Humboldt-Stiftung – U.S. National Academy of Sciences, June 11–14, Potsdam, Germany
Session Chair (with Stefan Bornholdt): Computational Creativity
- 2007 Invited participant, Japan-American Frontiers of Engineering Symposium, U.S. National Academy of Engineering – Japan Science and Technology Agency – Engineering Academy of Japan, November 5–7, Hewlett-Packard Laboratories, Palo Alto, California
Award: Best U.S. Poster Presenter
- 2007 Kavli Fellow, Thirteenth Annual German-American Kavli Frontiers of Science Symposium, U.S. National Academy of Sciences – Alexander von Humboldt-Stiftung, May 30 – June 2, Irvine, California
- 2005 Invited participant, Johns Hopkins University Center for Language and Speech Processing Summer Workshop in Language Engineering Proposal Competition
Proposal: Creativity in Musical Expression, Second place (tied)
- 2004 Invited Participant, U.S. Frontiers of Engineering Symposium, National Academy of Engineering, September 9–11, Irvine, California
- 1999 Embassy Series Recital and Photography Exhibit at the Singapore Embassy
- 1998 President's Charity Concert soloist with the Singapore Symphony Orchestra

Professional Experience

Professor of Digital Media **Queen Mary, University of London**
2011 – present School of Electronic Engineering and Computer Science

Director of Music Initiatives **Queen Mary, University of London**
2011 – present Centre for Digital Music

Director of Graduate Studies (Res) **Queen Mary, University of London**
2011 – 2012 School of Electronic Engineering and Computer Science

Fellow and Training Faculty **University of Southern California**
2010 – 2011 Brain and Creativity Institute, and Neuroscience Graduate Program

Visiting Scholar **Harvard University**
2008 – 2009 School of Engineering and Applied Sciences, Computer Science
Faculty of Arts and Sciences, Department of Music

Fellow **Radcliffe Institute for Advanced Study at Harvard University**
2007 – 2008 Edward, Frances, and Shirley B. Daniels Fellow

Associate Professor **University of Southern California**
2007 – 2013 Daniel J. Epstein Department of Industrial and Systems Engineering
Ming Hsieh Department of Electrical Engineering
Thornton School of Music (Courtesy)

Viterbi Early Career Chair **University of Southern California**
2005 – 2007 Viterbi School of Engineering

Research Area Director **University of Southern California**
2004 – 2011 Integrated Media Systems Center: Human Performance Engineering

Assistant Professor **University of Southern California**
2001 – 2007 Daniel J. Epstein Department of Industrial and Systems Engineering
2007 Ming Hsieh Department of Electrical Engineering (Courtesy)

Visiting Assistant Professor **Lehigh University**
2000 – 2001 Industrial and Manufacturing Systems Engineering

Founder / Artistic Director **Massachusetts Institute of Technology**
1998 – 2000 Aurelius Ensemble

Affiliated Artist **Massachusetts Institute of Technology**
1997 – 2000 Music and Theater Arts

Lecturer **Massachusetts Institute of Technology**
2000 Engineering Systems Division

Teaching Assistant **Harvard Business School**
2000 Quantitative Methods Module

Instructor **Massachusetts Institute of Technology**
1998 Sloan School of Management, MBA Program

Teaching Assistant **Massachusetts Institute of Technology**
1998 Engineering Systems Division

Teaching Instructor 1995 – 1997	Massachusetts Institute of Technology Sloan School of Management, Management of Technology Program
Systems Administrator 1997	Massachusetts Institute of Technology Sloan School of Management, Laboratory for Financial Engineering
Teaching Assistant 1996	Massachusetts Institute of Technology Sloan School of Management

External Funding History

CNRS-IRCAM-UPMC, University of Strasbourg Institute for Advanced Study (USIAS) Fellowship, Collaborator (PI: Moreno Andreatta), €140,000, Structural Music Information Research (SMIR): Introducing Algebra, Topology, and Category Theory Into Computational Musicology. Submitted 28 Oct 2016, awarded 1 Feb 2017.

Marie Slodowska-Curie Action Postdoctoral Fellowship, PI (Fellow: Dorien Herremans), £137,591. MorpheuS: Hybrid Machine Learning-Optimization Techniques to Generate Structured Music through Morphing and Fusion. Submitted 11 Sep 2014, awarded 4 Feb 2015.

Institute for Musical Research Support for Conferences, PI (Co-I: Oscar Bandtlow) £500. International Conference on Mathematics and Computation in Music. Awarded 28 May 2015.

London Mathematical Society Financial Support for Conferences—Scheme I Grant, International Conference on Mathematics and Computation in Music, Co-I (PI: Oscar Bandtlow, Co-I: Elaine Chew). £4,000. Submitted 15 Sep 2014, awarded 13 Oct 2014.

Dagstuhl Seminar, Co-I (PI: Meinard Mueller, Co-I: Juan Bello). Computational Music Structure Analysis. Submitted 3 Apr 2014, awarded 15 July 2014.

Lorentz Center Workshop, Co-I (PI: Anja Volk, Co-I: Christina Anagnostopoulou, Elizabeth Margulis). €7,700. Music Similarity: concepts, cognition, and computation. Submitted 16 Sep 2013, awarded 31 Mar 2014.

Centre for Doctoral Training Proposal, Co-I (PI: Mark Sandler, Co-I: Patrick Healey, Mark Plumbley, Andrew McPherson, Karen Shoop, Nick Bryan-Kinns), Award: £3,697,357. EPSRC-AHRC Centre for Doctoral Training in Media and Arts Technology. Submitted Jul, 2013, awarded Mar 2014.

National University of Singapore Academic Research Fund Tier 1, collaborator (PI: Craig De Wilde, Co-I: Bernard Lanskey), Award: SG\$30,000. Mathematical Conversations. Submitted Nov, 2013, awarded 2014.

National University of Singapore Institute for Mathematical Sciences, PI (Co-I: Bernard Lanskey, Bernard Tan), Award: SG\$50,000. Mathematical Music Sciences—an interdisciplinary workshop on mathematics and computation in music composition and performance. Submitted 9 Jul 2012, awarded 2013.

EPSRC Platform Grant, Co-I (PI: Mark Plumbley, Co-I: Mark Sandler, Patrick Healey, Geraint Wiggins, Nicholas Bryan-Kinns, Simon Dixon, Panos Kudumakis, Marcus Pearce, Matthew Purver, Joshua Reiss, Tony Stockman). Award: £1,161,334. Platform Grant: Digital Music. Submitted May 20, 2012, awarded Jan 2013.

The Arts and Humanities Research Council, Co-I (PI: Andrew McPherson, Co-I: Daniel Leech-Wilkinson). Award: £24,436.86. Measuring and Enhancing Expressive Musical Performance with Digital Instruments: Pilot Study and Research Workshop. Submitted Nov 30, 2011, awarded Jan 25, 2012.

British Academy Small Research Grant, co-PI (PI: Geraint Wiggins, co-PI: Alexandre François). Award: £2,000. Cognitive models of musical pitch and tonality perception. Submitted Nov 10, 2010, awarded Feb 14, 2011.

Radcliffe Institute for Advanced Study Exploratory Seminar Proposal, P.I. (co-PI: Alexandre R. J. François), Award: US\$14,000. Prosody and Dialog in Language and Music. Submitted Mar 15, 2010, awarded Apr 12, 2010.

MIT Council for the Arts Director's Grant, proposal submitted by Clarise Snyder and Shirley Entzminger, Award: US\$1000. The Mathematics in Music – a concert-conversation with Elaine Chew, submitted Jan 2008, awarded Mar 14, 2008.

Fulbright Scholar Program, France, Multidisciplinary Studies, Program Award #7270. Impressions Revisited—computational analyses and performances of contemporary music, submitted Aug 2006, awarded May 21, 2007 (declined).

Harvard University Radcliffe Institute of Advanced Studies Fellowship Program, P.I. (co-PI: Alexandre R. J. François), Award: US\$130,000++. Analytical Listening through Interactive Visualization, submitted Oct 2006, awarded Feb 27, 2007.

University of Victoria Women Scholars Lecture Series, Victoria, BC, Canada, proposal submitted by George Tzanetakis. Lecture series brings distinguished women scholars to the University of Victoria for 3-5 days for university-wide and local academic area seminars. Primary selection criterion is scholarly excellence. Awarded Dec 14, 2005.

NSF Faculty Early Career Development (CAREER) Grant No.0347988, P.I., Award: US\$500,000. Performer-Centered Approaches to Computer-Assisted Music Making, awarded Jan 31, 2004.

NSF Information Technology Research (ITR) Grant No. 0219912, co-P.I. (PI: Shrikanth Narayanan, co-PI: Jay C.-C. Kuo), Award: US\$500,000 (leader in 1/3 of project, co-leading and co-advising of students in other 2/3). A User-centric Content-based Approach to Indexing, Query and Retrieval of Music through Signal Processing and Knowledge-based Methods, awarded Oct 2002.

NSF Major Research Instrumentation (MRI) Grant No. 0321377, Senior Investigator (designer and leader of the Distributed Immersive Performance project, and one of the key proposal writers for this equipment grant), Award: US\$400,000. Acquisition of Equipment for Distributed Immersive Performance, awarded Aug 2003.

NSF Engineering Research Center (ERC) Cooperative Agreement No. EEC-9529152, Research Area Director, 2001-2007, Award: ~US\$100,000 per year. (annual amount until 2007). Integrated Media Systems Center.

Internal Funding History

C4DM Platform Grant, PI (CI Andrew McPherson). Award: £10,000. C4DM Concert Series 2015-2016. Proposal submitted Aug, 2015 – awarded Sep, 2015.

C4DM Platform Grant, PI (CI's Andrew McPherson, Andrew Robertson, Ian Pressland, Melissa Wong, Step Parikian). Award: £15,000. LCO New: Explore 'Inspired by Digital'. Proposal submitted Mar 20, 2013 – awarded Mar 26, 2013.

Pump Priming Funds for Public Engagement, QM Centre for Public Engagement, PI (CI: Andrew McPherson). Award: £10,000. London Chamber Orchestra (LCO)-Centre for Digital Music (C4DM) Partnership: Inspired by Digital. Proposal submitted Apr 2, 2012 – awarded Apr 27, 2012.

QMUL Engineering and Physical Sciences Research Council Doctoral Training Account CASE Studentship (with Yamaha Corporation). 9/2012-3/2016, Award: £75,054. Intelligent Interfaces for Accelerating Intermediate Piano Learning. Proposal submitted Nov 15, 2011.

QMUL China Scholarship Council Student Scholarship Bid, 9/2012-9/2016. Award: doctoral student tuition and stipend (£92,535). Contemporary Chinese Music written for Western Classical Instruments. Proposal submitted Nov 4, 2011 – awarded.

QMUL College 2012-2013 PGR Studentship Bids. Award: doctoral student tuition and stipend (~£140,580). Proposals submitted Oct, awarded Nov, 2011.

- Ensemble Interaction Over Distance (with Pat Healey), 9/2012-3/2016, £67,699
- Mathematical Models for Music Prosodic Gestures (with Oscar Bandtlow), 9/2012-3/2016, £67,699
- Adaptive Computational Interfaces for Creative Musical Expression (with Andrew McPherson), 9/2012-9/2016, £75,054

USC Provost's Arts and Humanities Initiative, Faculty Grants for Visions & Voices 2010–2011, P.I. (co-PIs: Aniruddh Patel, Peter Child, Alexandre François). Award: US\$20,000. Musical Patois – how instrumental music reflects a composer's native language. Preliminary proposal submitted Sep 2009; full proposal submitted Feb 2010; awarded Mar 22, 2010.

USC WiSE Child Care Subsidy. Award: US\$8,000 total – awarded June 29, 2010 and 2011.

USC Provost's Arts and Humanities Initiative, Faculty Grant for Visions & Voices 2006-2007. Award: US\$5,000. The Mathematics in Music – a recital and conversation with Elaine Chew, awarded Jan 2007.

USC WiSE Faculty Supplemental Research Grant. Award: US\$8,500 total – awarded Aug 2004, Aug 2005, 29 June 2010.

USC Women in Science and Engineering Postdoctoral Fellowship for Dr. Anja Volk, Award: US\$100,000. Faculty Sponsor, Sep 2003 – Aug 2005.

USC Arts Initiative Faculty Collaborative Grant, P.I. (co-PIs: Christos Kyriakakis and Dennis Thurmond) Award: US\$15,000. Flying Sonics! – a tale of two pianos and immersive audio, awarded Feb 2002.

USC Women in Science and Engineering New Faculty Recruitment Grant, Award: US\$30,000, awarded Sep 2001.

MIT Committee for Campus Race Relations Grants, P.I. Award: US\$800. Aurelius Ensemble Concert Grants for: *Antojitos Latinos*, and *Tcherepnin Live!*, Jul 1999, Feb 2000.

MIT Council for the Arts Grants, P.I. Award: US\$800. Aurelius Ensemble: *Poulenc Potpourri*, and *Fun, Wit and Humour*, and *Unabashed Angst*, Jan 1999, Aug 1998.

MIT Science and Technology Initiative China Program Grant, P.I. Award: US\$4000.
Field Study on Contemporary Chinese Piano Music in Beijing, China, Summer 1997.

Patents and Invention Disclosures

Chuan, C.-H., E. Chew. Automated Style-Specific Accompaniment System, USC Invention Disclosure, filed February 2008.

François, A. R. J., E. Chew, C. D. Thurmond. Multi-modal Interactive Musical Improvisation System, USC Invention Disclosure, filed January 31, 2007.

Chew, E., A. R. J. François, J. Liu, A. Yang. Expression Synthesis Project, USC Invention Disclosure (Ref. 3712) / US Provisional Patent Application (No. 60/685,357), filed June 30, 2005.

Chew, E., X. Wu. A Contig Mapping Algorithm for Voice Separation, USC Invention Disclosure (Ref. 3571) / US Patent Application (No. 60/654,686), filed April 5, 2004.

Chew, E., Chen Y.-C. Pitch Spelling Using the Spiral Array, USC Invention Disclosure (Ref. 3532 / MWE Ref. 18080-117).

Chew, E., A. R. J. François. MuSA.RT – Music on the Spiral Array . Real-Time, USC Invention Disclosure (Ref. 3533 / MWE Ref. 38080-118).

Plenary and Keynote Lectures

2017

- Nov 13-15 Title TBD. Keynote Speaker, Audio Developer Conference, Code Node, London, UK.
- Sep 14 Title TBD. Invited Panelist, SysMus Workshop on Applications of Computational Modelling, Queen Mary University of London, 14 Sep, London, UK.
- Sep 11-13 Title TBD. Keynote Speaker, Second Conference on Computer Simulation of Musical Creativity, Open University, Milton Keynes, UK.
- Jun 7 Mind Over Music Perception. Plenary Speaker, Music and the Brain, The Science of Consciousness, 5-10 Jun, San Diego, California, USA.
- May 17 Time and the Limits of Notation. Keynote Speaker, Music Encoding Conference, 16-19 May, Tours, France.
- Mar 2 Music, Mathematics, and Models of the Ineffable. Inaugural Lecture, Queen Mary University of London, UK.
- Feb 1 In Scientific Pursuit of Musical Thinking. Digital Science Speaker Series, London, UK.

2016

- Dec 8-9 Artistically-informed digital sleuthing: From music materials to structure visualisations. Keynote Speaker, Interfaces: Tradition and Technology in Musical Heritage Work, Musikarvkonferansen 2016, National Library of Norway, Oslo, Norway.
- May 27-29 Making Concrete the Ineffable: From Music to Mathematical Models. Keynote Speaker, International Conference on New Technologies for Music Notation and Representation, Anglia Ruskin University, 27-29 May, Cambridge, UK.

- May 14 Music, Mathematics, and Models of the Ineffable. Invited Speaker, Music and the Brain Symposium: Music Information Retrieval and Data Science, Stanford University, 14 May, Stanford, CA.
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- 2015
- Oct 13 Machines that Music and Women Who Dare to Dream. Invited Plenary Speaker, Ada Lovelace Day Live! Conway Hall Ethical Society, Conway Hall, London, UK.
- Apr 18 [Lecture 1] The Art of Stealing: Similarity and Variation in Its Many Guises; [Lecture 2] The Art of Problem Finding: Musician-Centered Approaches to Digital Musicology Research. Invited Speaker, First International Forum for Digital Musicology, Ningbo University College of the Arts, Ningbo, China.
- Feb 13 Motion and Gravitation in the Musical Spheres. Plenary Speaker, Mathemusical Conversations: Mathematics and Computation in Performance and Composition, National University of Singapore, 13-15 February, Singapore.
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- 2014
- Nov 26-29 The mechanics of tipping points: A case of extreme elasticity in expressive timing. Invited Plenary Speaker and Panelist, International Congress on Mathematics and Music, Universidad de Guadalajara, Vallarta, Mexico.
- Sep 26 Relativizing the Ground Truth Paradigm: Lessons Learned in Music. Keynote speaker, Agency for Science, Technology, and Research (A*STAR) Scientific Conference (A*SC), Singapore, Singapore.
- Sep 11 Human-machine improvisations with Mimi: Interrogating performance and listening processes and outcomes. Invited plenary speaker, Perspectives on Musical Improvisation II, Oxford, UK.
- Jul 7 Tonality and the choreography of expectation—a performer’s perspective (talk in honor of Krumhansl’s *The Cognitive Foundations of Musical Pitch*). Invited plenary speaker, Milestones in Music Cognition: A Quarter-Century Celebration of Books by Bregman, Krumhansl and Narmour, organized by Steve McAdams, Lola Cuddy, Alexander Rozin, David Temperley, McGill University, Montreal, Canada.
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- 2013
- Sep 20 Music Interaction With Others As Conveyor of Relational Intent: A Response to Ian Cross' "Music as Communication". Invited plenary speaker, Music and Communication: Music Therapy and Music Psychology, Nordoff Robbins London Centre, London, UK.
- May 23 Computational Magpie-ism and Music Research. Invited plenary speaker, London Hopper Colloquium, British Computer Society Headquarters, London, UK.
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- 2012
- Jan 10 Music Structure and Prosody: Do You Hear What I Hear? Invited speaker, Workshop on Large Scale Multimedia Search, Institute for Pure and Applied Mathematics, University of California, Los Angeles, CA.
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- 2011
- Dec 20 Building bridges - creating sustainable interdisciplinary collaborations between musicians and engineers. Keynote lecture, Annual Workshop of the Digital Music Research Network (DMRN+6), Queen Mary, University of London, UK.
- Oct 14 Musical Trajectories: Humour, Structure, and Interpretation, Workshop on Methods and Metaphors in Music Visualisation, King’s College London, UK.
- Mar 23 Music, Mathematics, and Computing. Keynote lecture, Women in Science, Technology and Math Event, Mirman School for Gifted Children, Los Angeles, CA.
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- 2010
- Sep 25 De-mystifying Music and Its Performance through Science and Technology. Plenary lecture, National Conference of the Association for Technology in Music Instruction, Marriott Minneapolis City Center, Minneapolis, MN.

