

Carla Scaletti

President, Symbolic Sound Corporation carlascaletti.com | symbolicsound.com

Education

- **Doctor of Musical Arts**, University of Illinois at Urbana-Champaign (1984)
 - Thesis: *Factors contributing to the characteristic timbre of harp tones*
 - Composition: *Lysogeny*, for harp and computer-generated electronics
 - Major: Music composition, Minor: Psychoacoustics
 - **Master of Computer Science**, University of Illinois at Urbana-Champaign (1988)
 - Thesis: *Kyma: an interactive graphic environment for object-oriented music composition and real-time software sound synthesis written in Smalltalk-80*
 - **Master of Music**, Texas Tech University (1979)
 - Thesis: *Waves: Concerto for Harp and Percussion Ensemble*
 - **Bachelor of Music, Magna cum laude**, University of New Mexico (1977)
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Experience

- **President / Co-founder**, Symbolic Sound Corporation (1989–Present)
 - Software design and development, marketing, sound design, documentation, and user support for the Kyma sound design environment.
- **Research Associate**, CERL Sound Group, University of Illinois (1984–1994)
 - Data sonification research with NCSA; sound consultant for NCSA Virtual Reality Lab; leading the Intensive Workshop in Sound Computation; music-related software development for Macintosh and PLATO platforms.
- **Adjunct Assistant Professor**, University of Illinois School of Music (1992–1994)
 - Advising graduate composition students; co-investigator on computer improvisation research with Salvatore Martirano, Bill Walker, Kurt Hebel. Organizing weekly Seminars in Sound Computation.
- **Visiting Assistant Professor**, University of Illinois School of Music (1983–1984)
 - Teaching computer music, 20th century music, 18th century counterpoint; Organizing of weekly seminar on computer music and Composers' Forum.
- **Teaching Assistant**, University of Illinois School of Music (1982–1983)
 - Teaching freshman and sophomore music theory and ear training courses.
- **Graduate Assistant**, Experimental Music Studio, University of Illinois (1982–1983)
 - Assisted in construction and wiring of Synclavier-based studio; maintenance of electronic music studios.
- **Research Assistant**, Psychology Department, University of Illinois (1981)
 - Developed electronic sounds to enhance hypnosis for chemotherapy patients
- **Teaching Assistant**, Texas Tech University (1978–1979)
- **Principal Harpist**, New Mexico Symphony Orchestra (1978–1979)

- **Principal Harpist**, Lubbock Symphony Orchestra (1974–1978)
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Honors and Awards

- **2025 Sonification Award** in the data analysis category.
 - **The SEAMUS Award (2017)**: Awarded by the Society for Electro-Acoustic Music in the United States for important contributions to the field.
 - **The 2017 Sound Award** from the Women’s International Film and Television Showcase (WIFTS).
 - **Listeners’ Choice Award (2009)**: For *SlipStick* for Kyma & Continuum fingerboard (SEAMUS).
 - **Distinguished Alumnae Award (2003)**: Texas Tech University.
 - **Editors’ Choice Award (1998, 2001, 2005)**: *Electronic Musician Magazine* (for Kyma).
 - **Commission Award (1995)**: International Computer Music Association.
 - **Multimedia Award & 10th Anniversary Award (1991)**: Nicograph.
 - **Fellowship (1988)**: Apple Computer InterUniversity Consortium on Educational Computing.
 - **University of Illinois Academic Fellowship (1980)**: Full tuition waiver.
 - **Percussive Arts Society Composition Contest Prize (1980)**.
 - **University of Illinois Academic Fellowship (1979)**.
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Invited Keynotes & Plenary Panels

- **Sonic Cartography: Navigating the Abstract Space-Time of Sound** (2024). *Audio Developer Conference (ADC)*, Bristol, UK.
 - **Why Sonification is a Joke** (2017). *23rd International Conference of Auditory Display (ICAD)*.
 - **New ways to play: visionary designers on their instruments** (2015). Carla Scaletti (Kyma), Gerhard Behles (Ableton Live), Roger Linn (LinnStrument) and Stephan Schmitt (Native Instruments) in conversation with Dennis DeSantis (author of *Making Music*) at the Ableton Loop Conference, Berlin.
 - **Looking forward, looking back** (2015). *41st International Computer Music Conference (ICMC)*.
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Publications: Journal Articles

- **Scaletti, C., Hebel, K.J., & Gruebele, M.** (2026 In Press). Auditory Analytics for pattern discovery in protein folding dynamics. *Journal of Chemometrics*, 40(2), e70097.
- **Chen, W., Gruebele, M., Havenith, M., Hebel, K.J., & Scaletti, C.** (2026). Water-mediated hydrogen bonds and local side-chain interactions in the cooperative collapse and expansion of PNIPAM oligomers. *Proceedings of the National Academy of Sciences*, 123(6), e2523755123.

