

MICHAEL SCOTT CUTHBERT

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<http://www.trecento.com/>

EDUCATION

1998–2006 **Harvard University** PH.D. 2006, A.M. 2001
Dissertation: “Trecento Fragments and Polyphony beyond the Codex”
Committee: Thomas Forrest Kelly (principal), Reinhold Brinkmann, John Nadas

1994–1998 **Harvard University** A.B. *summa cum laude* (music)
Phi Beta Kappa member

FACULTY POSITIONS

2011–present Associate Professor of Music, M.I.T.
Homer A. Burnell Career Development Professor

2008–11 Assistant Professor of Music, M.I.T.

2006–08 Visiting Assistant Professor, M.I.T.

2005–06 Visiting Assistant Professor, Smith College and Mount Holyoke College
(joint appointment)

MAJOR AWARDS

2012–13 Radcliffe Institute, Rieman and Baketel Fellow for Music

2012–14 NEH Digging into Data Challenge Grant (\$175,000)

2009–12 Seaver Institute Grants for Digital Humanities (\$325,000)

2009–10 Villa I Tatti, Harvard Center for Italian Renaissance Studies: Ahmanson Fellow

2004–05 Rome Prize of the American Academy in Rome:
Lily Auchincloss Fellow in Medieval Studies

2002 Nino Pirrotta Fellowship

2001 John Knowles Paine Traveling Fellowship for study in Italy (also 1999)

1998 Fulbright scholarship for study of early music printing in Germany (declined)
Thomas Hoopes Prize (highest award for an undergraduate thesis at Harvard) received
for “Fragments of Polyphonic Music from the Abbey of Santa Giustina: Codices,
Composers, and Context in Late Medieval Padua”

1997 Phi Beta Kappa research award; Dean’s research award

For MIT internal awards see below under Professional Activities and Service.

PUBLICATIONS

Co-authored articles in traditional musicological forums have equal responsibility among the authors. For computational musicology articles, I have noted those where someone else is first author with [], otherwise, I am lead author.*

- 2012 “International Style and Medieval Italian Music: A Flemish Motet in the Ascoli Piceno/ Montefortino Fragment,” with Sasha Zamler-Carhart. in *Fama e publica vox nel Medioevo: Atti del Convegno di Studio...Ascoli Piceno, Palazzo dei Capitani, 3–5 December 2009*, edited by Isa Lori Sanfilippo and Antonio Rigon (Rome: Istituto Storico Italiano per il Medio Evo, 2011 [i.e., 2012]), pp. 213–27.
- 2011 “Groups and Projects among the Paduan polyphonic sources,” in *I frammenti musicali padovani tra Santa Giustina e la diffusione della musica in Europa*, edited by Francesco Facchin and Pietro Gnan (Padua, 2011), pp. 183–214.
- “Feature Extraction and Machine Learning on Symbolic Music using the music21 Toolkit,” *Proceedings of the International Symposium on Music Information Retrieval*; lead author with Christopher Ariza and Lisa Friedland, pp. 387–92.
- “The Nuremberg and Melk Fragments and the International *Ars Nova*,” *Studi Musicali Nuova serie I*, no. 1 (2010) [i.e., 2011], pp. 7–51.
- “Hidden Beyond MIDI’s Reach: Feature Extraction and Machine Learning with Rich Symbolic Formats in music21” *Proceedings of the Neural Information Processing Systems Conference (Music and Machine Learning, Workshop 4)*, lead author with Christopher Ariza, Jose Cabal-Ugaz, Beth Hadley, and Neena Parikh.
- “Score Following from Inaccurate Score and Audio Data using OMR and music21” for *Proceedings of the Neural Information Processing Systems Conference (Music and Machine Learning, Workshop 4)*, with Jordi Bartolomé Guillen[*].
- “The music21 Stream: A New Object Model for Representing, Filtering, and Transforming Symbolic Musical Structures,” *Proceedings of the International Computer Music Conference*; with Christopher Ariza[*], pp. 61–68.
- “Analytical and Compositional Applications of a Network-Based Scale Model in music21,” *Proceedings of the International Computer Music Conference*; with Christopher Ariza[*], pp. 701–8.
- 2010 “Style, Locality, and the Trecento Gloria: New Sources and a Reexamination,” *Acta Musicologica* 82 (2010), pp. 185–212; with Elizabeth Nyikos.
- “Tipping the Iceberg: Missing Italian Polyphony from the Age of Schism,” *Musica Disciplina* 54 (2009) [i.e., 2010], pp. 39–74.
- “music21: A Toolkit for Computer-Aided Musicology and Symbolic Music Data,” *Proceedings of the International Symposium on Music Information Retrieval*; lead author with Christopher Ariza, pp. 637–42.
- “Modeling Beats, Accents, Beams, and Time Signatures Hierarchically with music21 Meter Objects,” *Proceedings of the International Computer Music Conference*; with Christopher Ariza[*], pp. 216–23.
- Bologna Q15: the making and remaking of a musical manuscript* by Margaret Bent, review for *Notes* 66.3 (March), pp. 656–60.