- Sep 24 De-mystifying Music and Its Performance. Invited speaker, Engineering and Music Session, U.S. Frontiers of Engineering Symposium, National Academy of Engineering, September 23–25, Armonk, NY.
- Mar 6 Tonality Algorithms and Visualization. Keynote lecture, Music Theory Southeast 2010, Winthrop University, Rock Hill, SC.
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- 2009
- Aug 3 Music Computation and Cognition. Keynote lecture, Society for Music Perception and Cognition Conference, IUPUI Music and Arts Technology, Indianapolis, IN.
- Mar 7 Modeling and Explaining Expressive Choices in Musical Performance. Keynote panel, Eighteenth Annual Meeting of the West Coast Conference of Music Theory and Analysis (WCCMTA, organizer: Joti Rockwell), Pomona College, Claremont, CA.
- Feb 8 Decoding Performance Art through Music Science. Keynote lecture, Suncoast Music Education Research Symposium (SMERS VII – *Understanding Musical Expression*, organizer: Carlos Xavier Rodriguez), University of South Florida, Tampa, FL.

Invited Lectures, Seminars and Other Presentations

2017

- TBD Music Structures Made and Unmade. Invited Speaker, Lecture Series of the Dresden Music Cognition Lab, TU Dresden, Germany.
- TBD Title TBD. Invited Speaker, Music Informatics, Cognition, Acoustics (MusICA) Seminar, University of Edinburgh, UK.
- Jun 16 Music and Mathematics, Radiophonic Workshop, Science Museum London, UK.
- Feb 22 Geometry and Music-induced Laughter, Strength In Numbers, Science Museum Lates, London, UK.
- Jan 31 Elaine Chew, solo piano with visualisation. Concert-conversation, Sussex Experimental Music Festival, Attenborough Centre for Creative Arts, University of Sussex, Brighton, UK.
- Jan 27 Making and Finding Constraints in Performance and Composition. Research Seminar Series, Royal Academy of Music, London, UK.
- Jan 23 Music, Mathematics, Computers: Modeling Tonality. Research Seminar Series, Kingston University of London, Kingston, UK.

2016

- Sep 9 Machine Creativity Roundtable, International Association for the Study of Popular Music (IASPM) Biennial Conference, Brighton, UK.
- Jul 24 Music Modeling. Lightning Talk, Sci Foo, Google Headquarters, Mountain View, USA.
- Jul 23 Visualising Music Structures. Visualisation Show and Tell, Sci Foo, Google Headquarters, Mountain View, USA.
- Jul 16 2xPiazzolla: Towards Analytical Models of the Repertoire of Possibles in Music Performance, Bath Spa University, Bath, UK.
- Feb 29 What You Hear and What You Make Others Hear. Workshop in Computational Music Structure Analysis, Schloss Dagstuhl, Germany.

- Feb 16 Musical Expression, Cognition, and Creativity: Mathematical and Computational Models. A*STAR: Agency for Science, Technology, and Research, Singapore.
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- 2015
- Aug 5 The Case for Music Expressivity and Structure. Google, Mountain View, CA, USA.
- Apr 20 Computers in Music Research: Communicating, Discovering, and Explaining What Musicians Do. Nanjing University of the Arts, Nanjing, China.
- Feb 13 Motion and Gravitation in the Musical Spheres. Mathemusical Conversations: Mathematics and Computation in Performance and Composition, National University of Singapore, 13-15 February, Singapore.
- Jan 19 The Art of Stealing. Similarity Challenge: Setting the Stage (Part II), Music Similarity: Concepts, Cognition, and Computation, Lorentz Center Workshop, 19-23 January, Leiden, the Netherlands.
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- 2014
- Dec 4 Models of Conceptualised and Performed Structures: Representation and Visualisation. Invited Speaker Series for MSc in Music, Mind, and Brain, Goldsmiths University of London, London, UK.
- Oct 31 Communicating what we do: Musician-centered approaches to research problem finding. PhD Research Seminar, Royal Academy of Music, London, UK.
- Oct 20 Music Performance and Expression. Media and Arts Technology Centre for Doctoral Training Forum, Queen Mary University of London, UK.
- Jul 19 Multiple sense making: When practice becomes performance. Performance Studies Network International Conference 3, Cambridge University, Cambridge, UK.
- Jul 4 Musician-centered approaches to digital music research. DE-miniTED: Digital economy technology, entrepreneurship and design, summer school of the all-EPSRC Centres for Doctoral Training, University of London Institute in Paris, France.
- Jun 20 Musician-centered approaches to digital music research. Centre for Interdisciplinary Research in Music Media and Technology, McGill University, Montreal, Canada.
- Apr 20 Dancing with spirals: An introduction to the Spiral Array model for tonality and its applications. Cognitive Science Seminar Series, Queen Mary University of London, London, UK.
- Jan 13 Mediated Pathways Into Performed Music. Media and Arts Technology Centre for Doctoral Training Forum, Queen Mary University of London, UK.
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- 2013
- Nov 27 Reason and Creativity in Music Performance. Science Society Seminar Series, University College London, London, UK.
- Jun 13 Conceptual and Experiential Representations of Tempo: Effects on Expressive Performance Comparisons. International Conference on Mathematics, Computation and Music, McGill University, Montreal, Canada.
- Apr 25 Conceptualisations of Musical Time in Performance. Cognitive Science Seminar Series, Queen Mary University of London, London, UK.
- Apr 5 The Tipping Point Analogy for Musical Timing. Performance Studies Network International Conference 2, Cambridge University, Cambridge, UK.

 2012

- Feb Synchronising prosodic and structural information to reveal performance decisions. London International Piano Symposium, Royal College of Music, London, UK.
- Jan 31 Mediated Pathways Into Performed Music. Media and Arts Technology Forum, Queen Mary University of London, London, UK.
- Oct 28 Tonality and Prosody: Connections and Transformations. Lecture-recital, The Performer's Voice, Yong Siew Toh Conservatory of Music, National University of Singapore, Singapore.
- Oct 9 Mathematical Models, Music Structure and Prosody, School of Mathematical Sciences, Queen Mary University of London, UK.
- Sep 28 London Chamber Orchestra and Centre for Digital Music: A Preview of Inspired by Digital, EU Researchers' Night Grand Variety Show, Great Hall, People's Palace, Queen Mary University of London, UK.
- Aug 27 Timing in Performance: as a Function of Desired Parsing and Sonic Effect, Yong Siew Toh Conservatory of Music, Singapore.
- Jul 13 Timing in Performance: as a Function of Desired Parsing and Sonic Effect, Music & Shape Conference, 12-14 July, Kings College London, UK.
- Jun 19 Absolute Tempo vs. Log(Tempo), Score Time vs. Performance Time (joint work with Clifton Callender), CMMR 2012 Workshop on Cross-Disciplinary Perspectives on Expressive Performance, Queen Mary, University of London, UK.
- Jun 7 Hearings Revealed in Performances: Mapping Aural Phenomena to Meanings Found. Invited talk, The 21st CREST Open Workshop: Computer-Human Interactive Performance Symposium (CHIPS), University College London, UK.
- Jan 17 Building Bridges: Creating Sustainable Collaborations Amongst Musicians and Engineers. Invited seminar, Media Arts and Technology Program, University of California, Santa Barbara, CA.

 2011

- Oct 20 Developing the Transdiscipline of Creativity: Digital Music, Inside Government Forum (Creative and Digital Industries: Economic Growth Through World Class Creativity), London, UK.
- Oct 19 Musical Trajectories: Humour, Structure, and Interpretation. Center for Digital Music Seminar, Queen Mary, University of London, UK.
- Sep 29 Media and Arts Technology Doctoral Training Center Forum, London, UK.
- Jul 12 Engineering and Music – from Guitar Hero to Intelligent Machines. Guest lecture, The Brain: An Introduction to Neuroscience (class taught by Bruce Teter), USC Summer Programs, University of Southern California, Los Angeles, CA.
- Apr 4 De-mystifying Music and Its Performance. Department of Performing Arts Technology, School of Music, Theater and Dance, University of Michigan, Ann Arbor, MI.
- Apr 4 Mathematical Modeling of Tonality – Theory and Applications. Department of Performing Arts Technology, School of Music, Theater and Dance, University of Michigan, Ann Arbor, MI.
- Mar 31 Musical Patois – reflections of language in music. Elaine Chew, performer and producer, Alexandre R. J. François, co-producer. A concert-conversation with neuroscientist Aniruddh Patel and composer Peter Child featuring world premieres of

newly commissioned works by Peter Child. USC Visions & Voices, Newman Recital Hall, Los Angeles, CA.

- Mar 5 Musical Patois – reflections of language in music. Elaine Chew, performer and producer, Alexandre R. J. François, co-producer. A concert-conversation with neuroscientist Aniruddh Patel and composer Peter Child featuring world premieres of newly commissioned works by Peter Child. MIT 150th anniversary event, FAST Arts Festival, Cambridge, MA.
- Mar 2 De-mystifying Music and Its Performance. Invited lecture, Computer Science Department, University of North Florida, Jacksonville, FL.
- Feb 10 MuS.A.R.T and Beethoven's Fifth. Invited presentation/performance (with Julia Greer). NAE Regional Meeting, USC, Town & Gown, Los Angeles, CA.
- Jan 23 De-mystifying Music and Its Performance. Invited presentation, Dagstuhl Seminar on Multimodal Music Processing, Leibniz-Zentrum für Informatik, Schloss Dagstuhl, Saarland, Germany.
- Jan 11 Music Computation and Cognition. Invited presentation, Brain and Creativity Institute, USC, LA, CA.
- Jan 6 The Pentahelix: a Four-Dimensional Realization of the Spiral Array. Invited presentation, Joint Mathematics Meeting Special Session on Mathematical Techniques in Musical Analysis, New Orleans, LA.

 2010

- Nov 17 Engineering and Music – from Guitar Hero to Intelligent Machines. Guest lecture, Engineering Freshmen Academy (Najmedin Meshkati's two classes), USC, LA, CA.
- Nov 16, 18 Engineering and Music – from Guitar Hero to Intelligent Machines. Guest lecture, Engineering Freshmen Academy (Jesse Yen's two classes), USC, LA, CA.
- Oct 25, 27 Engineering and Music – from Guitar Hero to Intelligent Machines. Guest lecture, Engineering Freshmen Academy (Milind Tambe's two classes), USC, LA, CA.
- Oct 18 Engineering and Music – from Guitar Hero to Intelligent Machines. Guest lecture, Engineering Freshmen Academy (Andrea Armani's two classes), USC, LA, CA.
- Jun 5 The Science Behind MIMI (with Alexandre François), People in Electronics, Boston Court, Pasadena, CA.
- Mar 25 Music and Engineering, IML Digital Studies Symposium, USC School of Cinematic Arts, Los Angeles, CA. Video: dss.usc.edu/index.php/speakers/2010/03/25/symposium-9-john-underkoffler-and-elaine-chew
- Mar 11 Mentoring and Academic Job Search, PhD Seminar, USC Epstein Industrial and Systems Engineering Department, Los Angeles, CA.
- Feb 25 Tonality Algorithms: Determining Keys, Spellings, Boundaries, and Expectation. Invited Talk, Statistics / Operations Research / Math Finance Seminar Series, Claremont Center for the Mathematical Sciences, Claremont, CA.

 2009

- Oct 26 Understanding Musical Structure, Prosody, and Dialogue through Playful Interaction with Dynamic Visualizations. Ear Club Seminar, UC Berkeley, CA.
- Mar 12 Mathematics in Music: Elaine Chew in conversation with Boston Lyric Opera. MIT Club of Boston (organizer: Pauline Hsu Benninga), Killian Hall, Cambridge, MA.

2008

- Jan 29 Musical Science and Engineering Art. New Media Colloquia Series, Ammerman Center for Arts and Technology, Connecticut College, New London, CT.
- Jan 29 MIMI: Multimodal Interaction for Musical Improvisation. CS312: Digital Sound Processing (Guest Lecture), Connecticut College, New London, CT.
- Sep 19 Music and Operations Research. Department of Industrial and Systems Engineering, Lehigh University, Bethlehem, PA.
- Sep 12 Engineering Science and Musical Art, Arts, Media and Engineering Program, Fulton School of Engineering and Herberger College of the Arts, Arizona State University, Tempe, AZ.
- Aug 26 The Expression Synthesis Project. (joint presentation with Alexandre François.) The 7th RENCON (Contest for Performance Rendering Systems) at ICMPC 10, Sapporo, Japan.
- Aug 25 MuSA.RT and the Pedal: The Role of the Sustain Pedal in Clarifying Tonal Structure. (joint presentation with Alexandre François.) International Conference on Music Perception and Cognition, Sapporo, Japan.
- May 29 Music Science and the Mathematical Modeling of Tonality. Symposium on Interactive Visualizations of Music (organizer: Juan P. Bello), Music Technology Program, New York University, New York, NY.
- May 19 Computational Modeling of Music and Its Performance. CSAIL Speech Seminar, MIT, Cambridge, MA.
- May 12 The Mathematics in Music – a concert-conversation with Elaine Chew. Applied Mathematics Colloquium, a joint seminar by the Department of Mathematics and the Music and Theater Arts Section, MIT, Cambridge, MA.
- April 4 Life after the ORC in the academe. Alumni presenter, Operations Research Center Open House, MIT, Cambridge, MA.
- Mar 25 Music Science and the Mathematical Modeling of Tonality. Operations Research Seminar, North Carolina State University, Raleigh, NC.
- Mar 24 The Mathematics in Music – a concert-conversation with Elaine Chew. North Carolina State University Arts Now Series, Raleigh, NC.
- Mar 5 Music Science and the Mathematical Modeling of Tonality. School of Informatics, Indiana University, Bloomington, IN.
- Feb 29 Analytical Listening Through Interactive Visualization. (joint presentation with Alexandre François.) Human-Computer Interaction Seminar (Seminar on People, Computers, and Design), Stanford University, Stanford, CA.
- Feb 28 Scientific Expressions of Musicianship. Master's Dinner Speaker, USC Parkside International Residential College, Los Angeles, CA.
- Feb 15 A Technical Analysis of P.D.Q. Bach. (with Alexandre François) Annals of Improbable Research Special Event, American Association for the Advancement of Science Annual Meeting, Sheraton Boston, Boston, MA.
- Feb 8 Music Science and the Mathematical Modeling of Tonality. Musical Information Archiving and Retrieval (Axis 3) Workshop, Center for Interdisciplinary Research in Music Media and Technology, McGill University, Montreal, Canada.

 2007

- Jan 25 Introductory Talk about MuCooCo. North East Music Information Special Interest Group, Columbia University, New York City, NY.
- Jan 16 Analytical Listening Through Interactive Visualization. (joint presentation with Alexandre François.) Radcliffe Institute Fellows' Presentation Series, Radcliffe Gymnasium, Harvard University, Cambridge, MA.
- Nov 29 Music Science and the Mathematical Modeling of Tonality: Lecture and Demonstration. Computer Science Department Colloquium, Harvard University, Cambridge, MA.
- Nov 8 MuSA.RT and the Visualization of Tonality. Hearing Seminar, Center for Computer Research in Music and Acoustics, Stanford University, Stanford, CA.
- Nov 8 Life After The MCS Program: One Person's Story. Mathematical and Computational Sciences Program, Stanford University, Stanford, CA.
- Oct 19 Music and Operations Research – the Perfect Match. Operations Research / Management Science Seminar Series, University of Massachusetts, Amherst, MA.
- Aug 2 MIMI in the Context of Music and Computing. MIT Alumni Association, Club of Southern California, Pasadena Lunch Guest Speaker (with Alexandre François), Beckham Grill, Pasadena, CA.
- May 19 Lecture and Demonstration: The Seiler Grand Piano and Computer-Interactive Improvisation with MIMI. (joint presentation with Alexandre François). International Conference on Mathematics and Computation in Music (MCM2007), Musical Instrument Museum, Berlin, Germany.
- May 18 Visible Humour : Seeing PDQ Bach's Musical Humour Devices in The Short-Tempered Clavier on the Spiral Array Space. Plenary Lecture, International Conference on Mathematics and Computation in Music (MCM2007), Musical Instrument Museum, Berlin, Germany.
- Apr 10 Creating an Interdisciplinary Research Program in Music and Engineering. USC Women in Management Monthly Luncheon Guest Speaker, Los Angeles, CA.
- Mar 16 The Mathematics in Music: A Performance, Computer Demonstration and Conversation with Elaine Chew. Invited lecture-recital as part of the Techno-Arts Series in the National University of Singapore Arts Festival, NUS University Cultural Center, Singapore.
- Mar 14 Slicing It All Ways: Mathematical Models for Tonal Induction, Approximation and Segmentation Using the Spiral Array, Invited lecture at the Mathematics Department, National University of Singapore, Singapore.
- Feb 26-28 University of Victoria Women Scholars Lecture Series, Victoria, BC, Canada.
 - Music, Mathematics and Computing – beyond tuning, fractions, and sound synthesis (public lecture, Feb 26)
 - The Mathematics in Music – a performance and conversations with Elaine Chew (music lecture-concert, Feb 27)
 - Heuristics and Algorithms for Music Problems (computer science lecture, Feb 28)
- Jan 24 The Mathematics in Music – a performance and conversations with Elaine Chew. Invited lecture-recital as part of Provost's Arts and Humanities Initiative, Alfred Newman Recital Hall, University of Southern California, Los Angeles, CA.
- Jan 5 A Multi-Pronged Approach to the Creating of an Interdisciplinary Research Program in Mathematics and Computation in Music. Invited speaker for the Special Session on

Mathematical Methods in Music Analysis as part of the 113rd Annual Meeting of the American Mathematical Society (AMS) at the Joint Mathematics Meeting, New Orleans, LA.