- **Scaletti, C., Russell, P.P.S., Hebel, K.J., Rickard, M.M., Boob, M., Danksagmüller, F., Taylor, S.A., Pogorelov, T.V., & Gruebele, M.** (2024). Hydrogen bonding heterogeneity correlates with protein folding transition state passage time as revealed by data sonification. *Proceedings of the National Academy of Sciences*, 121(22), e2319094121.
- **Scaletti, C., Rickard, M.M., Hebel, K.J., Pogorelov, T.V., Taylor, S.A., & Gruebele, M.** (2022). Sonification-Enhanced Lattice Model Animations for Teaching the Protein Folding Reaction. *Journal of Chemical Education*, 99(3), 1220-1230.
- **Scaletti, C.** (2017). Letters to the Editor. *Computer Music Journal*, 41(1), 10.
- **Scaletti, C.** (2016). Looking Back, Looking Forward: a Keynote Address for the 2015 International Computer Music Conference. *Computer Music Journal*, 40(1), 10-24.
- **Scaletti, C.** (2002). Computer Music Languages, Kyma, and the Future. *Computer Music Journal*, 26(4), 69-82.
- **Scaletti, C.** (1996). Reflections on the 20th Anniversary of CMJ. *Computer Music Journal*, 20(3), 31-35.
- **Scaletti, C.** (1989). The Kyma/Platypus Computer Music Workstation. *Computer Music Journal*, 13(2), 23-38.
- **Scaletti, C.** (1989). Composing Sound Objects in Kyma. *Perspectives of New Music*, 27(1), 42-69.
- **Scaletti, C.** (1985). The CERL Music Project at the University of Illinois. *Computer Music Journal*, 9(1), 45-58.

Publications: Books & Book Chapters

- **Scaletti, C.** (2018). Sonification \neq music. In A. McLean & R. Dean (Eds.), *The Oxford Handbook of Algorithmic Music*. New York: Oxford University Press.
- **Scaletti, C.** (2007). Metaphor in Mathematics and Sound. In M. Emmer (Ed.), *Matematica e Cultura 2007*. Milano: Springer-Verlag.
- **Scaletti, C.** (2004). *Kyma X Revealed: Secrets of the Kyma Sound Design Language*. Symbolic Sound Corporation.
- **Scaletti, C.** (2002). *Kyma.5 Walkthrough: A Tutorial Introduction to Kyma.5*. Symbolic Sound Corporation.
- **Scaletti, C.** (1997). *The Kyma Language for Sound Design: Version 4.5*. Symbolic Sound Corporation.
- **Scaletti, C.** (1994). Sound Synthesis Methods for Auditory Data Representation. In G. Kramer (Ed.), *Auditory Display: Sonification, audification, and auditory interfaces*. Santa Fe Institute Studies in the Science of Complexity: Addison-Wesley.
- **Scaletti, C.** (1991). Using Sound to Extract Meaning from Complex Data. In E. J. Farrell (Ed.), *Extracting Meaning From Complex Data: Processing, Display, Interaction II* (Vol. 1459). SPIE.
- **Scaletti, C.** (1991). An Object-based Representation for Musical Signals. In G. De Poli, C. Roads, & A. Piccialli (Eds.), *Representations of Musical Signals* (pp. 371-389). MIT Press.

- **Scaletti, C.** (1991). The Kyma/Platypus Computer Music Workstation. In S. Pope (Ed.), *The Well-tempered Object: Musical Applications of Object-oriented Programming* (pp. 119-140). MIT Press.