- 2009 *Ars nova: French and Italian Music in the Fourteenth Century*, edited with John L. Nádas (*Music in the Medieval World Reference Series* vol. 6). London: Ashgate.
Reviewed by Gary Towne, *The Medieval Review*, February 2010.
“Palimpsests, Sketches, and Extracts: The Organization and Compositions of Seville 5-2-25,” *L’Ars Nova Italiana del Trecento* 7, pp. 57–78.
Der Mensural Codex St. Emmeram: Faksimile der Handschrift Clm 14274 der Bayerischen Staatsbibliothek München by Ian Rumbold and Peter Wright, review for *Notes* 65.4 (June), pp. 252–4. (erratum Dec. 2009)
- 2008 “A New Trecento Source of a French Ballade (*Je voy mon cuer*),” in *Golden Muse: The Loeb Music Library at 50. Harvard Library Bulletin*, new series 18, pp. 77–81.
- 2007 “*Esperance* and the French Song in Foreign Sources,” *Studi Musicali* 36.1, pp. 1–19.
- 2006 “Generalized Set Analysis and Sub-Saharan African Rhythm? Evaluating and Expanding the Theories of Willie Anku,” *Journal of New Music Research* (formerly *Interface*) 35.3, pp. 211–19.
- 2005 “Zacara’s *D’amor Languire* and Strategies for Borrowing in the Early Fifteenth-Century Italian Mass,” in *Antonio Zacara da Teramo e il suo tempo*, edited by Francesco Zimei, (Lucca: Libreria Musicale Italiana, 2004 [i.e., 2005]). pp. 337–57 and plates 10–13. Originally read at the eponymous *convegno internazionale di studi*, Teramo, Italy, December 6–8, 2002.
- 2001 “Free Improvisation: John Zorn and the Construction of Jewish Identity through Music,” in *Studies in Jewish Musical Traditions*, edited by Kay Kaufman Shelemay (Cambridge, Mass.: Harvard College Library). pp. 1–31.
- 2000 “Original Sources: Manuscript and Printed,” with Jennifer G. Lee, in *Johann Sebastian Bach, “The Man from Whom All True Musical Wisdom Proceeded,” A 250th Anniversary Exhibition*, edited by Christoph Wolff (Cambridge, Mass.: President and Fellows of Harvard College).
- OTHER PUBLICATIONS
- 2010 “Living in Musical Time,” essay (5500 words) for the Boston Chamber Music Society, Winter Festival and Forum on Musical Time.
- 2008 Completion of Zacara da Teramo’s fragmentary ballata, *D’amor languire*, recorded by Ensemble Micrologus on their disc “Un Fior Gentile.”
- 2006 Program notes for concert of the works of Augusta Read Thomas at Smith College. Also notes on Berio, *Duetti*; Stravinsky, *Concertino*; Debussy, *Sonata* for flute, viola, and harp; and arias from two Bach cantatas.
- 2002–04 Program notes for the Fromm Foundation. Works include Webern op. 27, Knussen op. 24, Copland *Piano Variations*, Ligeti *Cello Concerto*, Scelsi *Anahit*, Murail *Ethers*, Sciarrino *Hérmes*, Carter *Double Concerto*, Davidovsky *Synchronisms 6*, and Crumb *Vox Balaenae*.