2006

- Dec 8 Lecture-Recital on Music and Engineering. Los Angeles Philharmonic Auxiliary, Long Beach, CA.
- Nov 10 Interactive Music Systems Based on Analysis of Music and Its Performance. Invited lecture at the Eastman School of Music / University of Rochester / Cornell University Music Cognition Symposium, Rochester, NY.
- Nov 9 Interactive Music Systems Based on Analysis of Music and Its Performance. Invited seminar at the University of Rochester Electrical and Computer Engineering Department, Rochester, NY.
- Nov 9 Messiaen's Regard IV – from performance to analysis. Invited lecture at the Eastman School of Music Performance/Analysis class, Rochester, NY.
- Oct 21 Building an Interdisciplinary Research Program in Computational Music Cognition. Workshop on Music, Mathematics and Computation (organizer: Aline Honingh), Institute for Logic, Language and Computation, University of Amsterdam, Amsterdam.
- Oct 5 Panel on Latency Issues in Networked Audio Systems (organizer: Elizabeth Cohen), 121st Audio Engineering Society (AES) Convention, Moscone Convention Center, San Francisco, CA.
- Sep 18 Creating an Interdisciplinary Research Program in Music and Engineering. Featured lunch speaker at the Association of American Universities Association of Graduate Schools (AAU-AGS) Graduate Deans' Meeting, Davidson Conference Center, University of Southern California, Los Angeles, CA.
- Aug 8 Computer Models and Music. IDM Network Seminar, jointly organized by the NUS Department of Electrical and Computer Engineering, ACM SIGCHI Singapore, and Singapore Computer Society SIG on Entertainment Computing, EA06-02, National University of Singapore, Kent Ridge, Singapore.
- Jun 8 Distributed Immersive Performance: Enabling Technologies for, and Analyses of, Remote Performance and Collaboration, Workshop Network Performance (organizer: Norbert Schnell), IRCAM, Paris, France.
- May 18 Lecture-Recital on Music and Engineering. Los Angeles Philharmonic Auxiliary, Palos Verdes, CA.
- Apr 14 Music Information Retrieval (presentation w Shrikanth Narayanan). Massive Multimedia Databases – a forum on innovative collaborative research that can be leveraged for technology-enhanced, learner-centered education. Marsha Kinder, organizer. Annenberg Center, USC, Los Angeles.
- Mar 16 Distributed Immersive Performance: Qualitative and Quantitative Studies of Remote Collaboration. Seminar IRCAM, Paris, France.
- Feb 3 The Musical Engineer - examples of experiments and explorations. USC W.V.T. Rusch Engineering Honors Colloquium, Los Angeles, CA.
- Jan 20 Musical Rigging Through ESP: A Driving Interface for Expressive Performance Rendering. UCSB IGERT Seminar, Santa Barbara, CA.

2005

- Nov 21 Musical Rigging Through ESP: A Driving Interface for Expressive Performance Rendering. Seminar IRCAM, Paris, France.
- Oct 28 Music + Engineering – Why, What, and How. Composer’s Forum, Arnold Schoenberg Institute, USC Thornton School of Music, Los Angeles, CA.
- Sep 11 Looking Beyond the Notes: An Engineering Approach to the Study of Musical Performance. International Conference on Music Information Retrieval, Goldsmiths College, University of London, UK.
- Aug 3 Multi-scale Analysis and Visualization of Pitch Structures in Music. Plenary Lecture. Summer Workshop on Language Engineering, Center for Language and Speech Processing, Johns Hopkins University, Baltimore, MD.
- May 20 Music Cognition and Computation Research at USC. Interactive Digital Multimedia IGERT Seminar, UC Santa Barbara, Santa Barbara, CA.
- May 13 Collaborative Performance Experiments in the Distributed Immersive Performance Project . Seminar on People, Computers and Design. Program in Human-Computer Interaction, Stanford University, Stanford, CA.
- May 11 Tonal Induction, Recognition, and Segmentation. Music 151 Guest Lecture: Introduction to Psychoacoustics and Music Cognition. Music Department, Stanford University, Stanford, CA.
- May 11 Engineering Applications of Computational Music Research at USC. Center for Computer Research in Music and Acoustics Colloquium, Stanford University, Stanford, CA.
- Apr 18 Helping Music Systems Make Better Decisions. INFORMS Practice Meeting, Palm Springs, CA.
- Mar 13 Creating Tonal Visualizations that Dance to the Rhythm of the Music. MaMuX Seminar, Music Representation Group, IRCAM, Paris, France.
- Feb 16 Mathematical Modeling and Computational Analysis of Tonal Contexts and Segmentation in Music. Industrial and Operations Engineering, University of Michigan, Ann Arbor, MI.
- Jan 7 The Engineering in Music. Lecture-Concert at the Achievement Rewards for College Scientists (ARCS) Annual Meeting Dinner hosted by the Viterbi School of Engineering, California Club, Los Angeles, CA.
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- 2004
- Nov 22 Distributed Immersive Performance. In *The Internet for Ensemble Performance?* Hosted by Rob Cutietta, Dean of USC Thornton School of Music. National Association of Schools of Music Meeting, San Diego, CA.
- Nov 5 Music and Computers: Recognizing Tonal Context. IMSC Student Council Speaker Series, USC Viterbi School of Engineering, Los Angeles, CA.
- Oct 24 Measuring Musical Dissimilarity: First and Second Order Center of Effect (CE) Differences Inside the Spiral Array. 1001th Meeting of the American Mathematical Society, Special Sessions on Mathematical Techniques in Musical Analysis. Organized by Judith Baxter, Richard Cohn and Robert Peck, Northwestern U., Evanston, IL.
- Oct 10 Musical Knowledge, Computational Models and Retrieval. Invited Tutorial at the 5th International Conference on Music Information Retrieval, Barcelona, Spain.

- May 25 The Spiral Array and Computational Models for Tonal Induction and Segmentation. Center for Computational Creativity, School of Informatics, City University, London, UK.
- May 21 Messiaen's Regard IV: Automatic segmentation using the Spiral Array. MaMuX Seminar on From Transformational Music Theory to Computer-Aided Music Analysis. Music Representation Group, IRCAM, Paris, France.
- May 22 Pitch Spelling: a computational approach using the Spiral Array. MaMuX Seminar on From Transformational Music Theory to Computer-Aided Music Analysis. Music Representation Group, IRCAM, Paris, France.
- Jan 15 The Cognition of Musical Structures for Real-Time Interaction. Disney Online Technology Forum, Los Angeles, CA.
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- 2003
- Feb 15 Music Appreciation for Computers. Sigma Xi Lecture, General Motors Research, Detroit, MI.
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- 2002
- Nov Extracting Tonal Structure from Music. USC Signal and Image Processing Institute Seminar, Los Angeles, CA.
- Dec A Geometric Model for Tracking Tonal Patterns in Music. Harvey Mudd College Computer Science Seminar, Claremont, CA.
- Aug The PPP Connection: Paintings, Poetry, Pieces – Wang Lisan's *Impressions of Paintings by Higashiyama Kaiti*. In "A Concert of Paintings: Musical Ekphrasis Throughout the Centuries," Siglind Bruhn, chair. 17th International Musicological Society Conference (quintennial event), Leuven, Belgium.
- Jul 4 New Pianos, Music, Internet. Lecture (w Dennis Thurmond) at the World Piano Conference, Portoroz, Slovenia.
- Jul 2 Methodology and Teaching of Improvisation. Lecture (w Dennis Thurmond) at the World Piano Conference, Portoroz, Slovenia.
- Jun A Computational Framework for Problems in Music Perception and Cognition. Turin Polytechnic Transportation Department Seminar, Turin, Italy.
- Mar Exploiting the Structure of Musical Space in Music Information Processing. Information Science Institute Artificial Intelligence Seminar Series, Marina Del Rey, CA.
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- 2001
- Apr Towards a Mathematical Model of Tonality. Lehigh University Mathematics Department seminar, Bethlehem, PA.
- Mar Towards a Mathematical Model of Tonality. Lehigh University Cognitive Science seminar, Bethlehem, PA.
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- 2000
- Sep Cognition and Recognition using Voronoi Diagrams. Lehigh University Department of Industrial and Manufacturing Systems Engineering Research Seminar, Bethlehem, PA.
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- 1999
- Apr A Geometric Model for Pitch Relations and an Algorithm for Identifying Tonal Centers and Harmonic Progressions. Midwest Graduate Music Consortium, U. of Chicago, Chicago, IL.

Book: Monograph

Chew, E. (2014). *Mathematical and Computational Modeling of Tonality: Theory and Applications*. Operations Research and Management Science Series, Vol. 204, New

York: Springer. isbn: 978-1-4614-9474-4 (print) 978-1-4614-9475-1 (online), url: hlink.springer.com/book/10.1007/978-1-4614-9475-1

Books: Edited Volumes

Smith, J. B. L., E. Chew, G. Assayag (2016). *Mathemusical Conversations: Mathematics and Computation in Music Performance Composition*. Imperial College Press / NUS Institute for Mathematical Sciences Lecture Notes Series, World Scientific, doi: 10.1142/10046

Volk, A., E. Chew, E. Margulis, C. Anagnostopoulou (2016). Special Issue on Music Similarity: Concepts, Cognition and Computation, *Journal of New Music Research*, 45(3).

Mueller, M., E. Chew, J. Bello (2016). Computational Music Structure Analysis, *Dagstuhl Reports*, 6(2). doi: 10.4230/DagRep.6.2.147

Childs, A., C.-H. Chuan (2009). *Mathematics and Computation in Music*, Second International Conference, MCM 2009, John Clough Memorial Conference, New Haven, CT, USA, June 19-21, 2009. Proceedings. Communications in Computer and Information Science (CCIS) 38, Berlin/Heidelberg, Germany: Springer. isbn: 978-3-642-02393-4 (print) 978-3-642-02394-1 (online), doi: 10.1007/978-3-642-02394-1, url: www.springerlink.com/content/978-3-642-02393-4

Bello, J. P., E. Chew, D. Turnbull (2008). Proceedings of the 9th International Conference on Music Information Retrieval, September 14-18, 2008, Philadelphia, Pennsylvania. url: www.lulu.com/content/3804316

Chew E., A. Cramer, C. Raphael (2008). Special Issue on Computation, *Journal of Mathematics and Music: Mathematical and Computational Approaches to Music Theory, Analysis, Composition and Performance*, 2(2): 57-115. London, UK: Taylor & Francis. url: www.tandf.co.uk/journals/titles/17459737.asp

Amatriain, X., E. Chew, J. Foote (2006). Proceedings of the 1st ACM Workshop on Audio and Music Computing for Multimedia, October 27, 2006, Santa Barbara, CA. url: www.create.ucsb.edu/amcmm06, pub: portal.acm.org/toc.cfm?id=1178723

Chew, E., R. Dannenberg, J. Sokol and M. Steedman (2006). Special Cluster on Computation in Music, *INFORMS Journal on Computing*, 18(3). pub: joc.journal.informs.org/content/vol18/issue3/index.dtl

Chew, E. (2005). Special Issue on Music Visualization, *ACM Computers in Entertainment*, 3(4). url: portal.acm.org/citation.cfm?id=1095534.1095540

Refereed Journal Publications

Chew, E. (in preparation). Notating the Music Auditory Experience. In Mark B. Sandler (ed.): Special Issue on Computational Audio, *Frontiers in Digital Humanities*.

Herremans, D., M. Le Bouteiller, E. Chew (in preparation). A model for tonal tension based on the spiral array. *Music Perception*.

Sokolovskis, J., D. Herremans, E. Chew (in preparation). An interface for mapping music practice patterns. *Psychology of Music*.

Kosta, K., O. Bandtlow, E. Chew (under review). Relativity in Dynamics: Practical implications of dynamic markings in the score. *Journal of New Music Research*.

- Herremans, D., E. Chew (under review). MorpheuS: generating structured music with constrained patterns and tension. *IEEE Transactions on Pattern Recognition and Machine Intelligence*.
- Herremans, D., C.-H. Chuan, E. Chew (to appear). A Functional Taxonomy of Music Generation Systems. *ACM Computing Surveys*.
- Yang, L., K. Rajab, E. Chew (2017). Filter Diagonalisation Method for Music Signal Analysis: Frame-wise Vibrato Detection and Estimation. *Journal of Mathematics and Music*. doi: 10.1080/17459737.2016.1263897
- Kosta, K., R. Ramirez, O. Bandtlow, E. Chew (2016). Mapping between dynamic markings and performed loudness: A machine learning approach. Special Issue on Music and Machine Learning, *Journal of Mathematics and Music*, 10(2): 149-172. doi: 10.1080/17459737.2016.1193237
- Chew, E. (2016). Playing with the edge: Tipping points and the role of tonality. In Stephen McAdams, David Temperley, Alexander Rozin (eds.): Milestones in Music Cognition Special Issue, *Music Perception*, 33(3):344-366. doi: 10.1525/MP.2016.33.03.344 , url: mp.ucpress.edu/content/33/3/344
- Chew, E. (2014). Music Interaction With Others As Conveyor of Relational Intent: A Response to Cross (2014). In Neta Spiro, Michael F. Schober (eds.): Perspectives on Music and Communication Special Issue in *Psychology of Music*, 42: 826-838. doi: 10.1177/0305735614549407
- Smith, J. B. L., I. Schankler and E. Chew (2014). Listening as a Creative Act: Meaningful Differences in Structural Annotations of Improvised Performances. *Music Theory Online*, 20(3).
www.mtosmt.org/issues/mto.14.20.3/mto.14.20.3.smith_schankler_chew.php
- Chuan, C.-H. and E. Chew (2014). The KUSC Classical Music Dataset for Audio Key Finding. *The International Journal of Multimedia and Its Applications*, 6(4).
- Smith, J. B. L., C.-H. Chuan and E. Chew (2014). Audio Properties of Perceived Boundaries in Music. *IEEE Transactions on Multimedia* Special Issue on Music Data Mining, 16(5): 1219-1228. doi: 10.1109/TMM.2014.2310706
- François, A. R. J., I. Schankler and E. Chew (2013). Mimi4x: An Interactive Audio-Visual Installation for High-Level Structural Improvisation. *International Journal of Art and Technology (IJART)*: Special Issue for revised and expanded proceedings from the ICME-IMIDA workshop, 6(2): 138-151, doi: 10.1504/IJART.2013.053557
- Chew, E. (2012). About Time: Strategies of Performance Revealed in Graphs. In Gena R. Greher and S. Alex Ruthmann (Eds.): A Tribute to Jeanne Bamberger, *Visions of Research in Music Education* 20(1), ISSN 1938-2065.
- François, A. R. J., E. Chew and D. Thurmond (2011). Performer Centered Visual Feedback in Human-Machine Improvisation. *ACM Computers in Entertainment*, 9(3): Article 13 (13 pages). doi: 10.1145/2027456.2027459.
- Chuan, C.-H. and E. Chew (2011). Generating and Evaluating Musical Harmonizations that Emulate Style. *Computer Music Journal*, 35(4): 65-82. doi: 10.1162/COMJ_a_00091.
- Chew, E. (2010). De-mystifying Music and Its Performance. *The Bridge* (the quarterly journal of the National Academy of Engineering), 40(4): 20-26.
- Cheng, E. and E. Chew (2008). Quantitative Analysis of Phrasing Strategies in Expressive Performance: Computational Methods and Analysis of Performances of

- Unaccompanied Bach for Solo Violin. *Journal of New Music Research*, 37(4): 325-338. doi: 10.1080/09298210802711660.
- Volk, A., and E. Chew (2008). Re-Considering the Affinity between Metric and Tonal Structures in Brahms' Op.76 No.8. In Walter B. Hewlett, Eleanor Selfridge-Field, and Edmund Correia, Jr. (eds.): Special Issue on Tonal Theory for the Digital Age, *Computing in Musicology* 15: 138-171.
- Chew, E. (2008). Out of the Grid and Inside the Spiral - Geometric Interpretations of and Comparisons with the Spiral Array Model. In Walter B. Hewlett, Eleanor Selfridge-Field, and Edmund Correia, Jr. (eds.): Special Issue on Tonal Theory for the Digital Age, *Computing in Musicology* 15: 51-72. USC TR 03-002 is paper draft.
- Zimmermann, R., E. Chew, S. Arslan and M. Pawar (2008). Distributed Musical Performances: Architecture and Stream Management. *ACM Transactions on Multimedia Computing Communications and Applications*, 4(2): Article 14. doi: 10.1145/1352012.1352018.
- Unal, E., E. Chew, G. Panayiotis, S. Narayanan (2008). Challenging Uncertainty: a Fingerprinting Approach. In Malcolm Slaney, Dan Ellis, Mark Sandler, Masataka Goto, Mike Goodwin (eds.): *IEEE Transactions on Audio, Speech and Language Processing*, Special Issue on Music Information Retrieval, 16(2): 359-371. doi: 10.1109/TASL.2007.912373.
- Parke, R., E. Chew, C. Kyriakakis (2007). Quantitative and Visual Analysis of the Impact of Music on Perceived Emotion of Film. *ACM Computers in Entertainment*, 5(3): Article 5, doi: 10.1145/1316511.1316516.
- Chuan, C.-H., and E. Chew (2007). Audio Key Finding: Considerations in System Design, and the Selecting and Evaluating of Solutions. In Ichiro Fujinaga, Masataka Goto, George Tzanetakis (eds.): Special Issue on Music Information Retrieval Based on Signal Processing, *EURASIP Journal on Applied Signal Processing*, 2007: Article 56561 (15 pages). doi: 10.1155/2007/56561.
- Chew, E. (2006). Slicing It All Ways: Mathematical Models for Tonal Induction, Approximation and Segmentation Using the Spiral Array. In E. Chew (ed.): Special Issue on Computation in Music, *INFORMS Journal on Computing*, 18(3): 305-320, doi: 10.1287/ijoc.1050.0134.
- Chew, E. (2005). Regards on Two Regards by Messiaen: Post-tonal Music Segmentation Using Pitch Context Distances in the Spiral Array. In Gerard Assayag (ed.): Special issue on 'Sound and Music Computing', selected papers from the First Sound and Music Computing Conference, revised and expanded. *Journal of New Music Research*, 34(4): 341-354, doi: 10.1080/09298210600578147.
- Chew, E. and A. R. J. François (2005). Interactive Multi-scale Visualizations of Tonal Evolution in MuSA.RT Opus 2. In N. Lee (ed.): Special Issue on Music Visualization and Education: *ACM Computers in Entertainment*, 3(4): ARTICLE 3E (16 pages), doi: 10.1145/1095534.1095545.
- Unal, E., S. S. Narayanan, H.-H. Shih, E. Chew and C.-C. Jay Kuo (2005). Creating Data Resources for Designing User-centric Front-ends for Query by Humming Systems. In Chabane Djeraba, Nicu Sebe and Michael S. Lew (guest eds.): a special issue of MIR'03 Workshop on Systems and Architectures for Multimedia Information Retrieval. *ACM Multimedia Systems*, 10(6): 475-483, doi: 10.1007/s00530-005-0176-5.
- Chew, E., and Y.-C. Chen (2005). Real-Time Pitch Spelling Using the Spiral Array. *Computer Music Journal (CMJ)*, 29(2): 61-76, doi: 10.1162/0148926054094378.
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Refereed Book Chapters

Chew, E. (2017). From Sound to Structure: Synchronising Prosodic and Structural Information to Reveal the Thinking Behind Performance Decisions. In C. Mackie (ed.): *New Thoughts on Piano Performance*, selected papers from the 2013 and 2015 London International Piano Symposium—Researching at the Interface between Science and the Art of Piano Performance. Kindle Amazon.