Publications: Conference Proceedings

- **Scaletti, C.** (2017). Why Sonification is a Joke. *Proceedings of the 23rd International Conference on Auditory Display (ICAD)*. University Park, PA.
- **Scaletti, C.** (1994). A Framework for the Design, Development, and Delivery of Real-time Software-based Sound Synthesis and Processing Algorithms. *Proceedings of the 1994 Audio Engineering Society 97th Convention*.
- **Scaletti, C.** (1993). The Software Architecture of the Kyma System. *Proceedings of the 1993 International Computer Music Conference*.
- **Scaletti, C.** (1992). Polymorphic Transformations in Kyma. *Proceedings of the 1992 International Computer Music Conference*.
- **Scaletti, C.** (1991). Lightweight Classes Without Programming. *Proceedings of the 1991 International Computer Music Conference*.
- **Scaletti, C.** (1988). An Interactive Graphic Environment for Object-oriented Music Composition and Sound Synthesis. *Proceedings of the ACM OOPSLA Conference*, 222-233.
- **Scaletti, C.** (1987). Kyma: an Object-oriented Language for Music Composition. *Proceedings of the 1987 International Computer Music Conference*, 49-56.

Publications: Online Essays and Reviews

- **Scaletti, C.** (2015). Art and Science: an interdisciplinary workshop in Geneva. *Ear to the Earth*.
- **Scaletti, C.** (2015). Sonification of the world. *Ear to the Earth*.
- **Scaletti, C.** (2010). Music and the flow of meaning. Review of Mark Johnson's *The Meaning of the Body: Aesthetics of Human Understanding*.

Publications: Software

- **Kyma 7** (2015-2026). Sound design environment.
- **Kyma X** (2004-2015). Sound design environment.
- **Kyma.5** (2000). Sound design environment.
- **Kyma 4** (1990s). Sound design environment.

Selected Invited Lectures & Workshops (2017-2025)

- **Hear Your Data: A Hands-On Data Sonification Workshop** (2025) University of Oregon.

- **Machine Learning & real-time inference in data-driven instrument design (2025)** University of Oregon.
- **Generative Sound Design (2025)** University of Oregon.
- **Auditory Analytics for Scientific Exploration & Discovery (2025)**. Sonification for Research: Techniques, Efficacy, and Applications (SoniTEA) workshop at Flatiron Institute, New York City.
- **Digital Sound Synthesis (2024)**. Seminar for the R&D team at DiGiCo, London.
- **Generative Sound Design in Kyma (2024)**. University of West London.
- **Misfold: a piece for hyper-organ inspired by scientific concepts (2024)**. ORGELPARK Amsterdam.
- **The Improbable Dance of Living Forms: Science-Art Collaborations (2023)**. Org_Art_Lab, Hamburg.
- **Mapping Numbers to Sound—From Scientific Exploration to Immersive Musical Experience (2022)**. Center for Advanced Study, University of Illinois.
- **Neuromusic—Propositions from an Art-Science Convergence (2022)**. Panel discussion at Center for Advanced Study, University of Illinois.
- **Active Listening: Your Secret Superpower (2022)**. GiMaT Summer School, University of Michigan.
- **Making the Invisible Audible (2021)**. 15th International Composers' Forum, Poznań, Poland.
- **Design Patterns for live performance (2021)**. Week-long intensive at SPLICE Institute, Western Michigan University.
- **Emergence: Live performance as computation (2021)**. SPLICE Institute, Western Michigan University.
- **Data, Data, Everywhere (2020)**. CCM, University of Cincinnati.
- **Sounds of Busan: Workshop on Data Sonification (2019)**. KISS 2019, Busan, South Korea.
- **Three Ways of Meaning-Making with Sound (2018)**. Design Research Lecture Series, Urbana, IL.
- **Design Patterns for Sound and Music (2018)**. MUS517 Spring Semester Course, University of Illinois.
- **Dissecting Double-well and Bubble & Squeak (2017)**. University of Oregon.
- **Emergence: dynamical systems, sync & sound design as computation (2017)**. University of Oregon.
- **Sound design strategies in Kyma (2017)**. University of Oregon.
- **Looking back, looking forward (2017)**. University of Oregon.

Invited Lectures & Workshops (1991–2016)

- **Ask, Recombine, Tumble (ART) (2016)**. Virginia Tech University.
- **Tracing Computer Music back to Prehistoric Times (2016)**. Virginia Tech University.
- **Data sonification ≠ music (2016)**. New York University Department of Music Colloquium.
- **Panel Discussion on Music and Technology (2016)**. Stony Brook University.