COMPLETED, ACCEPTED, AND AWAITING PUBLICATION

- “The Secular Music of the Trecento” and “The Sacred Music of the Trecento,” for the *Cambridge History of Medieval Music* (2012), edited by Mark Everist and Thomas Forrest Kelly.
- “Interoperable Digital Musicology Research via music21 Web Applications,” *Proceedings of the Digital Humanities Conference*, Hamburg, Germany, 2012, lead author with Beth Hadley, Lars Johnson, and Christopher Reyes.
- “Monks, Manuscripts, and Other Peer-to-Peer Song Sharing Networks of the Middle Ages,” in *Cantus scriptus: Technologies of Medieval Song, 3rd Lawrence J. Schoenberg Symposium on Manuscript Studies in the Digital Age*, edited by Lynn Ransom (Piscataway, N.J.: Gorgias Press, 2012).
- “Church Polyphony apropos of some Old Fragments in Rome,” *L’ars nova italiana del Trecento* 8 (2012).
- “Changing Musical Time at the Beginning of the Renaissance (and Today),” in *Renaissance Studies in Honor of Joseph Connors* (Firenze: Olschki, 2012), edited by Louis A. Waldman and Machtelt Israëls.

BOOKS IN PROGRESS

- Credo Scabioso: Italian Sacred Music in the Age of Plague and Schism*, monograph book.
- City, Chant, and the Topography of Early Music*, edited volume in honor of Thomas Forrest Kelly with Sean Gallagher and Christoph Wolff (Cambridge, Mass: Harvard Music Dept., 2012)

INVITED BOOK CHAPTERS

- “Music in the time of Dante,” with Agostino Ziino for the book *Dante in Context* part of the *Cambridge Works of Dante* series, edited by Lino Pertile and Zyg Baranski (2013).

PRESENTATIONS

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- 2012 “Ciconia, Zachara, and the Italianization of European Music around 1400” to be presented at American Musicological Society Meeting, New Orleans, November 6–9.
- “Teaching Musicology in a 2.0 World,” invited presentation for the “Master Teacher Session: Teaching the Discipline, Disciplining the Teacher” at AMS, New Orleans, November 6–9.
- “Corpus Research using the music21 Toolkit,” keynote lecture, Northeast Music Cognition Group semiannual meeting, Yale University, April 28.
- “What were the odds?: Reexamining Early (and not-so-Early) Music with statistical models,” invited lecture by the graduate students, Department of Music, Duke University, 30 March.
- “Understanding Musical Corpora with music21: Completed Tasks and Future Applications,” Workshop on Processing Large Amounts of Musical Information, McGill University, 17 February.
- 2011 “Gothic Survival in Trecento Polyphony,” The Gothic Revolution: Music in Western Europe 1100–1300, Princeton University, 4–6 November.

