Curriculum Vitae
Perry R. Cook
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Work Address: Computer Science, 35 Olden St., Princeton, NJ, 08544
Phone: (609) 258-4951 FAX: (609) 258-1771
URL: http://www.cs.princeton.edu/~prc
Home Address: 78 Dempsey Avenue, Princeton, NJ, 08540
Phone: (609) 279-1568 FAX: (866)-388-3522

EDUCATION

PhD, Electrical Engineering, Stanford University, January 1991
MS, Electrical Engineering, Stanford University, August 1987
BS, Electrical Engineering, University of Missouri, Kansas City, May 1986. Magna Cum Laude
BA, Music, University of Missouri, Kansas City Conservatory of Music. Major in voice.
Secondary emphasis in recording and electronic music, May 1985

RESEARCH INTERESTS

Physics-based synthesis of musical and real-world sounds. Singing voice analysis/synthesis. History of music technology. Real-time devices for computer music control and human-computer interaction. Human perception of audio and music. Audio analysis and feature extraction. Assistive technologies. Audio synthesis/analysis applications, auditory display, sound for immersive environments.

WORK EXPERIENCE

June 2008-Present: Consultant, Member of Board of Advisors, Sonic Mule, Menlo Park (iPhone Apps).
Feb. 1996 - Present: Professor (Full as of 6/05), Princeton University Computer Science, jointly in Music. Associate Chair (7/05-1/07), Industrial Affiliate's Director (1999-02, 04/05), EEO Rep., Spring 2005.
Sept. 1995 - Dec. 1995: Acting Director, Stanford Center for Computer Research in Music and Acoustics (CCRMA). Teaching, student supervision, research, and oversight of daily operations, building management, safety, new construction, including new recording studio and integration of new computer musicology center. Also, all duties of Technical Director as described below.
Sept. 1994 - Sept. 1995: Senior Research Associate and Technical Director, Stanford CCRMA. Research, Teaching, Academic Advising, Facilities Planning, and Supervision of technical staff consisting of audio engineer, computer system administrator, and office staff. Industrial Affiliates Coordinator.
Feb. 1993 - July 1994: Senior Research Scientist, Media Vision Inc. Research and design of systems for sound synthesis. Hardware architecture, software architecture, and integrated circuit simulation software for synthesis, compression, and audio processing VLSI designs.
March 1991 - Feb. 1993: Consultant, Media Vision Inc. Hardware and software for music and speech synthesis. Consulting Contracts, Sound and Music Software, Design Review, Patent Analysis, etc.: Interval Research, Chromatic Research, Xenon, NeXT Inc., Aureal Semiconductor, Media Vision, Emotioneering (formerly Mood Logic), Pellicano Detective Agency (of OJ trial fame).
Jan. 1991 - Sept. 1994: Graduate Research Associate, Stanford CCRMA. Research in modeling of human vocal tract, psychoacoustics, and digital signal processing. Software and hardware support for CCRMA research and teaching. Instructor of courses as listed in the Teaching Experience section below.
Jan. 1987 - Dec. 1990: Research Assistant, CCRMA. 1988-90: Singing voice synthesis thesis research. 1987-88: Physical modeling of single reed instruments. 1987: DSP for removal of reverberation from pre-recorded musical signals. TA/teaching duties, including CCRMA summer courses (see Teaching Experience below).

OTHER WORK EXPERIENCE (Roadie, Dog Catcher, etc.)

Summer 1985: Audio Consultant, Worlds of Fun/Oceans of Fun theme parks, Kansas City, Missouri. Sound system design and installation in 500 acre theme park complex including 15 theaters. Supervised setups and operation of sound systems for over 90 live performances at outdoor amphitheater.
1978-1983: Sound Technician, Worlds/Oceans of Fun theme parks, Kansas City, Missouri.
1978: Electronics Technician, 3M Electronic Business Equipment, Kansas City, Missouri.
1977-1978: Stage Manager, Forum Amphitheater, Worlds of Fun, Kansas City, Missouri.
1975-1977: Student Asst. Recording Engineer, UMKC Conservatory Recording/Electronic Music Studios.
1974: Animal Control Officer (Dog Catcher), City of Blue Springs, Missouri.
1973: Church Choir Director, Coleman Baptist Church, Peculiar Missouri.

PUBLICATIONS

Journal Papers

G. Wang, D. Trueman, S. Smallwood and P. Cook, “The Laptop Orchestra as Classroom,” Computer Music Journal (CMJ), 32(1), pp. 26-37, 2008.

S. Smallwood, D. Trueman, G. Wang and P. Cook, “Composing for Laptop Orchestra,” CMJ 32(1), pp. 9-25, 2008.

A. Misra, G. Wang and P. Cook, “Musical Tapestry: Re-Composing Natural Sounds,” Journal of New Music Research, 36:4, pp. 241-250, (Winner of 2006 JNMR ICMC Distinguished Paper Award), 2007.