Chew, E. (2017). The Mechanics of Tipping Points: A Case of Extreme Elasticity in Expressive Timing. In *International Congress on Music and Mathematics*, Puerto Vallarta, Mexico, November 25-29, 2014, Berlin: Springer.

Chew, E. and A. McPherson (2017). Performing music: Humans, computers, and electronics. In R. Ashley and R. Timmers (eds.): *The Routledge Companion to Music Cognition*. London: Routledge.

Chew, E. (2016). Motion and Gravitation in the Musical Spheres. In J. B. L. Smith, E. Chew, G. Assayag (eds.): *Mathemusical Conversations: Mathematics and Computation in Music Performance and Composition*. London: Imperial College Press / NUS Institute for Mathematical Sciences Lecture Notes, World Scientific, doi: 10.1142/0789813140103_0003

Yang, L., E. Chew, K. Rajab (2015). Logistic Modeling of Note Transitions. In Tom Collins, David Meredith, Anja Volk (eds.): *Mathematics and Computation in Music—5th International Conference, MCM2015, London, UK, Jun 22-25, 2015, Proceedings*. LNAI 9110, Switzerland: Springer. doi: 10.1007/978-3-319-20603-5; ebook isbn: 978-3-319-20603-5; softcover isbn: 978-3-319-20602-8.

Kosta, K., O. Bandtlow, E. Chew (2015). A Change-Point Approach Towards Representing Musical Dynamics. In Tom Collins, David Meredith, Anja Volk (eds.): *Mathematics and Computation in Music—5th International Conference, MCM2015, London, UK, Jun 22-25, 2015, Proceedings*. LNAI 9110, Switzerland: Springer. doi: 10.1007/978-3-319-20603-5; ebook isbn: 978-3-319-20603-5; softcover isbn: 978-3-319-20602-8.

Vera, B. and E. Chew (2014). Intensity Shaping in Sustained Notes Encodes Metrical Cues for Synchronization in Ensemble Performance. In *Computer Music Modeling and Retrieval: 10th International Symposium, CMMR 2013, Marseille, France, Oct 15-18, 2013. Revised Papers*, LNCS 8905: 193-203. Berlin: Springer-Verlag GmbH. isbn 978-3-319-12975-4 (print), 978-3-319-12976-1 (online); doi: 10.1007/978-3-319-12976-1_12.

Schankler, I., E. Chew, and A. R. J. François (2014). Improvising with Digital Auto-Scaffolding: How Mimi Changes and Enhances the Creative Process. Newton Lee (ed.): *Digital Da Vinci — Computers In Music*: 99-125, New York: Springer. isbn: 978-1-4939-0535-5, doi: 10.1007/978-1-4939-0536-2_5

Chew, E. (2013). Music. In Saul I. Gass, Michael C. Fu (eds.): *Springer Encyclopedia of Operations Research and Management Science*, 3rd edition, Berlin/New York/London: Springer Verlag. isbn 978-1-4419-1137-7 (print) / 978-1-4419-1154-4 (online)

Chew, E. and C. Callender (2013). Conceptual and Experiential Representations of Tempo: Effects on Expressive Performance Comparisons. In J. Yust, J. Wild, and A. Burgoyne (eds.): *Mathematics and Computation in Music: Fourth International Conference, MCM 2013, Montreal, Canada, Jun 12-14, 2013*. LNAI 7937: 76-87, Berlin/Heidelberg: Springer-Verlag GmbH. ISBN 978-3-642-39356-3 (print) / 978-3-642-39357-0 (online). doi: 10.1007/978-3-642-39357-0_6

Stowell, D. and E. Chew (2013). Probabilistic MAP estimation of piecewise arcs in tempo time-series. In M. Barthet, S. Dixon (eds.): *Computer Music Modeling and*

Retrieval: 9th International Symposium, CMMR 2012, London, UK, June 19-22, 2012. Revised Papers, LNCS 7900: 387-399, Berlin: Springer-Verlag GmbH. ISBN 978-3-642-41247-9 / 978-3-642-41248-6. doi: 10.1007/978-3-642-41248-6_22

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Chew, E. , S. Beer, I. Pressland (2016). 2xPiazzolla: Towards analytical models of the repertoire of possibles in music performance. Performance Studies Network Conference, Bath Spa University, Bath, UK, Jul 14-17, 2016.

Herremans, D., E. Chew (2016). Clouds and vectors in the spiral array as measures of tonal tension. International Conference on Music Perception and Cognition (ICMPC), pp. 25, San Francisco, California, Jul 5-9, 2016.

Kosta, K., O. Bandtlow, E. Chew (2016). Outliers in the interpretation of loudness changes of dynamic markings for Mazurka piano recordings. International Conference on Music Perception and Cognition (ICMPC), San Francisco, California, Jul 5-9, 2016.

Herremans, D. and E. Chew (2016). Music generation with structural constraints: An operations research approach. 30th Annual Conference of the Belgian Operational Research Society (ORBEL), January 28-29, Université catholique de Louvain, Louvain-la-Neuve, Belgium.

Vaquero, C. and E. Chew (2016). Application of Hidden Markov Models to music performance style classification via timing and loudness features. 30th Annual Conference of the Belgian Operational Research Society (ORBEL), January 28-29, Université catholique de Louvain, Louvain-la-Neuve, Belgium.

2014

Smith, J. B. L., E. Chew (2014). The Role of Attention in the Perception of Music Structure. Seventh International Conference of Students of Systematic Musicology, Goldsmiths, University of London, Sep 18-20, London, UK.

Chew, E., P. Child, L. Viste Grønli (2014). Multiple Sense Making: When Practice Becomes Performance. Performance Studies Network International Conference 3, Jul 17-20, Cambridge University, Cambridge, UK.

Kosta, K., O. Bandtlow and E. Chew (2014). A Study of Score Context-dependent Dynamics in Piano Performance. Performance Studies Network International Conference 3, Jul 17-20, Cambridge University, Cambridge, UK.

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Li, S., D. Black, and E. Chew (2012). Hierarchical clustering of expressive parameters across repetitions in music: tempo variegation analysis and visualisation. Annual Workshop of the Digital Music Research Network (DMRN+7), Queen Mary, University of London, UK, Dec 18.

Chew, E. (2012). Tonality and Prosody: Connections and Transformations. Lecture-recital, The Performer's Voice, Yong Siew Toh Conservatory of Music, National University of Singapore, Singapore, Oct 25-28.

Chew, E. (2012). Timing in Performance: as a Function of Desired Parsing and Sonic Effect. Music & Shape Conference, Kings College London, UK, Jul 12-14.

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Schankler, E., A. R. J. François, and E. Chew (2011). User-Directed Improvisation and Play with Meta-Compositions for Mimi4x. Late-Breaking/Demo Session, International Conference on Music Information Retrieval, Miami, Florida, Oct 24-28.

Brochier, T., J. B. L. Smith, and E. Chew (2011). Can An Overly Slow Initial Tempo Counteract the Deceleration Caused by Auditory Delay? Late-Breaking / Demo Session, International Conference on Music Information Retrieval, Miami, Florida, Oct 24-28.

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2010

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2007

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Students' Theses

Kosta, Katerina (2017). Computational Modelling and Quantitative Analysis of Dynamics in Performed Music. PhD dissertation, School of Electronic Engineering and Computer Science, QMUL, London, UK.

Yang, Luwei (2016). Computational Modeling and Analysis of Vibrato and Portamento in Expressive Music Performance. PhD dissertation, School of Electronic Engineering and Computer Science, QMUL, London, UK.

Smith, Jordan (2014). Explaining Listener Differences in the Perception of Musical Structure. PhD dissertation, School of Electronic Engineering and Computer Science, QMUL, London, UK.

Unal, Erdem (2008). Music Retrieval Systems: Robust Search Under the Effect of Uncertainty. PhD dissertation, Ming Hsieh Department of Electrical Engineering – Systems, USC, Los Angeles, California.

Chuan, Ching-Hua (2008). Hybrid Methods for Music Analysis and Synthesis: Audio Key Finding and Automatic Style-Specific Accompaniment. PhD dissertation, Computer Science Department, USC, Los Angeles, California.

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Conference Organization	2016	Co-organizer (with Meinard Mueller and Juan Bello) Computational Music Structure Analysis Leibniz-Zentrum für Informatik, Schloss Dagstuhl, Germany, Feb 28-Mar 4, 2016. www.dagstuhl.de/16092
	2015	General Chair (with Oscar Bandtlow) International Conference on Mathematics and Computation in Music Queen Mary University of London, London, UK, June 22-24, 2015. mcm2015.qmul.ac.uk
	2015	Convenor and Program Chair (with Gerard Assayag) Mathemusical Conversations: mathematics and computation in performance and comp Yong Siew Toh Conservatory of Music and Institute for Mathematical Sciences National University of Singapore, Singapore, February 13-15, 2015. sites.google.com/site/mathemusicalconversations
	2015	Co-organizer (with Anja Volk, Christina Anagnostopoulou, Elizabeth Margulis) Music Similarity: concepts, cognition, and computation Lorentz Centre, Leiden, the Netherlands, Jan 19-23, 2015. www.lorentzcenter.nl/lc/web/2015/669/info.php3?wsid=669
	2014	Organizer (with Anna-Louise Milne) DE-miniTED: Digital Economy Technology, Entrepreneurship, and Design Summer School of the EPSRC DE Centres for Doctoral Training University of London Institute in Paris, July 1-4, 2014. sites.google.com/site/minited2014
	2012	Music co-Chair (with Andrew McPherson) Computer Music Modeling and Retrieval Queen Mary, University of London, London, UK, June 19-22, 2012. cmmr2012.eecs.qmul.ac.uk

- 2010 Organizer (with Alexandre François)
Radcliffe Exploratory Seminar
Prosody and Dialog in Speech and Music
Radcliffe Institute for Advanced Study, Cambridge, MA, November 5-6, 2010.
www-bcf.usc.edu/~mucoaco/Radcliffe/ProsodyAndDialog
- 2010 Technical Program Committee
Third ACM Workshop on Machine Learning and Music
ACM Multimedia Conference, Firenze, Italy, October 25-29, 2010.
www.dtic.upf.edu/~rramirez/MML10
- 2009 Program Chair (with Adrian Childs)
Second International Conference Mathematics and Computation in Music
Yale University, New Haven, Connecticut, US, June 19-21, 2009.
www.mcm2009.info
- 2008 – 2009 Organizing Committee
Co-Chair of Session on Reductionism of Complex Systems (with Stefan Bornholdt)
Fifteenth Annual National Academy of Sciences German-American
Kavli Frontiers of Science Symposium
Planning meetings: Potsdam, Germany, June 13, 2008;
New York City, New York, September 27, 2008.
Symposium: Irvine, California, June 4-7, 2009.
www.nasonline.org/site/PageServer?pagename=FRONTIERS_main
- 2008 Program Chair (with Juan Pablo Bello)
Ninth International Conference on Music Information Retrieval
Philadelphia, Pennsylvania, US, September 14-18, 2008.
ismir2008.ismir.net
- 2008 Organizer (with Alexandre François)
Interactions – Humans • Computers • Music
An Analytical Listening through Interactive Visualization Cluster Symposium
Radcliffe Institute for Advanced Study, Cambridge, Massachusetts, US, April 24, 2008.
www-rcf.usc.edu/~mucoaco/Radcliffe/interactions-humans.computers.music
- 2008 Program Committee
Joint Conference on Digital Libraries
Pittsburgh, Pennsylvania, US, June 15-20, 2008.
www.jcdl2008.org
- 2007 – 2008 Organizing Committee
Co-Chair of Session on Computational Creativity (with Stefan Bornholdt)
Fourteenth Annual National Academy of Sciences German-American
Kavli Frontiers of Science Symposium
Planning meetings: Irvine, California, June 1, 2007;
Köpenick-Berlin, September 28-29, 2007.
Symposium: Potsdam, Germany, June 11-14, 2008.
www.nasonline.org/site/PageServer?pagename=FRONTIERS_main
- 2007 Technical Program Committee
Program Committee meeting and workshop, Delft, the Netherlands, June 14-15, 2007.
ACM Multimedia Conference, Augsburg, Germany, September 23-29, 2007.
- 2007 Program Committee
First International Conference of the Society for Mathematics and Computation in
Music, Berlin, Germany, May 18-20, 2007.
www.mcm2007.info

- 2007 Symposium Organizer (with Shlomo Dubnov)
Inaugural Meeting of the Southern California Computing in Music (SCCiM) network
Host at University of Southern California, Los Angeles, CA, US, February 17, 2007.
www-rcf.usc.edu/~mucoaco/SCCiM/2007i
- 2006 Workshop Organizer (with Xavier Amatriain and Jonathan Foote)
Workshop on Audio and Music Computing for Multimedia (AMCMM),
ACM Multimedia Conference, Santa Barbara, CA, US, October 27, 2006.
www.create.ucsb.edu/amcmm06
- 2005 Special Sessions Organizer and Sessions Chair: *Music, Computation and AI*,
9th INFORMS Computing Society Conference, Annapolis, MD, US, Jan 6, 2005.
www-bcf.usc.edu/~echew/INFORMS/ics2005.html
- 2003 Invited Cluster Organizer and Cluster Chair: *OR in the Arts: Applications in Music*
INFORMS Meeting Atlanta, GA, US, October, 2003.
www-bcf.usc.edu/~echew/INFORMS/cluster.html

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- Other Conference Service**
- 2016 ICMPC Awards Committee, International Conference on Music Perception and Cognition, San Francisco, CA, 5-9 July 2016.
- 2015 Program Committee, First International Conference on New Technologies for Music Notation and Representation (TENOR), University of Paris-Sorbonne, Paris, France, May 29-30, 2015.
- 2015 Scientific Committee, London International Piano Symposium, London, UK, Feb 13-15, 2015.
- 2014 Program Committee, ACM Multimedia, Orlando, Florida, USA, Nov 3-7, 2014.
- 2014 Program Committee, Thirteenth International Society for Music Information Retrieval Conference, Taipei, Taiwan, Oct 27-31, 2014.
- 2014 Scientific Committee, Joint Meeting of the International Conference on Sound and Music Computing and International Computer Music Conference, Athens, Greece, Sep 14-20, 2014.
- 2014 Scientific Committee for Poster Selection, Milestones in Music Cognition Conference, Montreal, Canada, Jul 7-8, 2014.
- 2014 Scientific Committee, International Conference on New Interfaces for Musical Expression, London, UK, Jun 30-Jul 3, 2014.
- 2013 Program Committee, ACM Multimedia Doctoral Symposium, Barcelona, Spain, Oct 21-25, 2013.
- 2013 Program Committee, ACM Multimedia: Music & Audio track, Barcelona, Spain, Oct 21-25, 2013.
- 2013 Program Committee, International Mathematics and Computation in Music Conference, Montreal, Canada, June 12-14, 2013.
- 2013 Paper Committee for Papers, Demos, and Installations, International Conference on New Interfaces for Musical Expression, Daejeon+Seoul, Korea, May 27-30, 2013.
- 2012 Program Committee, 2nd International Workshop on Music Information Retrieval with User-Centered and Multimodal Strategies (MIRUM) held in conjunction with the ACM Multimedia 2012 conference, Nara, Japan, November 2, 2012.
- 2012 Program Committee, Thirteenth International Society for Music Information Retrieval Conference, Porto, Portugal, October 8-12, 2012.
- 2012 Program Committee, Ends of Audiences – an interdisciplinary workshop on audiences and interaction, Queen Mary University of London, London, May 30-31, 2012.
- 2012 Program Committee, Twelfth International Conference on New Instruments for Musical Expression, Papers, Demos, and Installations, Ann Arbor, MI, US, May 21-23, 2012.