- **Emergence / What's new in Kyma 7.1 / Design Patterns** (2016). Kyma International Sound Symposium, De Montfort University, UK.
- **Kyma 7 for Sound Designers** (2016). Skywalker Sound Studio, Skywalker Ranch.
- **Data-driven: How scientific data-sonification changed the way I think about music** (2016). University of California Santa Cruz.
- **Inspiration and sound design in Kyma 7** (2016). University of California Santa Cruz.
- **What scientific data sonification taught me about music** (2016). The Barlow Lecture, Brigham Young University.
- **The Music for QUANTUM** (2015). Cinema Spoutnik, Geneva Switzerland.
- **New ways to play: visionary designers on their instruments** (2015). panel discussion with Carla Scaletti (Kyma), Gerhard Behles (Ableton Live), Roger Linn (LinnStrument) and Stephan Schmitt (Native Instruments) in conversation with Dennis DeSantis (author of *Making Music*) at the Ableton Loop Conference, Berlin.
- **Picturing Sound (First Contact)** (2015). Kyma International Sound Symposium, Montana State University.
- **Data sonification, Music, and Meaning** (2015). Rensselaer Polytechnic Institute.
- **What is the most organic sound?** (2014). Kyma International Sound Symposium, Lübeck.
- **Data-driven Sound** (2014). University of Virginia.
- **Seminars on data-sonification and Kyma 7** (2014). New York University Steinhardt.
- **Composers Forum on Data Sonification** (2014). University of Illinois School of Music.
- **Morphisms, Maps, Meaning and Magritte** (2013). Kyma International Sound Symposium, Brussels.
- **Guest Artist at Future Music Oregon** (2013). Concert, lectures, and workshop, University of Oregon.
- **Reel time versus Real Time / Sound Design Workshop** (2012). Kyma International Sound Symposium, St Cloud State University.
- **Intensive Kyma seminar for composers** (2011). Brandeis Electro-Acoustic Music Studio.
- **Exploring Sound Space** (2011). Kyma International Sound Symposium, Porto, Portugal.
- **Pre-conference workshop on Kyma** (2010). SEAMUS Conference St Cloud.
- **Sound for Dance Workshop** (2010). Gilles Jobin's GVA Sessions, Geneva.
- **Music is not a language** (2010). Kyma International Sound Symposium, Vienna.
- **Composers' Forum** (2009). Brooklyn College Conservatory of Music.
- **Kyma, Pacarana and mapping to external controls** (2009). Electronic Music Foundation Studio, Manhattan.
- **Exploring 2-d parameter space with the Wacom tablet** (2009). SEAMUS conference, Ft Wayne.
- **Recombination makes us human** (2009). Kyma International Sound Symposium, Barcelona.
- **Guest composer** (2008). Future Music Oregon, University of Oregon.
- **Athens Electromedia Works Festival** (2008). Athens, Greece.
- **Seminar on composition with Kyma** (2008). Ionian University, Corfu, Greece.

- **Annual 30-hour course in sound-based music composition** (2001-2007). CCMIX Paris.
- **Sound design in Kyma** (2006). Northwestern University.
- **Metaphor in Mathematics and Sound** (2006). Matematica e Cultura, Venice.
- **The Body in the Sound** (2005). Laboratory for Creative Arts & Technologies, Baton Rouge.
- **Three-day Seminar on Sound Design** (2004). Ionian University, Corfu.
- **London Kyma Users' Group Seminar** (2003). Tape Gallery, London.
- **Kyma Workshop** (2002). University of West London.
- **Invited concert and lecture** (2002). Keele University, UK.
- **Aggregate Synthesis** (2002). SEAMUS, Iowa City.
- **The Body in the Sound** (2002). De Montfort University, Leicester.
- **Aggregate Synthesis & FireWire** (2001). 10-city tour.
- **Kyma.5 in Electroacoustic Composition** (2001). SEAMUS, Baton Rouge.
- **Intensive Workshop on Sound Design** (2000). DIEZE Studios, Paris.
- **Guest composer** (2000). KTH, Cologne; LoveBytes, Sheffield.
- **Guest Professor** (1999). Institut für Electroakustik, Vienna.
- **Guest Composer** (1999). University of Oregon.
- **Kyma.5 Recombinant Sound** (1999). Engine 27, NYC.
- **Public Organ** (1996). Bruckner Conservatory, Linz.
- **Kyma: A Language for Creating and Manipulating Sound** (1996). Musikhochschule Vienna; University of Kingston London.
- **Sounds, Symbols, and Cyborgs** (1996). Alte Schmiede, Vienna.
- **Guest Composer** (1995). NoTAM, Oslo.
- **An Object-based Representation for Digital Audio Signals** (1995). Microsoft, Redmond.
- **A Language for Digital Audio Signals** (1994). University of Chicago.
- **Kyma 2.0 for Windows** (1993). SEAMUS, Austin.
- **Introduction to Data Sonification** (1993). ACM SIGGRAPH tutorial course.
- **Advanced Kyma Workshop** (1992). EMS, Stockholm.
- **Dartmouth College Graduate Timbre Seminar** (1992).
- **Sound Synthesis Methods for Auditory Data Representation** (1992). Santa Fe Institute.
- **The Kyma System** (1991). Acoustical Society of America, Houston.
- **Intensive Workshop in Sound Computation** (1991-1993). University of Illinois.