L. Peltola, C. Erkut, P. Cook and V. Valimaki, “Synthesis of Hand Clapping Sounds,” IEEE Transactions on Speech, Audio, and Language Processing, vol. 15, pp. 1021-1029, March 2007.

A. Kapur, P. Davidson, P. Cook, P.R. Driessen and W.A. Schloss, “Preservation and Extension of Traditional Techniques: Digitizing North Indian Performance,” Journal of New Music Research, 34:3, 2006.

G. Wallace, O. Anshus, P. Bi, H. Chen, Y. Chen, D. Clark, P. Cook, A. Finkelstein, T. Funkhouser, A. Gupta, M. Hibbs, K. Li, Z. Liu, R. Samanta, R. Sukthankar, and O. Troyanskaya, “Tools and Applications for Large-Scale Display Walls,” IEEE Computer Graphics and Applications, 25(4), July/Aug. 2005.

A. Kapur, G. Wang, P. Davidson, and P. Cook, “Interactive Network Performance: A Dream Worth Dreaming?” Organised Sound, 10(3), pp. 209-219, 2005.

P. Cook, “Remutualizing the Musical Instrument: Co-Design of Synthesis Algorithms and Controllers,” Journal of New Music Research, Vol. 33, No. 3, pp. 315-320, 2005.

G. Tzanetakis and P. Cook, "Music Analysis and Retrieval Systems", Journal of American Society for Information Science and Technology Volume 55, No. 12, pp. 1077-1083, 2004.

G. Essl, S. Serafin, P. Cook and J. Smith, “Theory of Banded Waveguides”, Computer Music Journal, 28(1) 2004.

G. Essl, S. Serafin, P. Cook and J. Smith, “Musical Applications of Banded Waveguides”, CMJ, 28(1) 2004.

P. Davidson, A. Kapur & P. Cook, “A System for Generating Real-Time Visual Meaning for Live Indian Drumming,” Refractory: A Journal of Entertainment Media, Volume 4, 2003.

M. Wright and P. Cook, “Project Arbol: Deer-B-Gone, Journal of a Guerilla Sound Installation,” Organized Sound, Volume 8, Number 3, December 2003.

A. Kapur, G. Essl, P. Davidson and P. Cook, “The Electronic Tabla Controller,” Journal of New Music Research, 32(4), pp. 351-360, 2003.

G. Tzanetakis, A. Ermolinskyi, and P. Cook, "Pitch Histograms in Symbolic and Audio Music Information Retrieval", Journal of New Music Research 32(2), pp. 143-152, 2003.

P. Cook, guest Editor, IEEE Computer Graphics and Applications, Special Issue: *Virtual Worlds, Real Sounds*, July/August 2002.

G. Tzanetakis and P. Cook, Musical Genre Classification of Audio Signals,” IEEE Transactions on Speech and Audio, July 2002.

P. Cook, “Tutorial: Sound Production and Modeling,” IEEE Computer Graphics and Applications, Special Issue: *Virtual Worlds, Real Sounds*, July 2002.

G. Tzanetakis and P. Cook "MARSYAS: A Framework for Audio Analysis," Organized Sound 4(3), 2000.

D. Trueman and P. Cook, "BoSSA: The Deconstructed Violin Reconstructed," Journal of New Music Research, Fall, 2000.

K. Li, H. Chen, Y. Chen, D. Clark, P. Cook, S. Damianakis, G. Essl, A. Finkelstein, T. Funkhouser, T. Housel, A. Klein, Z. Liu, E. Praun, R. Samanta, B. Shedd, J. Singh, G. Tzanetakis, J. Zheng, "Early Experiences and Challenges in Building and Using a Scalable Display Wall System," IEEE Computer Graphics and Applications, Special Issue: "Off the Desktop: Large-Format Displays" July, 2000.

G. Essl and P. Cook, “Measurements and Simulation of Bowed Bars,” Journal of the Acoustical Society of America, 108:1, pp. 379-388, July 2000.

S. Lakatos, P. Cook, and G. Scavone, "Selective Attention to the Parameters of a Physically Informed Sonic Model," Acoustics Research Letters Online, Journal of Acoustical Society of America, 107:5, pp. L31-L36, May 2000.

P. Cook, and D. Trueman, "Spherical Radiation from Stringed Instruments: Measured, Modeled, and Reproduced," Journal of the Catgut Acoustical Society, November 1999.