- 2012 Program Committee, Music, Mind, and Invention Workshop – Creativity at the Intersection of Music and Computation, The College of New Jersey, March 30-31, 2012.
- 2011 Program Committee, 1st International Workshop on Music Information Retrieval with User-Centered and Multimodal Strategies (MIRUM), held in conjunction with ACM Multimedia 2011, Scottsdale, AZ, November 28 – December 1, 2011.
- 2011 Program Committee, Twelfth International Society for Music Information Retrieval Conference, Miami, Florida, October 24-28, 2011.
- 2011 Program Committee, Third International Conference on Mathematics and Computation in Music, Paris, France, June 15-17, 2011.
- 2011 Program Committee, Third International Conference on Music and AI, Rethymnon, Crete, March 26-28, 2011.
- 2010 Program Committee, Third International Workshop on Machine Learning and Music Firenze, Italy, October 29, 2010. www.dtic.upf.edu/~rramirez/MML10
- 2010 Program Committee, Eleventh Intl Society for Music Information Retrieval Conf, Utrecht, the Netherlands, August 9-13, 2010. ismir2010.ismir.net
- 2009 Program Committee, Tenth International Society for Music Information Retrieval Conf, Kobe, Japan, October 26-30, 2009. ismir2009.ismir.net
- 2007 Program Committee, Third IEEE International Workshop on Multimedia Information Processing and Retrieval, Taichung, Taiwan, December 10-12, 2007.
- 2007 Program Committee, Eighth International Conference on Music Information Retrieval, Vienna, Austria, September 23-27, 2007.
- 2007 Scientific Committee, Fourth Sound and Music Computing Conference, Lefkada, Greece, July 11-13, 2007.
- 2007 Papers Committee, Seventh International Conference on New Interfaces for Musical Expression, New York University, New York, June 7-9, 2007.
- 2007 Program Committee, International Workshop on Artificial Intelligence and Music, Hyderabad, India, January 6-12, 2007.
- 2006 Program Committee, Second IEEE International Workshop on Multimedia Information Processing and Retrieval, San Diego, December 11-13, 2006.
- 2006 Papers and Posters Program Committee, Sixth International Conference on New Interfaces for Musical Expression, Institut de Recherche et Coordination Acoustique/Musique, Paris, France, June 4-7, 2006.
- 2006 Reading Panel, Third Sound and Music Computing Conference, Centre National de Creation Musicale, Marseille, France, May 18-20, 2006.
- 2005 Program Review Panel, Sixth International Conference on Music Information Retrieval, London, UK, September 11-15, 2005.
- 2002 Program Committee, Second International Conference on Music and Artificial Intelligence, Edinburgh, Scotland, UK, September 12-14, 2002.
- 2012 Reviewer, Intl Computer Music Conference, Sep 9-15, Ljubljana, Slovenia
- 2011 Reviewer, AES 44th Conference on Audio Networking, Nov 18-20, San Diego, CA
- 2009 Reviewer, Intl Computer Music Conference, August 16-21, Montreal, Quebec, Canada
- 2009 Reviewer, INFORMS Computing Society Conference, January 11-13, Charleston, SC
- 2008 Reviewer, International Computer Music Conference, August 24-29, Belfast, UK
- 2007 Reviewer, Twenty-Ninth Meeting of the Cognitive Science Society, Nashville, TN, August 1-4, 2007.
- 2006 Reviewer, Seventh International Conference on Music Information Retrieval, Victoria, Canada, October 8-12, 2006.
- 2006 Reviewer, IEEE International Conference on Acoustics, Speech and Signal Processing, Toulouse, France, May 14-19, 2006.
- Dec 2012 Session Chair, DMRN7+: Digital Music Research Network One-Day Workshop 2012
- Oct 2011 Session Chair, Twelfth International Conference on Music Information Retrieval
- Jun 2011 Session Chair, Third International Conf on Mathematics and Computation in Music
- Aug 2010 Session Chair, Eleventh International Conference on Music Information Retrieval
- Sep 2007 Session Chair, Eighth International Conference on Music Information Retrieval
- Dec 2005 Session Chair, First IEEE Multimedia Information Processing and Retrieval Workshop
- Sep 2005 Session Chair, Sixth International Conference on Music Information Retrieval

Oct 2004 Session Chair, First Sound and Music Computing Conference
 Oct 2002 Session Chair, Third International Conference on Music Information Retrieval

Editorial Service

2016 – Member, Editorial Advisory Board, Computer Music Journal
 2014 – Member, Editorial Board, Music Theory Spectrum
 2005 – Member, Editors' Panel, Computing in Musicology
 2004 – Founding Associate Editor, Journal of Music and Meaning
 2004 – Founding Member, Editorial Board, Journal of Mathematics and Music
 2002 – Founding Associate Editor, ACM Computers in Entertainment

2010 – 2017 Member, Editorial Board, Journal of New Music Research
 2009 – 2012 Editor, Society for Mathematics and Computation in Music Newsletter

2013 Guest Editor, Music Cognition U.: musiccognition.info
 2007 – 2008 Guest Editor, Journal of Mathematics and Music: Special Issue on Computation
 2003 – 2005 Guest Editor, INFORMS Journal on Computing: Special Cluster on Computation in Music

Grant Proposal Reviews

UK Engineering and Physical Sciences Research Council
 UK Economic and Social Research Council
 UK Arts and Humanities Research Council

US National Science Foundation (Human-Comp Interaction, Info & Intelligent Systems)
 US National Science Foundation (Artificial Intelligence and Cognitive Science, IIS)
 Professional Staff Congress-City U. of New York, Research Grant Program
 Radcliffe Institute for Advanced Study Fellowship Program

Austrian Science Foundation Erwin Schroedinger Program
 Natural Sciences and Engineering Research Council of Canada
 Research Grant Council of Hong Kong

Journal Paper Reviews

Computer Music Journal
 IEEE Transactions on Multimedia
 IEEE Computer
 Journal of Mathematics and Music
 Journal on Music and Meaning
 Journal of New Music Research
 Musicae Scientiae
 Music Theory Spectrum
 Proceedings of the Mathematical Music Theory Seminars, Berlin

Review and Steering Committees

- 2017 Member, External Program Review Committee, School of Music, Georgia Institute of Technology
- 2012 Member, Music and Science Group, Institute of Musical Research
- 2011 – 2014 Member, Advisory Board, EPSRC Funded Doctoral Training Centre in Media and Arts Technology, Queen Mary U. of London
- 2009 – 2011 Member, Advisory Board, Sustainable Software for Digital Music and Audio Research, a UK Engineering and Physical Sciences Research Council Project
- 2007 – 2011 Member, Steering Committee, Online Music Recognition And Searching 2 Project, UK Engineering and Physical Sciences Research Council Project
- 2007 – 2011 Member, Advisory Committee, Center for Digital Music, Queen Mary U. of London (London site visit Jun 4-11, 2008)
- 2007 – 2007 – 2012 Founding Member, Executive Board, Soc for Mathematics and Computation in Music Secretary, Society for Mathematics and Computation in Music
- 2004 – 2012 Member, Visiting Committee, MIT Music and Theater Arts (Cambridge Site Visits Dec 1-2, 2004, Oct 25-26, 2006, Sep 28-29, 2008, Nov 9-10, 2010, Nov 13-14, 2012)
- 2006 – 2009 Member, Steering Committee, International Society for Music Information Retrieval
- 2013 – 2014 Assessment Committee Member, Lrn2Cre8 postdoc

University Committees

- 2012 – 2012 – Member, College Athena SWAN Committee, QMUL
- 2015 – 2015 – Member, Artistic Group, QMUL
- 2010 – 2011 Member, Provost's Committee on Academic Programs and Teaching, USC
- 2009 – 2011 At-Large Member, Appointment, Promotion and Tenure Review Committee, USC
- 2009 – 2011 Member, Renaissance Scholars Prize Selection Committee, USC
- 2006 – 2007 Vice-Chair, Engineering Faculty Council, USC
- 2007 Member, EFC/APT Merit Review Committee, USC
- 2005 – 2006 Chair, EFC Standing Committee on Web-based Annual Faculty Review, USC
- 2004 – 2005 Webmaster, Elected Officer, EFC, Elected Officer, USC
- 2003 – 2007 Member, Engineering Faculty Council, USC
- 2007 Reviewer, Digital Dissertation Fellowship, USC
- 2005 – 2006 Member, Provost's Arts and Humanities Initiative Committee, USC
- 2005 – 2006 Member, University Committee on Curriculum: Arts and Humanities Panel, USC
- 2005 – 2006 Member, Viterbi School of Engineering Dean Search Committee, USC
- 2002 – 2003 Engineering Curriculum Committee, USC
- 2001 – 2002 Distance Education Network Committee, USC
- 2002 – 2012 Ambassador appointed by the President of USC

School/Department Committees

2014 – 2016	Chair, EECS Athena Swan Self Assessment Team, QMUL
2012 –	Member, EECS Athena Swan Committee, QMUL
2014 – 2012	Member, Senior Management Team, EPSRC Funded Centre for Doctoral Training in Media and Arts Technology, Queen Mary U. of London
2012 – 2013	Member, EECS Research Strategy Group, QMUL
2011 – 2013	Member, PhD Program in Media and Arts Technology Admissions Committee, QMUL
2009 – 2010	Member, Epstein ISE Department Undergraduate Curriculum Committee, USC
2003 – 2004	Chair, Epstein ISE Department Space Committee, USC
2002 – 2003	Member, Epstein ISE Department Faculty Search Committee, USC
2001 – 2002	Chair, Epstein ISE Department Faculty Search Committee, USC
2002 – 2003	Chair, Epstein ISE Department Graduate Committee, USC
2001 – 2002	Member, Epstein ISE Department Graduate Committee, USC
2000 – 2001	Faculty Advisor, Lehigh University IIE Student Chapter

Professional Society Memberships	<p>Inst for Operations Research & Management Science (INFORMS) member since 1992. Nominated to participate in doctoral colloquium, Atlanta, GA (Nov 1996).</p> <p>Institute for Industrial Engineers (IIE) member since 2002-2012.</p> <p>Association for Computing Machinery (ACM) member since 2003.</p> <p>IEEE Computer Society member since 2005.</p> <p>International Soc for Math and Computation in Music, founding member, since 2005.</p> <p>International Society for Music Information Retrieval, since 2009.</p> <p>International Musicological Society (IMS) member, 2002.</p> <p>College Music Society (CMS) member, 2000-2001.</p> <p>Society for Music Perception and Cognition (SMPC) member, 2000, 2005.</p> <p>American Mathematical Society (AMS) member, 2007.</p>
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Lecture Series Organized

Organizer	Viterbi Early Career Chair Lecture Series
Founder	Interdisciplinary lectures on music computation and cognition by visitors worldwide. Website created: www-bcf.usc.edu/~mucoaco/events/lectures.html
Coordinator	PhD Seminar (ISE 650, USC, 2002) Website created: www-scf.usc.edu/~echew/PhDSeminar2002 (discontinued)
Coordinator	MIT Operations Research Center Fall Seminar Series web.mit.edu/orc/www/seminar/1995f (discontinued)

Courses Taught and Open Courseware

- Instructor Music and Speech Modeling (ECS729, QMUL)
2016 (10 students): sites.google.com/site/qmulecs729spr2016
- Instructor Music and Speech Processing (ECS729, QMUL)
Major overhaul of syllabus to focus on performed music and speech
2015 (8 students): sites.google.com/site/ecs729spr2015
2014 (11 students): sites.google.com/site/ecs729spr2014
2013 (28 students)
- Coordinator Final Year Projects (ECS625/635/636/770/771, QMUL)
Lectures providing final year project support
2016 (235 students)
2015 (229 students)
2014 (238 students)
- Instructor Business Modeling (ECS418U, QMUL)
Co-taught module with Tassos Tombros
2012 (25 students)
- Instructor Music and Speech Processing (ELE021/ELED021/ELEM021, QMUL)
Co-taught module with Panos Kudumakis
Open Courseware: www.eecs.qmul.ac.uk/~eniale/teaching/elem021
2012 (12 students)
- Instructor Topics in Eng Approaches to Music Cognition (ISE575/CSCI575/EE675, USC)
Creator Structure in Music
Open Courseware: www-scf.usc.edu/~ise575/e
2011: Students: 9; Course: 4.0/5.0; Instructor: 4.11/5.0
- Instructor Engineering Freshman Academy (ENGR102, USC)
Creator Open Courseware: www-classes.usc.edu/engr/engr/102
2010: Students: 39 (section 28512); Course: 2.76/5.0; Instructor: 3.72/5.0
2010: Students: 37 (section 28517); Course: 2.88/5.0; Instructor: 4.09/5.0
- Instructor Topics in Eng Approaches to Music Cognition (ISE575/CSCI575/EE675, USC)
Creator Musical Prosody and Interpretation
Open Courseware: www-scf.usc.edu/~ise575/d
2010: Students: 9 (+1 auditor); Course: 4.5/5.0; Instructor: 4.7/5.0
- Instructor Topics in Eng Approaches to Music Cognition (ISE575c/CSCI575c/EE675c, USC)
Creator Human-Centered Computing in Generating Music
Open Courseware: www-scf.usc.edu/~ise575/c (week-by-week details, reports, projects)
2007: Students: 6 for credit (+2 official auditors); Course: 5.0/5.0; Instructor: 5.0/5.0
- Instructor Topics in Eng Approaches to Music Cognition (ISE575b/CSCI575b/EE675b, USC)
Creator Computational Modeling of Expressive Performance
Open Courseware: www-scf.usc.edu/~ise575/b (week-by-week details, reports, projects)
2006: Students: 13 for credit (+3 auditors); Course: 4.6/5.0; Instructor: 4.7/5.0
- Instructor Eng Approaches to Music Perception and Cognition (ISE575/CSCI575/EE675, USC)
Creator Open Courseware (2005): www-scf.usc.edu/~ise575 (including reports, projects)
Open Courseware (2004): www-classes.usc.edu/engr/ise/599muscog/2004
Open Courseware (2003): www-classes.usc.edu/engr/ise/599muscog/2003
2005: Students: 11/11; Course: 3.7/5.0; Instructor: 4.1/5.0
2004: Students: 12/12; Course: 4.5/5.0; Instructor: 4.7/5.0
2003: Students: 9/9; Course: 4.6/5.0; Instructor: 4.8/5.0

Instructor	Web Technology for Industrial Engineering (ISE582, USC) Open Courseware (2003): www-classes.usc.edu/engr/ise/582/2003 (including projects) Open Courseware (2002): www-classes.usc.edu/engr/ise/582/2002 Open Courseware (2001): www-classes.usc.edu/engr/ise/582/2001 2003: Students: 19/38; Course: 3.2/5.0; Instructor: 4.2/5.0 2002: Students: 20/35; Course: 3.2/5.0; Instructor: 3.6/5.0 2001: Students: 25/32; Course: 3.7/5.0; Instructor: 4.3/5.0
Instructor	Introduction to Operations Research (ISE330, USC) Open Courseware (2006): www-scf.usc.edu/~ise330 (including, hw/exams and solns) Open Courseware (2003): www-classes.usc.edu/engr/ise/330/2003 Open Courseware (2002): www-classes.usc.edu/engr/ise/330/2002 2006: Students: 36/49; Course: 3.6/5.0; Instructor: 3.7/5.0 2003: Students: 30/39; Course: 3.2/5.0; Instructor: 3.1/5.0 2002: Students: 12/18; Course: 3.8/5.0; Instructor: 4.5/5.0
Faculty Advisor	Senior Design Project (ISE495b, USC) 2005 (BMW dealership team), 2006 (Aramark team), 2010 (Ability First team)
Instructor	Engineering Statistics (IE121, Lehigh, 2001) Open Courseware (discontinued)
Instructor	Operations Research – Probabilistic Models (IE221, Lehigh, 2000) Open Courseware (discontinued) Developed case study: Imogen Timber and Lumber (UG assistant Anthony Hillman)
Instructor	Engineering Risk Benefit Analysis (1.155J, MIT, 2000) Open Courseware (discontinued, password protected)
Teaching Assistant	Engineering Risk Benefit Analysis (1.155J, MIT, 1998) Open Courseware (discontinued)
Teaching Assistant	Quantitative Methods (HBS, Harvard, 2000)
Teaching Assistant	Data, Models and Decisions (15.060, MIT, 1996)
Teaching Assistant	Urban Operations Research (6.281J, MIT, 1997-1998) OpenCourseware website created Supervised online textbook initiative: web.mit.edu/urban_or_book/www
Instructor	MBA Mathematics Review (MIT, 1998) Website created (discontinued)
Tutorial Instructor	Statistical Analysis for Technology Managers (15.061, MIT–MOT, 1995 – 1997)
Instructor	Pianolab (MIT, 1998-2000)
Systems Administrator	Laboratory for Financial Engineering (Sloan, MIT, 1997)

Other Web Publications

Researcher	Contemporary Chinese Piano Music
Creator	Public Resource (1997, 2007): sites.google.com/site/contemporarychinesepianomusic Contains my translations of biographies and autobiographies of composers Chen Gang, Jiang Weny, Wang Lisan, and pianist Zhou Guangren

Postdoctoral Fellow Supervised

Dorien Herremans (MCSA Postdoctoral Fellow, 2015 – 2017)

Anja Volk (WISE Postdoctoral Fellow, 2003 – 2005)

NWO Innovative Research Incentives Scheme Vidi laureate (2010 – 2015) to 'Model music similarity over time using the variation principle'

(2011–) Assistant Professor of Information and Computing Sciences, University of Utrecht, the Netherlands.

(2006 – 2010) University of Utrecht, deputy project leader of the Witchcraft Project, a NWO-CATCH funded project in music information retrieval.

Ph.D. Students Supervised
(as Primary Supervisor)

Vanessa Pope (QMUL MAT, 2015–)

Topic: *Rhythm and Pacing in Theatre Performance*

(2015–2019) Media and Arts Technology Doctoral Training Centre Studentship

Simin (Cicely) Yang (QMUL EECS, 2015–), co-supervised with Mathieu Barthet

Topic: *Music and Emotion*

(2015–2019) China Student Council Scholarship

Janis Sokolovskis (QMUL EECS, 2013–)

Topic: *Music Technologies for Piano Learning*

(2013–2016) EPSRC CASE Studentship with Yamaha R&D Centre London

Katerina Kosta (QMUL EECS, 2012–2017), co-supervised with Oscar Bandtlow

Topic: *Computational Modeling and Quantitative Analysis of Dynamics in Performed Music*

(2012–2015) QMUL Principal's Studentship

(2014) AES Semantic Audio Conference Best Presentation Award

(2016–) Machine Learning Researcher, Jukedeck

Luwei Yang (QMUL EECS, 2012–2016), co-supervised with Khalid Rajab

Thesis: *Computational Modeling and Analysis of Vibrato and Portamento in Expressive Music Performance*

(2012–2016) China Student Council Scholarship

(2017–) Machine Learning and Big Data Researcher, Huawei Tech Nanjing Res Ctr

Jordan Bennet Louis Smith (USC ISE, 2010–2012; QMUL EECS, 2012-2014)

Thesis: *Explaining Listener Differences in the Perception of Musical Structure*

(2010–2012) USC Provost's Ph.D. Fellowship

(2012–2014) QMUL EECS Doctoral Fellowship

(2012–2014) SSHRC Bourse de doctorat, Fond de recherche Société et culture

(2014–) Postdoctoral Researcher, National Institute of Advanced Industrial Science and Technology, Japan

Ching-Hua Chuan (USC Computer Science, 2004–2008)

Thesis: *Hybrid Methods for Music Analysis and Synthesis: Audio Key Finding and Automatic Style-Specific Accompaniment*

Grace Hopper Celebration of Women in Computing's Best New Investigator Paper Award 2011

Recipient of USC Digital Dissertation Fellowship (2007–2008)

Nominated to membership in USC's Phi Kappa Phi honor society

Qualifying exam: May 29, 2007. Thesis defense: May 13, 2008.