- “Computational Approaches to Music Theory and Analysis: Overview and Hands-on Tutorials,” Society for Music Theory, 27 October.
- “Computational Musicology and the *Ars Nova*: Four Case Studies using `music21` (with a new French fragment of Polyphonic music),” presented at the Medieval and Renaissance Music Conference, Barcelona, Catalonia, Spain, 4–10 July.
- “Nouvelles découvertes de manuscrits et de nouvelles orientations informatique pour la musique du Trecento et de la Renaissance (New Manuscript Discoveries and New Computational Directions in Music of the Trecento and Early Renaissance)” invited lecture Centres d’Études Supérieures de Renaissance, Tours, France, 22 June.
- “Teaching Music History with Technology (But not for Technology’s Sake)” AMS-NE Chapter Spring Meeting, Providence College, 30 April.
- “Listening Faster: How Digital Humanities is Transforming Music Scholarship,” Harvard–M.I.T. Joint Digital Humanities Forum, with Matthias Röder. 22 April.
- “*Out of the branches, grow many trunks: music21 and the Promise of Linked Data in Early Music*,” Department of Music and e-Research Center, Oxford University, 1 April.
- “Computational Musicology with the `music21` Toolkit,” NYU Music and Audio Research Lab, 4 February.
- 2010 “Where’d All the Songs Go? The Statistical Methodologies Behind *Tipping the Iceberg* and the New View of Early Music,” Boston Renaissance Musicology Colloquium Series (Boston University), 23 November.
- “Studying *Musica Ficta* and Early Renaissance Canons with the `music21` Toolkit,” Lila Wallace/Reader’s Digest Founder’s Lecture in Renaissance Studies, Harvard University (Digital Humanities Forum), 22 November.
- “Monks, Manuscripts, and Other Peer-to-Peer Song Sharing Networks of the Middle Ages,” invited lecture for the Schoenberg Symposium on Manuscript Studies, University of Pennsylvania, 19–20 November.
- “Modeling Musical Structures as Objects in `music21`,” for the Society for Music Theory/American Musicological Society annual conference, Indianapolis, 4–7 November, with Christopher Ariza.
- “From Ancient Greece to Kendall T: The Musical Legacy of Pythagoras,” MIT Council for the Arts annual meeting, 27 October.
- “`music21`: Music Informatics for Music Cognition,” Northeastern Music Cognition Group, 23 October.
- “An idea whose time has come,” interview about parallels between evolutionary theory and musical development. BBC Radio, October 7.
- “New (and Old) Motets and Mass Movements from Central Europe, Italy, and Beyond,” for the 10th International Symposium on Late Medieval and Early Renaissance Music, Novacella, Italy, 28 June–3 July.

- “Polifonia italiana fra fine Trecento e primo Quattrocento: nuove metodologie e conclusioni,” invited lecture Università di Roma, “La sapienza,” 17 May.
- Organizer and Panelist on “Time and the Structure of Music” for the Boston Chamber Music Society, Winter Festival and Forum on Musical Time (9 January). Followed by a more specialized lecture, “Repeating Time: Minimalism and the Structure of Reich’s *Four Organs*,” 11 January.
- 2009 “Fragments, Computer Technology, and the New Music History of the Era of Plague and Schism,” Villa I Tatti, Florence, Italy, November 5.
- “The Trecento Gloria,” *Beyond 50 years of Ars Nova Studies at Certaldo*, International Conference 12–14 June.
- “The English Countenance before the English: ‘Fifteenth-century’ style traits in fourteenth-century Italy,” invited paper, *John Dunstaple (ca. 1390–1453): English Polyphony in Fifteenth-Century Italy*, fondazione Giorgio Cini, Venice 23 May.
- “Manuscript Destruction and Content Reconstruction in Early Fifteenth-Century Music,” invited paper, *Palimpsests in Perspective*, American Academy in Rome, 6 March.
- “Musical Artifacts in Unlikely Places: Rare Chant Sources in the MIT Library Collection,” special event at the Lewis Music Library at M.I.T. on the occasion of new donations of chant manuscripts and early printed books at M.I.T. 3 March. (online: <http://mitworld.mit.edu/video/653/>)
- 2008 “Italian Sacred Music during the Great Schism in Light of New Discoveries,” American Musicological Society Meeting, Nashville, November 6–9.
- “Modeling Music(ology) with Computer Algorithms,” invited presentation for a panel sponsored by the Committee on Career-Related Issues, AMS Nashville, November 7.
- “Computer-Aided Music Analysis and the music21 Platform” invited lecture, UNC Greensboro Composition, History, and Theory Music Forum, November 12. Also gave a second lecture, “The Clarinet’s Role in Shaping the Aesthetic(s) of Contemporary Music” to the UNCG clarinet studio.
- “L’uso del computer e statistica nello studio dell’ars nova,” guest lecture, “Corso di Perfezionamento in L’ars Nova in Europa,” Università degli Studi di Roma, “Tor Vergata,” Certaldo, June 19. (Reprised 2009)
- “*Ubi sunt? Hic!* The End of Nostalgia and the Appreciation of the Present in late Medieval Music,” invited talk New College of Florida, March 8.
- 2007 “Ambiguity, Process, and Information Content in Minimal Music,” M.I.T. Comparative Media Studies colloquium, invited lecture, April 19.
- “Geek Musicology: the Increasing Use of Computers, Statistics, and other Quantitative Techniques in Empirical Music Research,” presentation to the Burchard Scholars, M.I.T., March 7.
- 2006 “Schisms, Papal Visits, and The Ars Nova Traditions of Cividale,” presentation at Harvard University, 8 December.