P. Cook, "Physically Informed Sonic Modeling (PhISM): Synthesis of Percussive Sounds," CMJ, 21:3, 1997.

P. Cook,"Singing Voice Synthesis History, Current Work, Future Directions," Computer Music Journal 20:2 1996

D. Levitin and P. Cook, "Memory for Musical Tempo: Additional Evidence that Musical Memory is Absolute," Perception and Psychophysics, 58 (6), pp. 927-935, 1996.

P. Cook, "SPASM: a Real-Time Vocal Tract Physical Model Editor/Controller and Singer: the Companion Software Synthesis System," Computer Music Journal, 17: 1, pp 30-44, 1992.

P. Cook, "Numerical Solution of Boundary Value Problems in Musical Acoustics," Winner, 1986 IEEE Student Paper Region 5 Competition, Published in IEEE 1986 Student Papers, pp. 100-108, 1987.

Refereed Conference Papers

A. Misra, G. Wang and P. Cook "Musical Tapestry: Re-Composing Natural Sounds," Proc. of the International Computer Music Conference (ICMC), New Orleans, 2006, JNMR Distinguished Paper Award.

A. Kapur, P. Davidson, P. Cook, P. Driessen, and W.A. Schloss, "Digitizing North Indian Performance", Proc. of the ICMC, Miami, Nov. 2004. Journal of New Music Research Distinguished Best Paper Award.

J. O'Brien, P. Cook, and G. Essl, "Synthesizing Sounds from Physically Based Motion." *The proceedings of ACM SIGGRAPH 2001*, Los Angeles, California, pp. 529-536, 2001.

D. Trueman and P. Cook, "BoSSA: The Deconstructed Violin Reconstructed," International Computer Music Conference, Beijing, October, 1999. Winner, Swets and Zeitlinger Distinguished Paper Award 1999.

Books and Book Chapters

P. Cook, "Computer Music," in the Springer Handbook of Acoustics, T. Rossing ed., May, 2007.

G. Scavone and P. Cook, "Synthesis Toolkit in C++ (STK)," in Audio Anecdotes, Volume 2, K. Greenebaum and R. Barzel Eds., A.K. Peters Press, 2004.

P. Cook, "Introduction to Physical Modeling," in Audio Anecdotes, Volume 1, K. Greenebaum and R. Barzel Eds., A.K. Peters Press, 2004.

P. Cook, Real Sound Synthesis for Interactive Applications, A.K. Peters Press, 2002.

P. Cook, "Multimedia Audio," in the Wiley Encyclopedia of Electrical and Electronics Engineering, 1999.

P. Cook, ed. Music, Cognition and Computerized Sound: An Introduction to Psychoacoustics, MIT Press, 1999.

P. Cook, "Identification of Control Parameters in an Articulatory Vocal Tract Model, With Applications to the Synthesis of Singing," Electrical Engineering PhD Dissertation, Stanford University, 1991.

Published Animations and Research Videos

S. Smallwood, D. Trueman, P. Cook, and G. Wang, Video Examples to Accompany the Article "Composing for Laptop Orchestra" (CMJ 32:1), 2008 CMJ DVD 32:4.

J. Chowning, A. Misra, G. Wang and P. Cook, "Stria," Digital Remix and Custom sndpeek Visualization, Computer Music Journal Special DVD, 31(4), 2007.

P. Cook, "Transfizzle," Rensselaer Polytechnic Institute iEAR Electronic Arts Residency Live DigitalDoo Performance, Computer Music Journal Special DVD, 27(4), 2003.

J. O'Brien, P. Cook and G. Essl, "Synthesizing Sounds from Physically Based Motion," SIGGRAPH Animation Theater, 2001.

R. Bargar, I. Choi, A. Betts, P. Cook, "Music for Unprepared Piano," Electronic Theater, SIGGRAPH 1998.

P. Cook, "Voice Synthesis Projects," International Computer Music Association Research Video, 2:1, 1995.

P. Cook and D. Morrill, "The Cook-Morrill Trumpet," ICMA Research Video, 2:1, 1995.

Collections and Proceedings

P. Cook, Editor, P. Cook, D. Pai, J. O'Brien, "Physics-Based Sound Synthesis for Graphics and Interactive Systems", SIGGRAPH 2003 Course Notes #36

P. Cook, "Physically-Based Parametric Sound Synthesis and Control," SIGGRAPH 2000 Course Notes #2.

P. Cook, Editor, Proceedings of the International Conference on Auditory Display, Atlanta, Apr. 2000.

P. Cook, Editor, P. Cook, T. Funkhouser, R. Bargar, N. Miner "Virtual Worlds, Real Sounds," SIGGRAPH 1999 Course Notes #23.