(Apr 2010 –) Associate Professor at University of North Florida

(Aug 2010 – Apr 2016) Assistant Professor at University of North Florida

(Aug 2008 – Jul 2010) Assistant Professor at Barry University

Erdem Unal (USC Electrical Engineering, 2002 – 2008), co-supervised w S. Narayanan
 Thesis: *Music Retrieval Systems: Robust Performance Under the Effect of Uncertainty*
 Qualifying exam: August 6, 2007. Thesis defense: May 13, 2008.
Turkish Career Grant for 'Music tracking system for royalty rights management' (2010)
 (2008–) Researcher, Scientific and Technological Research Council of Turkey
 (TÜBİTAK)

Jie Liu (USC Industrial and Systems Engineering, 2003 – 2007)
 Thesis: *User-Centered Design and Computing in ESP: a Driving Interface for Musical
 Expression Synthesis*
 Recipient of USC Dissertation Completion Fellowship (Fall 2007)
 Qualifying exam: May 4, 2006. Thesis defense: August 28, 2007.
 (Dec 2015–) Data Science Manager, Product Analytics, Snapchat
 (Jul 2014–Dec 2015) Data Scientist, Product Analytics, Snapchat
 (Jul 2010–Jul 2014) Software engineer, Facebook
 (Mar 2008–Jun 2010) Software engineer, Ironport (a Cisco business unit)

Arpi Mardirossian (USC Industrial and Systems Engineering, 2002–2007)
 Thesis: *Investigations in Music Similarity: Analysis, Organization, and Visualization
 Using Tonal Features*
 Recipient of USC Digital Dissertation Fellowship (2006–2007)
 Qualifying exam: August 21, 2006. Thesis defense: June 5, 2007.
 (2009–) Lecturer at USC Epstein Department of Industrial and Systems Engineering
 (2008– 2009) Interface and Media Design Manager, Buzznet

Ph.D. Students Supervised
 (as Second Supervisor)

Jacob Harrison (2017–), primary supervisor: Andrew McPherson
 Topic: *Music interfaces for stroke neuro-rehab*

Sarah Anne Sauv  (2015–), primary supervisor: Marcus Pearce
 Topic: *Effects of pitch and time expectancy in music*

Siyang Wang (2013–), primary supervisor: Simon Dixon, Sebastian Ewert
 Topic: *Improving Accuracy and Robustness of Automatic Music Alignment Methods for
 Highly Expressive Music*

Tom Hedges (2013–), primary supervisor: Geraint Wiggins
 Topic: *Modeling High-Ordered Structure in Jazz Chord Sequences*

Laurel Pardue (QMUL EECS-MAT, 2012–), primary supervisor: Andrew McPherson
 Topic: *Adaptive Musical Instruments—Understanding, Design, and Learning*

Samantha Duffy (QMUL EECS-MAT, 2011–2015), primary supervisor: Pat Healey
 Topic: *Music Tuition Over the Internet*
 (2010–2014) Media and Arts Technology PhD Scholarship

Benjamin Bengler (QMUL EECS, 2011–2015), primary supervisor: Nick Bryan-Kinns
 Topic: *Design and Evaluation of Collaborative Music Systems*

Yu Shiu (USC Electrical Engineering, 2005–2008), co-advised with Prof. Jay C.-C. Kuo
 Thesis: *Digital Signal Processing Techniques for Music Structure Analysis*
 Qualifying exam January 26, 2006. Thesis defense: August 20, 2007.
 (April 2008–) Engineer at SonicJam (a web-based digital music company)

Visiting Doctoral Students

Carlos Vaquero (ILLC, University of Amsterdam, Sum 2015)
 Student of Henkjan Honing
 Project: Analysis and Modelling of Music Performance

Louis Bigo (Music Informatics, IRCAM/LACL-Université Paris Est Créteil, Sum 2012)
 Student of Olivier Michel, Antoine Spicher, and Moreno Andreatta
 Project: Spatial Representation of Rubato in Music

Suranga Nanayakkara (Electrical Engineering, National U. of Singapore, 2007–)
 Interactive and Digital Media Network, NUS Hollywood Lab Intern (Summer 2007)
 Project: Hearing through Sight

Oliver Grewe (University of Music and Drama, Hannover, Germany)
 The Institute for Music Physiology and Musicians' Medicine
 student of Eckhart Altenmuller and Reinhart Kopiez (visited Spring 2005)
 Project: How does music arouse "chills"? Investigations of strong emotions

Frederik Nagel (University of Music and Drama, Hannover, Germany)
 The Institute for Music Physiology and Musicians' Medicine
 student of Eckhart Altenmuller and Reinhart Kopiez (visited Spring 2005)
 Project: EMuJoy software for continuous measurement of perceived emotions in music

M.S. Theses Students Supervised

Madeleine Le Bouteiller (ENS Lyon & Ircam 2015)
 Topic: Structure and Performances in Debussy's Sonata for Cello and Piano
 (since 2015) Masters in Musicology, Strasbourg, France

Adrian Gierakowski (QMUL MAT, 2012–2013)
 Topic: *New Interfaces for Musical Performance for Post-Stroke Motor Recovery*
 (2012–2013) Media and Arts Technology DTC Scholarship

Eric Cheng (USC EE–Multimedia & Creative Tech, 2006–2007) MS Thesis advisee
 Thesis: *Computational Analysis of Expression in Violin Performance*
 Recipient of a *Frank and Eva Buck Foundation Scholarship*, since 2000
 Thesis defense: November 21, 2006.
 (since 2007) Principal Scientist, Areté Associates.

Merrick Mosst (USC EE-Systems, 2005–2006) MS Thesis advisee
 Thesis: *Quantitative Modeling of Emotion Perception in Music*
Rose Hills Merit Scholarship Award, 2006
 USC Trustee's Scholar, 2001 – 2005
 Thesis defense: September 1, 2006.
 (since Aug 2006) Audio Engineer, Audyssey Laboratories.

Shivani Yardi (USC EE-Systems, 2003–2004) MS Thesis advisee
 Thesis: *Raga Structure: Geometric and Generative Models*
 Thesis defended: Spring, 2004.
 (2004–) Jacuzzi Brands, Inc.

Other M.S. Students Supervised

Chandra Rajagopal (USC EE–Systems, 2010)
 Topic: Granados on Guitar and Piano
 (since 2010) Technology Developer, Audyssey Laboratories, CA

ChangHyun Kim (USC EE–Systems, 2006–2008)
 Topic: Wireless Conducting Interface

(2009– 2014) Doctoral student at KAIST, South Korea.
(since 2014) Researcher, Samsung Advanced Institute of Technology

Robert Parke (USC EE–Systems, 2005–2007)
Topic: Film, Music, and Emotion
USC Trustee’s Scholar, 2000-2004
USC Archimedes’ Circle Award (Engineering Valedictorian), 2004
(2009 – 2010) Intern at Los Angeles community college district’s Project MATCH
(2010 – 2012) Lecturer at Santiago Canyon College, CA
(since 2012) Lecturer at University of Southern California, CA

Aaron Yang (USC Computer Engineering, 2004–2005)
(2006) Integrated circuit design intern, Electronic Design Automation, CA
(since 2006) Senior R&D Engineer, Synopsys, CA

Carley Tanoue (USC Engineering Management, 2004–2005)
Best Presentation Award, IMSC Student Conference, 2005
(2005 – 2007) User Interface Developer, GoldPocket Interactive
(2008 – 2010) Senior Flash Engineer, ABC.com
(2010 – 2014) Software Engineer, Disney ABSC Television Group
(since 2014) Senior Software Engineer, Disney ABC Television Group

Cindy Chia-Ying Lee (USC Computer Science, 2003–2004)
(2005 – 2006) Masters Diploma, Interaction Design Institute Ivrea, Italy
(2007 – 2010) Senior Interaction Designer, PEGA Design & Engineering
(since 2011) Founder, studio if

Phillip Wu (USC Industrial and Systems Engineering, 2002–2004)
(2006 – 2007) Web Engineer, Veeky Inc., online video sharing startup, CA
(2007 – 2014) Founder of various technology companies
(since 2014) CEO, Guangzhou Silvertime Information Technology Co.

Dulari Parikh (USC Computer Science, 2003–2004)

Hui-Yun Kao (USC Computer Science, 2003–2004)
(since 2004) LiteOn Technology Corp., communications group, Taiwan

Divya Devaguptapu (USC Electrical Engineering, 2003–2004)

Xumei Tan (USC Industrial and Systems Engineering, 2002–2004)
(since May 2007) Operations Research Analyst, E & J Gallo Winery.

Yun-Ching Chen (USC Int Media Sys/Industrial & Systems Engineering, 2002–2003)
(since 2003) Fab 12 Manufacturing Dep, Taiwan Semiconductor Manuf Dep, Ltd.

Sharvajana Ameresekere (USC Engineering Management, 2002–2003)
(since 2003) Managing Director, Consultant 21 Limited, Colombo, Sri Lanka

Undergraduates Supervised

- Katie Powell (USC Computer Science, 2011)
(2011) KUSC Undergraduate Research Assistant
- Keith DeRuiter (USC Computer Science, 2011)
- Tim Brochier (USC Electrical Engineering, Minor in Music Industry, 2010–)
(2010 – 2011) USC Merit Research Scholar
- Joyce Liu (USC Biomedical Engineering, 2010)
(2010) USC Merit Research Scholar
- Steven Lewis (USC Mechanical Engineering, 2010)
- Yawen Cheng (USC Neuroscience, Summer Undergraduate Research Fellow, 2010)
- Jiayun (Gloria) Guo (University of Washington, Computer Science)
CRA-W Distributed Research Experiences for Undergraduates Fellow (2010)
- KatieAnna Wolf (University of Minnesota, Computer Science / Mathematics / Italian)
Honors thesis: Evaluation of Performance-to-Score MIDI Alignment for Piano Duets
NSF Graduate Research Fellowship, 2011
CRA Outstanding Undergraduate Award Finalist, 2010
CRA-W Distributed Research Experiences for Undergraduates Fellow (2010)
Late breaking poster presentation at the International Conference on Music Information Retrieval, Utrecht, the Netherlands (2010)
(2011–) PhD, Computer Science, Princeton University
- Jonathan Bragg (Harvard University, Comp Sci / Music)
Thesis: Detection of Neo-Riemannian Cycles: A Finite State Approach
- Anna Huang (USC CS / Music Comp, IMSC-UGRP, WISE, Annenberg, 2002 – 2006)
NSF Graduate Research Fellowship, 2006
Outstanding Research Award in Computer Science, 2006
CRA Outstanding Undergraduate Award Finalist, 2005
Josephine de Kármán Fellowship Award, 2005
First Prize, San Francisco Choral Artists' New Voice Project, 2005
First Prize, Interdisciplinary Award, 2004 USC Undergraduate Symposium
(2006 – 2008) SM, MIT Media Lab Music, Mind, and Machine Group
(scholarship to New England Conservatory MS Composition program deferred)
PhD candidate, Harvard University Computer Science (since 2008)
- Aaron Yang (USC Computer Engineering, IMSC-UGRP, 2003 – 2004)
Best Presentation Award, IMSC Student Conference, 2003
Best Presentation Award, IMSC Student Conference, 2004
(2005–2006) MS, Computer Engineering
(since 2007) Integrated Circuit Designer, Electronic Design Automation
- Eric Wiggins (USC Computer Science, IMSC-UGRP, 2004 – 2005)
Best Presentation Award, IMSC Student Conference, 2005
- Katherine deSousa (USC Industrial & Systems Engineering, WISE-UGRP, 2006–2007)
(Fall 2006) Dean's List
- Nate Dahlin (USC EE-Systems, USC Merit Scholarship, 2005 – 2006)
(Fall 2006) Dean's List
- Jesse Hans (USC EE-Systems, IMSC-UGRP, 2005 – 2006)
(2004–2008) USC Merit Scholar
(Fall 2006) Dean's List
- Jan Zheng (UMBC CS/Math/Psych, IMSC-REU intern, 2007)
- Joann Emmanuel (USC Aeronautical and Mechanical Engineering, IMSC-UGRP, 2003)
(2004 – 2005) Masters student, Industrial and Systems Engineering

Dennis Leung (USC Biomedical Engineering, IMSC-UGRP, 2005 – 2006)

Tanya Cabral (USC Electrical Engineering, IMSC-UGRP, 2004 – 2005)

Michael Rapp (USC Mathematics, 2007)

Scout Kingery (USC Engineering undeclared, 2006)

Audrey Yen (USC Biology, 2002)

(2001–2005) USC Trustees' Scholar

(since 2005) Medical student, Keck Medical School

John Zhu (USC Mathematics / Computer Science / Music, 2002)

(since 2003) Undergraduate, U. of Chicago

Other Thesis Committees

- 2017 External Examiner, PhD Thesis viva for Andrew Elmsley, City University
- 2016 External Examiner, PhD Thesis viva for Dimitri Buche, Ircam-UPMC
- 2016 External Examiner, PhD Thesis viva for Marcelo Rodríguez López, U Utrecht
- 2015 External Examiner, PhD Thesis viva for Mattia Bergomi, Ircam
- 2015 External Examiner, PhD Thesis viva for Cynthia Liem, TU Delft
- 2015 External Examiner, PhD Thesis viva for Anthony Precht, Open University
- 2015 External Examiner, PhD Thesis preliminary viva for Jerome Nika, Ircam
- 2015 External Examiner, PhD Thesis viva for Dorien Herremanns, U Antwerp
- 2015 External Examiner, PhD Thesis viva for Curtis McKinney, Bournemouth University
- 2014 – 2015 External Examiner, PhD Thesis viva for Peyman Heydarian, London Metropolitan U
- 2013 External Examiner, PhD Thesis viva for Louis Bigo, Ircam-LACL (Université Paris-Est)
- 2013 External Examiner, PhD Thesis viva for Andrew Milner, Open University
- 2007 – 2008 External Reader, Anna Huang's Masters thesis, MIT Media Lab
- 2006 External Member, PhD Thesis Committee for Aline Honingh, University of Amsterdam, the Netherlands

- 2003 – 2007 Haojun (Leo) Wang (USC CS, 2007); Shiva Sundaram (USC EE-Systems, 2006–2008); Min Qin (USC CS, 2006–2007); Zhenyao Mo (USC CS, 2006); Yu Shiu (USC EE-Systems, 2004–2007); Brian Harlan (USC Music History and Literature, 2004–2007); Maverick Shih (USC EE-Systems, 2002–2003); Elaine Eun-Young Kang (USC Computer Science, 2003); Wei-Chung Cheng (USC EE-Systems, 2003).

QMUL Independent Assessor

Thomas William Hedges (QMUL EECS, 2014); Miriam Kirsch (QMUL Psychology, 2015); Nicholas Harley (QMUL EECS, 2015)

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Haifeng Ji (USC ISE, 2007); Jiamin Zhao (USC ISE, 2002); Boontariga Kasemsomtitum (USC ISE, 2002), Apichat Chayanupatkul (USC ISE, 2003).

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Jun 24, 2016. Schott Music Shop, London, UK.

Jonathan Berger *Intermezzo for Pedja* (2015)
Jan 31, 2017. Sussex Experimental Music Festival, Brighton, UK

Dorien Herremans, Elaine Chew *Morpheus Haydn* (2016)
May 12, 2016. Center for New Music, San Francisco, CA.
May 28, 2016. Anglia Ruskin University, Cambridge, UK.
Jun 24, 2016. Schott Music Shop, London, UK.

Cheryl Frances-Hoad *Stolen Rhythm* (2009)
May 12, 2016. Center for New Music, San Francisco, CA.
May 28, 2016. Anglia Ruskin University, Cambridge, UK.
Jun 24, 2016. Schott Music Shop, London, UK.

Dorien Herremans, Elaine Chew *Morpheus Bach* (2016)
Mar 3, 2016. Schloss Dagstuhl, Wadern, Germany.
Jun 24, 2016. Schott Music Shop, London, UK.

Lina Viste Grønli, Peter Child, Elaine Chew *Practicing Haydn*
Nov 10, 2013. Kunsthall Stavanger, Norway.
vimeo.com/79062883
May 12, 2016. Center for New Music, San Francisco, CA.
May 28, 2016. Anglia Ruskin University, Cambridge, UK.

Peter Child *f80 (Faure), b510 (Bax), i95 (Ireland)*
Mar 5, 2011. MIT Little Kresge Auditorium, Cambridge, MA.
Mar 31, 2011. USC Newman Recital Hall.

H.S.M. ‘Donald’ Coxeter *Andante* (‘To O.B., with many happy returns, Feb 1925’).
Allegro Moderato (from *Magic*).
Jun 29, 2008. MIT Kresge Auditorium, Cambridge, MA.
Recording of Soundtrack for TV Ontario’s documentary on Coxeter’s life.

Rodney Waschka II *A Simple Gift for Elaine* (2008) for Elaine Chew. World premiere.
May 12, 2008. MIT Killian Hall, Cambridge, MA.
Mar 24, 2008. N. Carolina State U. Arts Now Series, Raleigh, NC.

Tamar Diesendruck *Sudoku Variations* (2006) for Elaine Chew. World premiere.
May 12, 2008. MIT Killian Hall, Cambridge, MA.

- Mar 24, 2008. N. Carolina State U. Arts Now Series, Talley Student Center Ballroom.
 Mar 16, 2007. National University of Singapore Techno-Arts Series, U. Cultural Ctr.
 Feb 26, 2007. University of Victoria, Victoria, British Columbia, Canada.
 Jan 24, 2007. Provost's Arts and Humanities Initiative, Newman Hall, Los Angeles, CA
- Alba Potes *Tres Piezas Breves para Piano* (1994-1997). Los Angeles premiere.
Siete Haiku (1992) for soprano and piano. Los Angeles premiere.
 with Julieanne Klein, soprano.
 Apr 3, 2002. Portrait of Alba Potes by Music of Changes, Zipper Hall, Los Angeles, CA
- Paul Schoenfield *Trio for Clarinet, Violin and Piano* (1990). Los Angeles premiere.
 with *Xine and Friends*: Lynn Maxine Rosen, vln, and Tad Calcara, cl.
 Feb 23, 2002. Samuelson Chapel, Cal Lutheran University, Thousand Oaks, CA
- Chris Dench *Eigenmomenta* (2000-2001). US premiere.
Tilt (1985) for solo piano. US premiere.
 Feb, 2002. Portrait of Chris Dench by Music of Changes, Zipper Hall, Los Angeles.
- Cecilia Heejeong Kim *Illusions* for solo piano (1994). US premiere.
 Jae Eun Ha *Quodlibet* for piano and violin (1995) by Jae Eun Ha.
 Donald Sur *Satori on Park Avenue* (1984) by Donald Sur.
 Feb, 2001. Contemporary Korean Concert by the Lehigh U. Very Modern Ensemble.
 Baker Hall, Lehigh University, Bethlehem, PA.
- Peter Child *Doubles: III* (1998), *Prelude and Postlude* (2000). World Premiere.
Doubles III was written for Elaine Chew and based on Chinese/Malay songs from my childhood.
 Jan 24, 2007. Provost's Arts and Humanities Initiative, Newman Hall, Los Angeles, CA
 Jan 7, 2004. ARCS Annual Meeting Dinner, California Club, Los Angeles, CA.
 Dec 2, 2001. Music of Changes, Zipper Hall, Los Angeles, CA.
 Feb 17, 2001. Killian Hall, Massachusetts Institute of Technology, MA.
 May 12, 2000. Jordan Hall, New England Conservatory, Boston, MA.
 Aug 3, 1999. St. Mary's Pro-Cathedral, Salt Ste. Marie, MI.
 Apr 30 / May 1, 1999. Cambridge Multicultural Arts Center, Cambridge MA.
 Mar 27, 1999. Building 10-250, MIT, Cambridge, MA, for Odyssey Program.
 Nov 17, 1998. Home of Pat Chute, MIT Council for the Arts Mtg, Cambridge, MA.
 Nov 13, 1998. Killian Hall, Massachusetts Institute of Technology, Cambridge, MA.
 Sep 12, 1998. Home of Chin Nam Tan, Singapore.
- Wang Lisan *IMPRESSIONS* – concert of contemporary Chinese and French music.
 Jiang Wenye *Impressions of Paintings by Higashiyama Kaii* (1979). US premiere.
Festive Poems of the Home Village (1950). US premiere.
 and *Gaspard de la Nuit* (1908) by Maurice Ravel.
 Nov 3, 2000. American Musicological Society lecture-recital, Toronto2000, Canada.
 Oct 24, 2000. Lecture-recital, Baker Hall, Lehigh University, Bethlehem, PA.
 May 12, 2000. Fdn for Chinese Performing Arts Recitals, Jordan Hall, Boston, MA.
 Aug 3, 1999. St. Mary's Pro-Cathedral, Sault Ste. Marie, MI.
 May 14-15, 1999. Embassy Series Exhibition-Recital. Singapore Embassy, D.C.
 Apr 30 / May 1, 1999. Cambridge Multicultural Arts Center, Cambridge, MA.
 Oct 25, 1998. The Unitarian-Universalist Church of Greater Lynn, Swampscott, MA.
 Feb 8, 1998. Advanced Music Performance Program Recital, MIT, Cambridge, MA.
- Chen Yi *Ba Ban* (2000) for solo piano. Boston Premiere.
 May 12, 2000. Jordan Hall, New England Conservatory, Boston, MA.
- Peter Child *The Great Panjandrum: Seven Songs for Young Listeners* (1989) by Peter Child.
 Mar 10, 2000. (with Miho Sato, sop) Cambridge Multicultural Arts Ctr, Cambridge MA.
 Feb 28, 1998. (with Janna Baty, sop) Sounds of the XXth Century, Killina Hall, MIT.