- “A New Source and a Reassessment of the Paduan Fragments and their Context,” presented at the annual meeting of the American Musicological Society in Los Angeles, November.
- “The Music of John Dunstable,” Pre-concert lecture for Blue Heron Renaissance Choir, November 11.
- “Le fonti padovani e loro relazioni: interiore e con gli altri frammenti italiani,” presented at *I frammenti musicali padovani tra Santa Giustina e la diffusione della musica in Europa*, Padua, Italy, June 15.
- “Ambiguity, Near Equality, and the Remains of Serial Organization in Glass’s *Einstein on the Beach* and other Minimalist Works,” invited lecture at Listaháskóli Íslands, Reykjavik, January 20. Also conducted a workshop, “Learning Medieval Notation from Medieval Manuscripts,” January 21.
- 2005 “New Concordances and New Forms of Participation: Preliminary Results and Design Considerations for Expanding Trecento Databases,” presented at *Dolci e nuove note: Convegno internazionale del Centro Studi sull’Ars nova italiana del Trecento*, Certaldo, Italy, December 17–19.
- “On Popularity in the Trecento and Zacara’s Popularity in Particular,” presented at the Medieval and Renaissance Music Conference, Tours, France, July 13–16.
- “Help! There’s Music in my Manuscript,” invited lecture for the Summer Seminar on Medieval Paleography at the American Academy in Rome, Christopher Celenza, director, July 11.
- “Ambiguity and Certainty in Minimalist Processes,” presented at the International Conference on Music Analysis, Dublin, June 23–25.
- “Counting Our Losses: The Missing Polyphonic Works of the Trecento,” presented at Musicology at Kalamazoo, International Congress on Medieval Studies, May 5–8.
- 2004 “Set Analysis, West African Music, and the Theories of Willie Anku,” presented as part of the conference “Approaches to Analysis and Music Theories in Ethnomusicology,” EthNoise! conference University of Chicago, May 21–22. (Pub. 2006)
- 2003 “Why Simple Polyphony Matters,” paper read at the Seminari Internazionali Estivi “Jacopo da Bologna,” Dozza, Italy, July 8–13.
- 2002 “Zacara’s *D’amor Languire* and Strategies for Borrowing in the Early Fifteenth-Century Italian Mass,” presented at the Convegno internazionale di Studi, *Antonio Zacara da Teramo e il suo tempo*, Teramo, Italy, December 6–8. (See above under 2005 for publication)
- “Some Observations Concerning the Paduan Fragment ‘Pad A’ as Part of the Manuscript Context of Bologna Q 15,” paper read at the Seminari Internazionali Estivi “Jacopo da Bologna,” Dozza, Italy, July 8–13.
- 2000 “Minimalist Resources for Maximalist Composers,” presentation for the Harvard Group for New Music composition forum, December 4.
- “Fragments and the New History of the Trecento” presentation at Eastman School of Music (2007), Columbia University (2007), M.I.T. (2006), University of South Carolina (2006), Hope College (2005)