Organizational Experience

- **Kyma International Sound Symposium (KISS) co-organizer** (2009–2019). Collaborate on theme, call for participation, program, and keynote.
 - **KISS 2019: Resonance**. Busan, South Korea.
 - **KISS 2018: Altered States**. Santa Cruz, CA.
 - **KISS 2017: Augmenting Reality**. Oslo, Norway.

- **KISS 2016: Emergence.** De Montfort University, UK.
- **KISS 2015: Picturing Sound.** Montana State University.
- **KISS 2014: Organic Sound.** Musikhochschule Lübeck.
- **KISS 2013: INTER faces.** Brussels.
- **KISS 2012: Reel Time vs Real Time.** St Cloud State University.
- **KISS 2011: Exploring Sound Space.** Casa da Música, Porto.
- **KISS 2010: Symbolic Sound.** Vienna.
- **KISS 2009: Kyma.** Barcelona.
- **Café Sci Organizer** (2006). Champaign, Illinois.

Advising & Peer Review

- **Advisory panel member**, “Sonification: a tool for research, outreach and inclusion in space sciences” in support of full and equal participation of persons with disabilities in the space sector,” United Nations Office for Outer Space Affairs, (2023)
- **Advisory panel member**, “Accessible Oceans: Exploring Ocean Data through Sound,” Bower, A., J. Bellona, J. Roberts, and L.M. Smith. National Science Foundation Grant #2115751 (2021)
- **Editorial Advisory Board**, *Computer Music Journal* (2016–Present)
- **Paper reviewer**, *International Conference on Digital Effects DAFx* (2024–Present)
- **Paper reviewer**, *Audio Engineering Society AI & Machine Learning in Audio* (2025)
- **Paper reviewer**, *International Computer Music Conference* (1994–2001, 2014–Present)
- **Paper meta-reviewer**, *New Instruments for Musical Expression* (2016–Present)
- **Paper reviewer** ACM SIGGRAPH (1994), NSF (1992).
- **Thesis Committee Member**: Senem Pirlir (RPI, 2016); Mark Ballora (McGill, 1995); Bill Walker (1994).

Compositions & Performances

- **misfold** (2023). For Franz Danksagmüller and the Hyper-organ at St.-Nikolai-Kirche with live Kyma electronics. (Future Music Oregon 2025; Orgelpark Amsterdam 2024; org_art_lab Hamburg 2023).
- **Rupture** (2019). For Kyma with iPad controller. (Future Music Oregon 2025; KISS 2019 Busan; Cube Fest Virginia Tech).
- **VR_I** (2018). 3D Music & Sound Design for choreographer Gilles Jobin. (Venice Film Festival; Sundance Film Festival).
- **Wí Shpá, A journey in bare feet** (2018). Data-driven score for choreographer Minerva Muñoz. (Espuma Cuántica Dance Festival, Mexico).
- **Bubble and Squeak** (2017). For performer processed through Kyma. (Future Music Oregon; SEAMUS Award Concert).
- **h->gg (QUANTUM suite)** (2017). (SEAMUS Award Concert; μ - ψ Concert St Louis).
- **The Strip of Möbius** (2017). Live improvisation with Rich O'Donnell and Anna Lum.
- **Double-well** (2017). For audience processed through Kyma.