Jun 15, 1997. (with Janna Baty, sop) Rockport Chamber Music Festival, Rockport, MA.
 Feb 8, 1997. (with Janna Baty, sop) Child's Play, Killian Hall, MIT, Cambridge, MA.

- Eric Sawyer *Quartet for Piano and Strings* (1997). Boston Premiere.
 with Walter Federle, vln, Annette Klein, vla, and Michael Bonner, cello.
 Apr 11, 1999. Crowell Chapel, Manchester-by-the-Sea, MA.
 Apr 7, 1999. Cabot Living Room, Harvard University, Cambridge, MA.
 Mar 30, 1999. Killian Hall, Massachusetts Institute of Technology, Cambridge, MA.
 Mar 27, 1999. Building 10-250, MIT, Cambridge, MA, for Odyssey Program.
 Mar 7, 1999. Ashdown House, Massachusetts Institute of Technology, Cambridge, MA.
- John Harbison *Cello Concerto* (1994). World premiere preview.
 with Yo-Yo Ma, cello. Pianists: A. Child (mvt 1), J. Yap (mvt 2), E. Chew (mvt 3).
 Feb 1994. Killian Hall, Massachusetts Institute of Technology, Cambridge, MA.

Contemporary Music CD Recordings

- Peter Child *Doubles* (1998-2000) – *Prologue, Doubles III, Epilogue*.
 March 2001, recorded at the Sonic Temple Studio, Roslindale, MA,
 by recording engineer: Joel Gordon.
 In *Doubles – Music of Peter Child*
 © 2009 Albany Records – TROY 1114
- Peter Child *Trio* (1998) – *Celebration-Variation-Reflection-Gombosi Romp*
 with Grant Ho, vln, and Asher Davison, cl
 In *Child's Play*
 © 1998 Neuma Records – 45-098; ASIN: B00000G3WC

Movie Soundtrack Recording

- Chopin *Nocturne Op. 48 No. 1 in C minor*
 Dec 23, 2014. London, UK.
 Recording of Soundtrack and MuSA.RT visualisations for sOlar eye communications' documentary on the life of Ralph Modjeski—Bridging Urban America.
bit.ly/ec-Modjeski
- H.S.M. 'Donald' Coxeter *Andante* ('To O.B., with many happy returns, Feb 1925')
Allegro Moderato (from *Magic*)
 Recorded June 29, 2008, Kresge Auditorium, Cambridge, MA.
 Soundtrack for documentary on Coxeter's life,
 Donald Coxeter – the man who saved geometry
 by the Toronto-based Foundry Films.
 September 9, 2009. Preview Screening at the Fields Institute, Toronto, Canada.
 October 21, 2009. Premiere on TV Ontario, Canada.
 October 25, 2009. Repeated on TV Ontario, Canada.
bit.ly/ec-Coxeter

Recordings Featured on National Public Radio

- Ivan Tcherepnin *Fetes – Variations on Happy Birthday* (1970-1979).
 2001. In the online feature archive on *Parody Pieces, Art of the States*
 Distributed by Public Radio International.

soundcloud.com/elaine-chew/tcherepnin-fetes-happy-birthday-variations

Francis Poulenc *Sextuor* (1932-40) by Poulenc
with Lehigh University's faculty wind ensemble: the East Winds Ensemble.
Robin Kani, fl, David Diggs, ob, Christopher DiSanto, cl, Ping Liang, bs, Paul
Lafollette, hn.
March 2001. Recorded live for WDIY, Lehigh Valley's NPR member station.
Sample: soundcloud.com/elaine-chew/poulenc-sextuor-mvt-2

Multimedia Concerts

- 2017 **Elaine Chew, solo piano with visualisation**
Johann Sebastian Bach's Toccata in D major BWV 912
Cheryl Frances-Hoad's Stolen Rhythm (2009)
Elaine Chew, Peter Child, Lina Viste Grønli's Practicing Haydn (2013)
Jonathan Berger's Intermezzo – for Pedja (2015)
Dorien Herremans, Elaine Chew's Morpheus Haydn (2016)
Franz Josef Haydn's Sonata in E-flat, Hob XVI:45, finale
Jan 31, 2017. Sussex Experimental Music Festival, Attenborough Centre for Creative
Arts, University of Sussex, Brighton, UK.
2015. **Art Inside Music**
(with Hilary Sturt, violin; Ian Pressland, cello; Alessia Milo, spectral art)
A concert-conversation on shaping time and performance with generative visual art.
Arno Babajanian's Trio in F-sharp minor (1952)
Oct 22, 2015. Some Things Rich and Strange, QMUL Performance Lab, London, UK.
bit.ly/ec-ArtInsideMusic
2012. **Inspired by Digital (Preview)**
Ian Pressland LCO on a 1760 Joseph Hill cello,
Elaine Chew C4DM on Andrew McPherson's Magnetic Resonator Piano,
automatic percussions designed by Andrew Robertson, and
tonal visualizations generated by Alexandre François' MuSA_RT App using Elaine
Chew's Spiral Array.
Sep 28, 2012. EU Researchers' Night Grand Variety Show, Great Hall, People's Palace,
Queen Mary University of London, UK.
2011. **Musical Patois – reflections of language in music**
Elaine Chew, performer and producer, Alexandre R. J. François, co-producer
A concert-conversation with neuroscientist Aniruddh Patel and composer Peter Child
featuring world premieres of newly commissioned works by Peter Child.
Mar 31, 2011. USC Visions & Voices, Newman Recital Hall, Los Angeles, CA
Mar 5, 2011. MIT 150th anniversary event, FAST Arts Festival, Cambridge, MA
2011. **MuSA.RT and Beethoven's Fifth – invited presentation/performance**
(with Julia Greer).
Beethoven's Fifth Symphony Arranged for Piano Four Hands (n.d., ca.1905)
by Xaver Scharwenka
Feb 10, 2011. NAE Regional Meeting, USC, Town & Gown, Los Angeles, CA.
2008. **The Mathematics in Music – a concert-conversation with Elaine Chew**
Sudoku Variations (2006) by Tamar Diesendruck
Doubles III and Epilogue (1998-99) by Peter Child
A Simple Gift for Elaine (2008) by Rodney Waschka II
Fêtes – Variations on Happy Birthday (1975) by Ivan Tcherepnin
Mar 24, 2008. NCSU Arts Now Series, Talley Student Center Ballroom, Raleigh, NC.
May 12, 2008. MIT Applied Mathematics Colloquium, Cambridge, MA

2007. **The Mathematics in Music** – a concert-conversation with Elaine Chew
Sudoku Variations (2006) by Tamar Diesendruck, special commission for event.
Fêtes – Variations on Happy Birthday (1975) by Ivan Tcherepnin
Doubles III and Epilogue (1998-99) by Peter Child
 Jan 24, 2007. USC Provost's Arts and Humanities Initiative, Alfred Newman Recital Hall, Los Angeles, CA.
 Feb 26, 2007. University of Victoria Women Scholars Lecture Series, Victoria, British Columbia, Canada.
 Mar 16, 2007. National University of Singapore Arts Festival – Techno-Arts Series, NUS University Cultural Center, Singapore.
 (with Alexandre François coordinating MuSA.RT, a real-time tonal analysis system)
2003. January 31, 2003. **Dark Blue Sky Dream**
 Music Under the Stars concert series, Ask Jeeves Planetarium
 Chabot Space & Science Center, Oakland, CA.
 Julia Ogrydziak, violin & artistic director, Elaine Chew, piano.
 A multimedia production featuring music by Bolcom, Pärt, Takemitsu and Ravel.
 Concurrent projection of slides and video in the planetarium dome.
 See www.julia-o.com/shows.html
2002. April 15, 2002. **Flying Sonics** – a tale of two pianos and immersive audio
 Newman Hall, University of Southern California, Los Angeles, CA.
 Elaine Chew, artistic director and producer
 with Dennis Thurmond, Chris Kyriakakis, Tom Holman, Kevin Dooley and Ben Levine
 Featuring music by Piazzolla, Herbie Hancock, Gershwin, Dooley and Levine
 with live and prepared renderings of sounds in 10.2-channel immersive audio.
 See audiolab.usc.edu/events/FlyingSonics

Other Selected Solo Piano / Concerto Performances

2017. 3 morphed pieces from A Little Notebook for Anna Magdalena by MorpheuS-Bach
 3 morphed pieces from 30 and 24 Pieces for Children by MorpheuS-Kabalevsky
 May 23, 2017. Partnerships Concert, St. Dunstan & All Saints, Stepney, UK
 Jun 16, 2017. Radiophonic Workshop, Science Museum London, UK
 Jun 8, 2017. The Science of Consciousness Conference, La Jolla, California, US
2012. II. Conception & V. Creation 3 from *Secrets of Antikythera* by Andrew McPherson
 III. Nekar bei nacht from *The Masons of Heidelberg* by Daniel Shapiro
 Dec 1, 2012. LCO New: Explore 'Inspired by Digital' Study Day, People's Palace, Queen Mary University of London, UK
2012. II. Conception & V. Creation 3 from *Secrets of Antikythera* by Andrew McPherson
 Nov 9, 2012. Language, Music, and Interaction workshop, Queen Mary University of London, UK
2012. *Refractions* by Peter Child
 Oct 28, 2012. Lecture-recital at the Performer's Voice, Yong Siew Toh Conservatory of Music, National University of Singapore, Singapore
2012. Epilogue from *Doubles* by Peter Child
 Jul 13, 2012. Lecture-recital at the Music and Shape Conference, Senate House, University of London, UK
2012. Selections from *Penta Metrics* by Libby Larsen
 Jun 19, 2012. Libby with MuSA_RT for piano and live tonal visualisation, New Resonances Festival Concert, International Symposium on Computer Music

Modeling and Retrieval, Queen Mary University of London, UK

2008. Concert at the International Conference on Music Information Retrieval (ISMIR)
Fêtes – Variations on Happy Birthday (1975) by Ivan Tcherepnin
Sep 16, 2008. ISMIR Concert, Drexel University, Philadelphia, PA
2006. *Thirty-two Variations on an Original Theme in C minor WoO 80o* by Beethoven,
Doubles III and Epilogue (1998-1999) by Peter Child
Dec 8, 2006. Los Angeles Philharmonic Affiliates Concert, Long Beach, CA.
2006. *Russian Fairy Tale* by Nikolai Medtner, *Regards No.IV and XVI* by Olivier Messiaen,
Fêtes – Variations on Happy Birthday by Ivan Tcherepnin.
May 18, 2006. Los Angeles Philharmonic Peninsula Committee Salon,
Rolling Hills United Methodist Church, Rolling Hills Estates, CA.
2005. *Doubles* (1998-1999) by Peter Child
Fetes – Variations on Happy Birthday (1970-1979) by Ivan Tcherepnin
May 28, 2005. UBC School of Music Recital Hall, NIME Concert.
May 13, 2005. CCRMA Strictly Ballroom Concert.
April 18. 2005. INFORMS Pract Conf, Westin Mission Hills Resort, Palm Springs, CA.
2003. Selections from *Peccadilloes* by Paul Schoenfield
June 22, 2005. Renaissance at the Wellington, Laguna Hills, CA
2003. *Village Earth Poems* (1950) by Jiang Wenye, *Doubles* (1998-1999) by Peter Child
Impressions of Paintings by Higashiyama Kaii (1979) by Wang Lisan
Feb 3, 2003. 31st ICCIE Conference, Sheraton Fisherman's Wharf, San Francisco, CA.
2002. *Three Chinese Songs* from *Doubles* (1998) by Peter Child
Sep 12, 2002. ICMAI Concert, Reid Hall, U. of Edinburgh, Scotland, UK.
2002. *Trez Piazas Breves para Piano* (1994-7) by Alba Potes
Apr 3, 2002. Music of Changes: Portrait of Alba Potes, Zipper Hall, Los Angeles, CA.
2002. *Tilt* by Chris Dench
Feb 7, 2002. Music of Changes: Portrait of Chris Dench, Zipper Hall, Los Angeles, CA.
2001. *Impressions of Paintings by Higashiyama Kaii* (1979) by Wang Lisan
June 9, 2001. 7th Intl Congress on Musical Signification, Imatra, Finland.
2000. *Fêtes – Variations on Happy Birthday* (1970-1979) by Ivan Tcherepnin
Nov 3, 2000. Lecture-recital at Toronto2000-AMS Meeting, Toronto, Canada.
October 24, 2000. Lecture-recital at the Zoellner Arts Center, Lehigh University, PA.
May 12, 2000. Fdn for Chinese Performing Arts Concert, Jordan Hall, Boston, MA.
February 12, 2000. Tcherepnin Live!, Aurelius Ensemble, Killian Hall, MIT.
2000. *Russian Fairy Tales* by Nikolai Medtner
Children's Suite by Ding Shande
Mar 10, 2000. Cambridge Multicultural Arts Center, Cambridge, MA.
- 1996 – 1998. *Burleske* by Ricard Strauss
Sep 18-19, 1998. President's Charity Concert, Singapore Symphony Orchestra.
Victoria Concert Hall, Singapore.
Mar 16, 1996. MIT Symph Orch Concert, Kresge Auditorium, MIT, Cambridge, MA.
1996. *Flute and Drums in the Setting Sun* by Li Yinghai
Myriad Birds Adoring the Phoenix by Wang Jianzhong
Shadow Play by Alexander Tcherepnin

- Russian Fairy Tales* Op.51 No.1, Op.26 No.3, Op.31 No.3 by Nikolai Medtner
Romeo and Juliet by Sergei Prokofiev
 Apr 26, 1996. Sino-Soviet Concert, Killian Hall, MIT, Cambridge, MA.
1994. *Vingt Regards sur l'Enfant Jésus* by Olivier Messiaen
 Alborada del Gracioso and Oiseaux Tristes from *Miroirs* by Maurice Ravel
Partita No. 5 in G BWV 829 by J. S. Bach
 Jun, 1994. University of Science and Technology, China.
 May 27, 1994. Singapore Festival of Arts Fringe Concert, Shell Theatre, Singapore.
 April 29, 1994. (Ravel) Trio Concert w/ Egozy & Hsieh, Killian Hall, Cambridge, MA.
 Apr 13, 1994. Killian Hall, MIT, Cambridge, MA.
1993. *Fantasie Op. 77* and *Sonata in Eb, Op. 7* by Beethoven
La Chasse and *Hungarian Rhapsody No. 13* by Liszt
 Apr, 1994. Killian Hall, MIT, Cambridge, MA.
1992. *Sonata Piano Sonata Op.26* by Samuel Barber
Two Preludes: Op.23 No.2 in B flat major, Op.32 No.10 in B minor by Rachmaninov
Two Preludes: Voiles and *Feux d'artifice* by Debussy
Sonata in D Hob. XVI:51 by Haydn
 Aug 1992. Bechtel International Center, Stanford University, Stanford, CA.
 May 28, 1992. Campbell Recital Hall, Stanford University, Stanford, CA.
 May 24, 1992. Morning Service, United Universalist Church, Palo Alto, CA.
1990. Works by Mozart, Chopin and Liszt
 Nov 1990. Campbell Recital Hall, Stanford University, Stanford, CA.
1989. Works by Chopin, Mozart and Debussy
 Jul 1989. Singapore Arts Festival Fringe Concert, Goethe Institute, Singapore.
1987. *Jeux d'eau* by Ravel
 Aug 1987. Young Musicians on Sunday, Meridien Hotel, Singapore.
1986. *Concerto No. 1 in E minor* by Chopin
 Aug 1986. Singapore Symphony Orchestra, Victoria Concert Hall.
 Youngest finalist in Pianist of the Year Competition.