TEACHING

Quantitative and Computational Studies of Music History

Interdisciplinary seminar, developed after a grant (\$22,800) from the SHASS fund for teaching and learning (2012)

Early Music (800–1680)

Seminar focusing on four important areas of research: chant, trecento, English Renaissance, and early baroque Venice, M.I.T. (2007, '08, '09, '10, '11)

Three Upper-division undergraduate lecture/seminars at M.I.T. on Music after 1900:

Stravinsky to the Present (2011)

Music from 1900–1960 (2006, '07)

Music after 1960 (2007, '08)

Harmony and Counterpoint I

First semester of a four-semester theory course for music majors. M.I.T. (2006, '07, '09)

Music at the End of the Middle Ages: Italy and France in the Fourteenth Century

Upper division undergraduate seminar at Mount Holyoke College (2005)

Composing Music in the Age of Process

Introductory seminar for music majors at Smith College, focusing on serialism, aleatory, and minimalism. (2005)

Music from the “Pre-classical” to the Present

Lecture course given at Smith and Mount Holyoke Colleges (2006)

Introduction to music **for non-majors** (800–1800). Harvard. (2002; Teaching Fellow).

Introduction to Music History **for music majors** (including non-Western) and methods in Musicology. Harvard. (2000–01; Teaching Fellow in a tutorial setting).

Advisor to individual studies on **JavaScript-based music rendering** (2012), **music theater composition** (2011), **automated figured bass composition** (2011), and **contemporary violin repertoire** (2006).

Excellence in Teaching Award (Committee on Undergraduate Education, Harvard) every semester at Harvard; given to the top 15–20% of teaching fellows and assistants. Average student evaluation of 6.5 out of 7 across all classes at MIT.

PROFESSIONAL ACTIVITIES AND SERVICE

At M.I.T.:

Music21 Research Lab: run a software development laboratory at M.I.T. creating new tools for music analysis and musicology research, supported by major research grants from the Seaver Institute and the National Endowment for the Humanities/Digging into Data Research Challenge (see below).

EMMSAP: Electronic Medieval Music Score Archive Project (“em-sap”), Principal Investigator (Anna Kathryn Grau, project manager); project to create searchable digital versions of all fourteenth-century musical pieces and fragments. Supervise and coordinate four independent scholar/contractors on a budget of \$20,000 (2012–present)

Music Major Advisor and **Undergraduate Academic Officer** (since 2010)

SHASS Education Advisory Committee: Committee on undergraduate education in the School of Humanities, Arts, and Social Sciences (2011–present)

Austin Kelly Essay Prize reader (2009)

Library Committee M.I.T. Music and Theater Arts section, Chair (since 2007)

Technology Committee M.I.T. Music and Theater Arts section (since 2008)

Oral History Project Committee M.I.T. Lewis Library (since 2010)

Bang-on-a-Can Residency Committee (term: 2010–2012)

MIT Wind Ensemble mid-concert lecture demonstration about Gordon Jacob's *William Byrd Suite* (2012 Spring)

M.I.T. Internal Grants:

MISTI (MIT-International Science & Technology Initiative) Germany Seed Fund for “Analytical Approaches to Large-Scale Databases of Musical Scores,” with Ludwig-Maximilians-Universität, Munich; \$29,260, 2011.

“**MOSS: the Mobile Sound Studio for Teaching and Learning at MIT.**” Project for introducing recording to the MIT curriculum; \$40,000, 2011.

Quantitative and Statistical Methods for Studying Music History, SHASS Fund for Teaching and Learning innovation grant, \$22,800, 2011

Beyond M.I.T.:

Electronic Locator of Vertical Interval Successions (ELVIS): Digging into Data Challenge Grant funded by the NEH (\$175,000; Cuthbert P.I. with Ian Quinn, Yale, Co-Investigator), AHRC/ESRC/JISC and SSHRC (~\$500,000 total) (2012–14).