- **Conductus** (2014). For pipe organ, Kyma and three singers in tap shoes.
- **QUANTUM** (2013). Score for choreographer Gilles Jobin's CERN-inspired dance piece.
- **Spider Galaxies** (2011). Score for Gilles Jobin.
- **...odd kind of sympathy** (2011). For audience processed through Kyma.
- **SlipStick** (2008). For Continuum fingerboard controlling Kyma.
- **Cyclonic** (2008).
- **Frog Pool Farm** (2002).
- **Lament** (1999). For narrator processed through Kyma.
- **Tangled Timelines** (1999). For Celtic harp and Kyma.
- **Public Organ** (1995). Networked sound art installation.
- **Mitochondria** (1994).
- **Trinity** (1989). For narrator processed through Kyma.
- **sunSurgeAutomata** (1987).
- **Levulose** (1986). For double-bass and CERL Interactive Music System.
- **X Bar** (1986). For piano and CERL Interactive Music System.
- **Lysogeny** (1983). For concert harp and tape.
- **Blood Wedding** (1982). Incidental music for Garcia Lorca's play.
- **Yes** (1981). For mezzo soprano and Buchla-generated tape.
- **Motet** (1977). For mezzo soprano, bass clarinet, harp, and narrator.

Recordings

- **sunSurge Automata**. *CDCM Computer Music Series, Vol. 3*, Centaur CRC 2045 (1989).
- **Lysogeny**. *25th Anniversary of the Experimental Music Studios of the University of Illinois* (1984).
- **Motet**. Opus One Records Number 42 (1977).
- **Ragwyrk**. Opus One Records Number 50 (1979).
- **thank you god for most this amazing**. Opus One Records Number 34 (1977).

Selected Bibliography & Media Coverage

- **The Science is Sound** (2025) by Pallab Roygupta, *Shaastra*, Vol. 04, Issue 06.
- **Encoding Sound: Perspectives on Cultural Bias in Music Software Design** (2024) by Andrew Telichan-Phillips, *Computer Music Journal*, Vol. 48, No. 3.
- **From Symphony to Structure: Listening to Proteins Fold** (2024) by Rohini Subrahmanyam *The Scientist*, August 21, 2024.
- **Hearing proteins fold** (2024) by Pallab Roygupta, *Shaastra*, Vol. 03, Issue 05
- **The Sounds of Data** (2024). *Physics Magazine* podcast with host Julie Gould.
- **Scientists are turning the process of protein folding into sound** (2024) by Payal Dhar, *C&EN Chemical & Engineering News*, Vol. 102, Issue 17.

- **What Scientists can learn by turning their data into sounds** (2023). *Los Angeles Times* first page article by Sumeet Kulkarni featuring Martin Gruebele's work with Carla Scaletti.
- **The Science of Sound** (2023). *The Show About Science* podcast interview with host Nate Butkus.
- **A Complex and Interactive Network: Carla Scaletti, the Kyma System, and the Kyma User Community** (2019). Doctoral dissertation by Madison Heying, University of California, Santa Cruz.
- **Musicians join scientists to explore data through sound** (2017). Quoted in PNAS, vol. 114 no. 18.
- **Hearing the Music of Our Spheres** (2017). Paper by Madison Heying, Society for American Music.
- **The Sense of Beauty** (2017). Interview in documentary film on CERN.
- **The Coding of Community** (2016). Paper by Madison Heying, AMS/SMT Conference.
- **Art + Music + Technology Podcast 132** (2016). Interview with Darwin Grosse.
- **Wonderland Podcast** (2016). Episode 3 with Steven Johnson.
- **Audio Innovations** (2011). *Post Magazine*.
- **Grove's Dictionary of Music and Musicians** (2010). Article by Elizabeth Hinkle Turner.
- **Pink Noises: Women on Electronic Music and Sound** (2010). Chapter by Tara Rodgers.
- **Crossing the Line: Women Composers and Music Technology in the US** (2006). By Elizabeth Hinkle-Turner.
- **Listen Closely: Thanks to Special Effects, Movies Have Been Given A Whole New Look. Get Ready for a Whole New Sound.** (1998) *Wall Street Journal* by Eben Shapiro.
- **Electric Sound: the past and promise of electronic music** (1997). By Joel Chadabe.

Professional Organizations

- **Associate Editor & Member**, *Ear to the Earth* (2015–2021)
- **Member**, Association for Computing Machinery (ACM) (1987–Present)
- **Member**, Institute of Electronic and Electrical Engineers (IEEE) (1993–Present)