Selected Chamber Music Performances

2015. Musical Banditry
Etudes and Parodies (2005) by Paul Lansky
 (with Hilary Sturt, violin; Joel Ashford, horn)
 Dec 21, 2015. C4DM Concert Series, QMUL, London, UK
bit.ly/ec-MusicalBanditry
2015. Art Inside Music
Trio in F-sharp minor by Arno Babajanian
 (with Hilary Sturt, violin; Ian Pressland, cello)
 Oct 22, 2015. Inside Out Festival / C4DM Concert Series, QMUL, London, UK
bit.ly/ec-ArtInsideMusic
2014. Beethoven and Brahms
Seven Variations on Bei Männern welche Liebe fühlen by Beethoven
Cello Sonata No. 2 in F major, Op. 99 by Brahms
 (with Susanne Beer, cello)
 Sep 19, 2014. Home Concert, Islington, UK

Sep 21, 2014. Little Cello Corner, Islington, UK

2012. Chamber Shorts
Trio for Piano, Violin, and Cello by Ravel
Café Music (mvt 1) by Paul Schoenfield
Requiem for Three Cellos and Piano, Op. 66 by Popper
Elfintanz, Op. 39 by Popper
Sonata in G minor for Two Cellos and Piano, Op. 2 No. 8 by Handel
 (with Ian Pressland, vcl, Hilary Sturt, vln, Sarah Kaznowski, vcl)
 Jun 16, 2012. Clapton Festival, Sutton House, Hackney, UK
2011. *Beethoven's Fifth Symphony arranged for Piano Four Hands* (n.d., ca.1905)
 by Xaver Scharwenka
 Feb 10, 2011. Off the Clock, Caltech, Pasadena, CA. (with Julia Greer)
 Feb 18, 2011. NAE Regional Meeting, USC, Town & Gown, Los Angeles, CA. (with Julia Greer)
 Jan 27, 2011. Schloss Dagstuhl, Germany. (with Cynthia Liem)
2010. *Suite for Violin, Clarinet, and Piano Op.157b* (1936) by Milhaud
 Apr 7, 2010. 32nd Annual Viterbi Awards, California Club, Los Angeles, CA.
 (with TK Wang, violin; Carl Kesselman, clarinet)
2007. Franco-Chinese Concert
Sonata for violin and piano in G minor (1917) by Debussy,
The Dawn of the Miao Mountains (1973-1975) by Gang Chen,
The Sun Shines on Tashkent (1973-1975) by Gang Chen,
Sonata for violin and piano in G major (1923-1927) by Ravel,
 Nov 13, 2007. Greenleaf House, Harvard University, Cambridge, MA.
www-rcf.usc.edu/~mucoaco/Radcliffe/franco-chinese
 (with TK Wang, violin)
2007. *Sextuor for piano, flute, oboe, clarinet, bassoon, and french horn* (1932-40) by Poulenc
 May 26, 2007. Horn Concert, Regional Artists, Hummingbird – Hornswoggle,
 Jemez Springs, NM.
 (with Sally Chapman, Flute; Lauren Stephens, Oboe; Donna Greenstreet, Clarinet; John Petring, Horn, Icel Kendrick, Bassoon)
2006. Sinfonia from *Divertimento – Ballet Suite fr Le baiser de la fée* (The Fairy's Kiss, 1934)
 by Stravinsky
 Sep 10, 2006. Concert honoring Eudice Shapiro, Newman Hall, Los Angeles, CA.
 (with TK Wang, vln)
2006. *Concerto for Four Horns and Orchestra, Opus 93* (1992) by Christopher D. Wiggins
 Piano reduction with solo parts
Concert Piece for Four Horns and Orchestra (1856) by Carl Heinrich Hübler
 Piano reduction with solo parts
 June 10, 2006. Private concert at the home of Naomi Heller, Santa Monica, CA.
 (with Bob Watt, Harold Aschmann, John Petring, and Chris Wilson on French horns)
2005. *Sonata for Violin and Piano K.570* by Mozart
Violin Sonata No.2 in A major, Op.12 No.2 by Beethoven
La Plus Que Lente – Valse by Debussy (trans. by Leon Roques)
 Dec 8, 2005. Los Angeles Philharmonic Auxiliary, Long Beach, CA.
 (with TK Wang, vln)
2005. *Trio for Piano, Violin and Cello* (1915) by Ravel.
 May 15, 2005. Masterclass with Menahem Pressler, Biola University, La Mirada, CA.
 April 29, 2005. Korean American Education Foundation, Los Angeles, CA.

- April 26, 2005. Newman Recital Hall, USC, Los Angeles, CA.
 April 24, 2005. Peter Marsh's Home, Monrovia, CA.
 (with Daniel Tringov, vln, Jee-Young Moon, vlc)
2004. *Piano Quartet No.1 in C minor* by Faure
 with the *After Dark Quartet* (with J. Ogrydziak, vln, W. Hsieh, vla, E. Wu, vcl)
 Jul 4, 2004. Saint Lawrence String Quartet Summer Chamber Music Institute,
 Campbell Recital Hall, Stanford University, CA.
2003. *Legende in G minor, Op.17*, by Henryk Wieniawski.
Sonata for violin and piano (1923-7) by Ravel.
Spanish Dances by Moritz Moszkowski.
 Jun 22, 2003. (with J. Ogrydziak, vln) Renaissance at the Wellington, Laguna Hills, CA.
2003. *Fratres* (1980) by Arvo Pärt.
Violin Sonata No. 2 (1978) by William Bolcom.
Hika (1973) by Takemitsu.
Sonata for violin and piano (1923-7) by Ravel.
 Jan 31, 2003. (with Julia Ogrydziak, vln) Ask Jeeves Planetarium, Chabot Space and
 Science Center, Oakland, CA.
2002. *Clarinet Concerto, Op.57* (1928) by Nielsen.
L'Histoire du Soldat (1919) by Stravinsky.
 Sep 21, 2002. (with Joel Scheckmann, cl) Newman Hall, USC, Los Angeles, CA.
2002. *Cuban Overture* (1933) by Gershwin.
The People United Will Never Be Defeated (1975) by Rzewski (arranged for two pianos)
Cantaloupe Island by Herbie Hancock
 with Dennis Thurmond, piano/keyboards, Chris Kyriakakis, immersive audio, Benjamin
 Levine, bass, Kevin Dooley, drums.
 Apr 15, 2002. Flying Sonics – a tale of immersive audio and diverse instruments,
 Newman Hall, USC, Los Angeles, CA.
2002. *Siete Haiku para soprano y piano* (1992) by Alba Potes.
 with Julieanne Klein, sop
 Apr 3, 2002. Music of Changes: Portrait of Alba Potes, Zipper Hall, Los Angeles, CA.
2002. *Trio for Clarinet, Violin and Piano* (1990) by Paul Schoenfield.
Trio for Clarinet, Violin and Piano (1932) by Darius Milhaud.
Le Grande Tango (1982) by Astor Piazzolla.
 Selections of music for violin and piano by Fritz Kreisler.
 with *Xine and Friends*: members of the Utah Symphony,
 Lynn Maxine Rosen, vln, Tad Calcara, cl, and Brant Bayless, vla.
 Feb 23, 2002. Parkinson's Institute Benefit Concert.
 Samuelson Chapel, Cal Lutheran University, Thousand Oaks, CA.
2002. *Eigenmomenta for ensemble* (2000–2001) by Chris Dench.
 Feb 7, 2002. Music of Changes: Portrait of Chris Dench, Zipper Hall, Los Angeles, CA.
2001. *Satori on Park Avenue* (1984) by Donald Sur.
Quodlibet for violin and piano (1995) by Jae Eun Ha.
Illusions for piano (1990) by Cecilia Kim.
 with Paul Chou, violin, and the Lehigh University Very Modern Ensemble (LUVME).
 Mar 25, 2001. LUVME Concert of Contemporary Korean Music, Baker Hall, Lehigh
 University, Bethlehem, PA.
2001. *Sextuor for piano, flute, oboe, clarinet, bassoon, and french horn* (1932-40) by Poulenc.

- with Robin Kani, fl, David Diggs, ob, Christopher DiSanto, cl, Ping Liang, bs, Paul Lafollette, hn.
Mar 2, 2001. East Winds Ensemble Concert, Lehigh University's faculty wind ensemble, Baker Hall, Lehigh University, Bethlehem, PA.
2000. *Quartet for the End of Time* (1940) by Olivier Messiaen.
with Eran Egozy, cl, Oliver Klein, vln, Benjamin Ross, cello.
May 7, 2000. Chamber Music Society Concert, Killian Hall, MIT, Cambridge, MA.
Jun 4, 2000. Crowell Chapel, Manchester-by-the-Sea, MA.
1999. *Le Grand Tango* (1982) by Astor Piazzolla (with Wilson Hsieh, vla)
Cuban Overture (1933) by Gershwin (with Ronni Schwartz, pno)
Jul 22-23, 1999. Antojitos Latinos, Aurelius Ensemble, Killian Hall, MIT.
1999. *Suite for Two Cellos and Piano* by Menotti (1973)
(with Andres Diaz and Jan Mueller, cellos)
Jun 19, 1999. Rockport Chamber Music Festival, Rockport, MA.
1999. *From Silence for soprano, chamber ensemble, computer and tape* (1988) by J. Harvey
(with Barry Vercoe, conductor, Yukiko Ueno and Diana Dabby, keyboards etc)
May 21, 1999. Digital Rewind: Celebrating 25 years of Comptuer Music at MIT, Kresge Auditorium, MIT, Cambridge, MA.
1999. *Quartet for Piano and Strings* (1997) by Eric Sawyer.
Piano Quartet Op.60 in c by Johann Brahms.
Piano Quintet by Dvorak.
Apr 11, 1999. Crowell Chapel, Manchester-by-the-Sea, MA.
Apr 7, 1999. Cabot Living Room, Harvard University, Cambridge, MA.
Mar 30, 1999. Killian Hall, Massachusetts Institute of Technology, Cambridge, MA.
Mar 27, 1999. Building 10-250, MIT, Cambridge, MA, for Odyssey Program.
Mar 7, 1999. Ashdown House, Massachusetts Institute of Technology, Cambridge, MA.
1999. *Clarinet Sonata* (1962), *Sextuor* (1932-40), *Sonata for Piano Duet* (1953) by Poulenc
Jan 29-30, 1999. Poulenc Potpourri, Aurelius Ensemble, Killian Hall, MIT.
1998. *Trio in G minor for Clarinet, Violin and Piano* (1932) by Khachaturian
(with Nina Chen, vln, and Eran Egozy, cl.)
Nov 13, 1998. MIT Chamber Music Society, Killian Hall, Cambridge, MA.
1998. *La Forza Del Duct Tape* – a mini opera (1998).
words by Don Kater and Marc Abrahams, music by Liszt, Verdi, Mozart and Beethoven
For the libretto and cast, see www.improbable.com/ig/ig98-duct-tape-libretto.html
Oct 8, 1998. Ig Nobel Prize Ceremony, Sanders Theater, Harvard U., Cambridge, MA.
1998. *Piano Quartet in C minor Op. 60* by Brahms
with Julia Ogrydziak, vln, Wilson Hsieh, vla, Michael Bonner, cello
Aug 27, 1998. Unabashed Angst, Aurelius Ensemble, Killian Hall, Cambridge, MA.
1998. *Trio fur Klavier, Klarinette und Violoncello nach dem Septett* Op. 20 by Beethoven
Sonate La Trille du Diable by Giuseppe Tartini
with Eran Egozy, cl, Michael Bonner, cello, and Grant Ho, vln.
Jul 23, 1998. Fun, Wit and Humour, Aurelius Ensemble, Killian Hall, Cambridge, MA.
1998. *Arrows to the Sun – A Pueblo Indian Tale for Children* by Peter Child
(with Nicole Lee, Jason Wong, and Youssef Marzouk)
May 3, 1998. A Concert of Music for Two Pianos, Kresge Auditorium, MIT, Cambridge, MA.

1998. *The Great Panjandrum: Seven Songs for Young Listeners* (1989) by Peter Child.
Mirabai Songs (1983) by John Harbison
Sky Above Clouds (1989) for flute and piano by Elena Ruehr
Helen for soprano and piano (1997) by Edward Cohen
 with Janna Baty, soprano, and Michael Horowitz, flute.
 Feb 28, 1998. Sounds of the XXth Century, Killian Hall, MIT, Cambridge, MA.
- 1997-2000. *The Great Panjandrum: Seven Songs for Young Listeners* (1989) by Peter Child.
 March 10, 2000. (with Miho Sato, sop) Cambridge Multicultural Arts Ctr, MA.
 Feb 28, 1998. (with Janna Baty, sop) Sounds of the XXth Century, Killian Hall, MIT.
 Jun 15, 1997. (with Janna Baty, sop) Rockport Chamber Music Festival, Rockport, MA.
 Feb 8, 1997. (with Janna Baty, sop) Child's Play, Killian Hall, MIT, Cambridge, MA.
1997. *Trio* for clarinet, violin and piano (1996) by Peter Child
 with Asher Davison, cl, and Grant Ho, vln.
 Oct 1997. New England Composer's Conference, Killian Hall, Cambridge, MA.
 Feb 8, 1997. Child's Play, Killian Hall, MIT, Cambridge, MA.
1996. *Cello Sonata* by Sergei Prokofiev (with Michael Bonner, cello)
 Nov 1996. MIT Chamber Music Society, Killian Hall, MIT, Cambridge, MA.
1996. *Fratres for violin and piano* (1980) by Arvo Part (with Julia Ogrydziak)
Sonata in A major, BWV 1015 by Bach (with J. Ogrydziak)
 Feb 21, 1996. Julia Ogrydziak AMP Recital, Killian Hall, Cambridge, MA.
 Feb 20, 1996. Noontime Concerts, MIT Lincoln Laboratory, Lincoln, MA.
1995. *Trio* by John Harbison (with Eran Egozy, cl, and Julia Ogrydziak, vln.)
 May 1995. MIT Chamber Music Society, Killian Hall, MIT, Cambridge, MA.
1995. Scenes from *Trouble in Tahiti* by Leonard Bernstein
 Feb 16, 1995. A Black History Program, Dimock Youth Intervention Program,
 Richards Bldg Auditorium, Dimock Community Health Center, Roxbury, MA.
1994. *Piano Quartet in C Minor, Op. 60* by Brahms
 (with Julia Ogrydziak, vln, Wilson Hsieh, vla, Michael Bonner, cello)
 Dec 7, 1994. MIT Chamber Music Society, Killian Hall, MIT, Cambridge, MA.
1994. *Sonata for viola and piano* by Hindemith (with Wilson Hsieh)
Trio für Klarinette, Viola und Klavier by Carl Reinecke
Kegelstaat Trio by Mozart (with E. Egozy, cl, W. Hsieh, vla, and M. Tripsas, ob)
 May, 1994. Chamber Music Society Concert, Killian Hall, MIT, Cambridge, MA.
 Apr 29, 1994. Adv Mus Performance Trio Recital, Killian Hall, MIT, Cambridge, MA.
1994. *Deux Rhapsodies for oboe, viola and piano* (1901) by Charles Martin Loeffler
 (with W. Hsieh, vla, and M. Tripsas, ob)
 Apr 24, 1994. MIT Chamber Music Society, Killian Hall, MIT, Cambridge, MA.
1994. *Cello Concerto arranged for cello and piano* by Harbison (with Yo-Yo Ma)
 Mar 1994. Harbison Cello Concerto open reh, Killian Hall, MIT, Cambridge, MA.
1993. *Shepherd on the Rock* by Schubert (with Eran Egozy, cl, and Alice Lin, sop)
Sonata for clarinet and piano (1962) by Poulenc (with E. Egozy)
 Dec 2 1993. MIT Chamber Music Society, Killian Hall, MIT, Cambridge, MA.
 Oct 28, 1993. MIT Council for the Arts, Killian Hall, MIT, Cambridge, MA.
1993. *Contrasts for violin, clarinet and piano* (1938) by Bartok
 with Eran Egozy, cl, Donald Yeung, vln
 May 1993. MIT Chamber Music Society, Killian Hall, MIT, Cambridge, MA.

1993. *Concerto for Clarinet* by Nielsen (with Eran Egozy)
Sonata for clarinet and piano Op.167 by Saint-Saëns (E. Egozy)
 Feb 1993. Advanced Music Performance Recital, Killian Hall, MIT, Cambridge, MA.
1992. *Quintet for piano, two violins, viola and cello in A major, Op. 81*, by Dvorak
 (with Conroy Lee & Roy Seto, vlns, Richard Olson, vla, Leonard Kim, cello)
 Dec 1992. Killian Hall, MIT, Cambridge, CA.
1992. *Trio in F minor Op.65* by Dvorak (with Mari Shimizu, vln, and Tim Hawks, cello)
 May 1992. Campbell Recital Hall, Stanford University, Stanford, CA.
 Apr 1992. Campbell Recital Hall, Stanford University, Stanford, CA.
1991. Vocal music by Purcell, Schumann, Debussy (with Elaine Romanelli, sop.)
 Oct 1991. Campbell Recital Hall, Stanford University, Stanford, CA.
1989. *L'Histoire du Soldat* by Stravinsky
Trio in G minor for clarinet, violin and piano (1932) by Khachaturian
Sonata for clarinet and piano (1962) by Poulenc
Clarinet Concerto in A major, K622, by Mozart
Grand Duo Concertant for clarinet and piano in Eb major, Op. 48, by Weber
 with Annisa Tai and Soon Woon-Kuo
 Jun 1989. National Music Competition, Goethe Institute, Singapore.
 Jul 1989. Natl Mus Comp Prizewinner's concert. Victoria Concert Hall, Singapore.
 Aug 1989. Outreach Concert at Pei Dao Secondary School, Singapore.
 Aug 1989. Noon Concert Series, British Council, Singapore.
1987. Vocal music by Debussy, Fauré, Ravel etc
 with Canadian opera singers Bruno Laplante and Brigitte Toulon
 Jan 1987. Recital hosted by Jean-Claude Bailly, GM of Le Meridien Singapour.
1986. Valse Duet: I Love You So, from (the Merry Widow) operetta Act 3
 with Canadian opera singers Bruno Laplante and Brigitte Toulon
 Dec 31, 1986. New Year's Eve Community Chest TV Concert, Kallang Theater,
 Singapore.

Principal Music Teachers

PIANO	Lip-Tat Ong, Singapore Lee Choo Goh, Singapore James Goldsworthy, Stanford University David Deveau, Massachusetts Institute of Technology
CHAMBER MUSIC	Marcus Thompson, Massachusetts Institute of Technology John Harbison, Massachusetts Institute of Technology David Deveau, Massachusetts Institute of Technology Lynn Chang, Massachusetts Institute of Technology Peter Marsh, University of Southern California Philip Levy (Stanford String Quartet), Stanford University

Photo Exhibitions

- SNAP-TO-GRID Los Angeles Center for Digital Art, Los Angeles, CA.
 Sep 13 – Oct 7, 2006. One print titled *mangosteen*.
 Sep 9 – Oct 1, 2004. Three digital collages, two of which were selected for the show's
 online promotional poster, see <http://www.lacda.com/exhibits/september.html>

Pictures archived at <http://www-rcf.usc.edu/~echew/photography/LACDA2004>

IMPRESSIONS Exhibitions in conjunction with lecture-recitals of the same name, consisting of 40 photographs from my field study on contemporary Chinese piano music in Beijing.

Feb 2001. Lehigh University Art Gallery, Bethlehem, PA.
May 1999. Singapore Embassy, Washington D.C.
Feb 1998. Lincoln Laboratories, Lincoln, MA
Feb 1998. Stratton Student Center Art Gallery, MIT, Cambridge, MA

EC. Updated July 11, 2017.