DIAMM (Digital Image Archive of Medieval Music), member, Board of Directors (since 2010; member of the Advisory Board since 2007).

AMS-New England, organizer of 2012 Winter meeting at MIT. Program committee (2012–14)

AMS/MLA RISM Committee, joint committee of the American Musicological Society and the Music Librarian's Association overseeing the project *Répertoire Internationale de Sources Musicale* (since 2011).

SIMSSA, Single Interface for Music Score Searching and Analysis: Advisory Board (2011–14)

Josquin Research Project: Advisory Board: <http://jrp.ccarh.org/> (since 2011)

Conference Organizer, “City, Chant, and the Topography of Early Music,” Harvard University (2009).

American Musicological Society, Administrator for Facebook and digital communications (2012–).

Referee Reader for *International Symposium for Music Information Retrieval* (2011, '12), *Journal of Interdisciplinary History* (2009), *Journal of Popular Music* (2006) and two books by W.W. Norton (2010, '12).

Centro Studi sull'Ars Nova Italiana del Trecento, member of the Advisory Board (since 2007).

Prepared indices of chants, manuscripts, and other terms, for five hundred page volume, *Western Plainchant in the First Millennium: Studies in the Medieval Liturgy and Its Music* (James McKinnon Festschrift), edited by Sean Gallagher, et al. (Aldershot, England: Ashgate, 2003).

Planned and installed computers and digital manuscripts for the 2003 international seminar on trecento music at Dozza, Italy. Designed from overseas a lab of six interconnected computers including image manipulation software and over 8,000 pages of on-line .pdf reserves to allow teams to reconstruct the manuscript, San Lorenzo 2211.

Co-organizer of the conference, “Progressions, Regressions, and Digressions,” with Jeannie Guerrero, Harvard University, February 28–March 1, 2003. Chaired paper selection team.

Colloquium organizer for the invited faculty lecture series organized by graduate students, 1999–2001.

Notation Seminar: authored and led a one-day workshop on advanced Finale software for musicologists, theorists and composers (2002). Topics included embedding notation in academic papers and creating Schenker graphs. Engraved Beethoven sketchbook pages, preserving layout.

Graduate Music Forum, faculty meeting representative and social chair (1999–2003). Organized renovation of graduate student computer facilities, on-line music reserves, and outings. Graphic design and publicity for many Harvard Group for New Music events.

RELATED SKILLS

Composer: Compositions in a variety of media. Selected works include *Vasarely Patterns* for the Bang on a Can All-Stars (2002), *Two Etudes for Solo Viola* (2001; violin version 1999 rev. 2005), and *in this cold winter* for string quartet (1998). Current projects include a clarinet sonata with live electronics (Max/MSP) and a large-timescale electro-acoustic space with music21. Teachers include Mario Davidovsky, Judith Weir, and Michael Gandolfi.

Languages: Italian (lived and studied in Italy 3 years plus 2 semesters), German (1 college semester, 8 secondary school), French (2 semesters, primarily reading) and Latin (2 semesters).

Performer: Clarinet (including A \flat soprano, E \flat , and bass). Groups include the Dudley House (Graduate Student) Traditional Music Ensemble and the Bach Society Orchestra.

Font Designer: medieval music and clarinet fingering fonts released on-line and have appeared in several publications.

Conductor: Toscanini Chamber Orchestra (40 members), Harvard University, 1995–96.

Programmer and Graphic Design Consultant: National Bureau of Economic Research (www.nber.org), developed web-related systems for the largest non-profit economic research organization (1998–2009). Harvard University Library, 1998–2000. Particular fluency with Python, Perl, Photoshop, JavaScript, Apache, Ajax, REST, XML, and SQL. Web: www.trecento.com

REFERENCES

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