P. Cook, "Introduction to Audio Compression and Representation," SIGGRAPH 1998 Course Notes #27.

P. Cook, co-Editor, Proceedings of the International Computer Music Conference, Thessaloniki, Greece, 1998.

Technical Reports

"The Sonification Report: Status of the Field and Research Agenda," Prepared for National Science Foundation by the International Community for Auditory Display: G. Kramer (Ed.), Authors: B. Walker, T. Bonebright, P. Cook, J. Flowers, N. Miner, J. Neuhoff, R. Bargar, S. Barrass, J. Berger, G. Evreinov, W. Fitch, M. Gröhn, S. Handel, H. Kaper, H. Levkowitz, S. Lodha, B. Shinn-Cunningham, M. Simoni, S. Tipei, 1999.

P. Cook, "Implementation of Single Reed Instruments With Arbitrary Bore Shapes Using Digital Waveguide Filters," Music Dept. Tech. Rep. STAN-M-51, Stanford University, 1988.

P. Cook, "Reverberation Cancellation in Musical Signals Using Adaptive Filters," Music Dept. Tech. Rep. STAN-M-50, Stanford University, 1988.

Conference Papers

X. Ma and P. Cook, "Creating and Evaluating a Video Vocabulary for Communicating Verbs for Different Age Groups," ACM SIGACCESS Conference on R. Computers and Accessibility, Oct. 2008.

R. Fiebrink, G. Wang and P. Cook. 2008, "Support for MIR Prototyping and Real-Rime Applications in the ChucK Programming Language," Proceedings of the International Conference on Music Information Retrieval, Philadelphia, September 2008.

M. Hoffman, D. Blei, P. Cook, "Content-Based Musical Similarity Computation Using the Hierarchical Dirichlet Process," in Proceedings of 9th International Conference on Music Information Retrieval, Philadelphia, 2008.

R. Fiebrink, G. Wang, and P. Cook, "Foundations for On-the-Fly Learning in the ChucK Programming Language," Proceedings of the International Computer Music Conference (ICMC), Belfast, August, 2008. (co-winner, ICMC 2008 Best Presentation Award)

M. Hoffman, P. Cook, D. Blei, "Data-driven recomposition using the hierarchical Dirichlet process hidden Markov model," in Proceedings of the 2008 International Computer Music Conference, Belfast, 2008.

T. Lieber, A. Misra and P. Cook. "Freedom in TAPESTREA! Voice-Aware Track Manipulations." ICMC, Belfast, August 2008.

M. Hoffman, P. Cook, "Real-Time Dissonancizers: Two Dissonance-Augmenting Audio Effects," in Proceedings of the 11th International Conference on Digital Audio Effects, Espoo, 2008.

G. Wang, R. Fiebrink and P. Cook, "Combining Analysis and Synthesis in the ChucK Programming Language," Proceedings of the International Computer Music Conference (ICMC), Copenhagen, Aug. 2007.

M. Hoffman and P. Cook, "The FeatSynth Framework for Feature-Based Synthesis: Design and Applications," In Proceedings of the ICMC, Copenhagen, Aug. 2007.

P. Cook, "Din of An Iquity: Analysis and Synthesis of Environmental Sounds," Proceedings of the International Conference on Auditory Display, Montreal, June 2007.

P. Cook, "Principles for Controlling Computer Music Designers," (invited keynote), Proceedings of the Conference on New Interfaces for Musical Expression (NIME), New York, June 2007.

R. Fiebrink, G. Wang and P. Cook, "Don't Forget the Laptop: Using Native Input Capabilities for Expressive Musical Control," Proceedings of NIME, New York, June 2007.

M. Hoffman and P. Cook, "Real-time Feature-Based Synthesis for Live Musical Performance," in Proceedings of NIME, New York, June 2007.

S. Lakatos, T. Kruger, M. Hoffman and P. Cook, "Detection of Temporal Shifts in Human-Object Interaction Sounds," 5th Annual Meeting on Auditory, Perception, Cognition and Action (APCAM), Houston, 2006.

A. Misra, P. Cook, and G. Wang, "A New Paradigm for Sound Design," Proceedings of the International Conference on Digital Audio Effects, Montreal 2006.

S. Salazar, G. Wang, and P. Cook, "miniAudicle and the ChucK Shell: New Interfaces for ChucK Development and Performance," Proceedings of the Intl. Computer Music Conference (ICMC), New Orleans, 2006.

D. Trueman, P. Cook, S. Smallwood, and G. Wang, "PLOrk: Princeton Laptop Orchestra, Year 1," Proceedings of the Intl. Computer Music Conference (ICMC), New Orleans, 2006.

M. Hoffman and P. Cook, "Feature-Based Synthesis: Mapping from Acoustic and Perceptual Features to Synthesis Parameters," Proceedings of the ICMC, New Orleans, 2006.

A. Misra, G. Wang and P. Cook, "Musical Tapestry: Re-Composing Natural Sounds," Proc. of the International Computer Music Conference," New Orleans, Journal of New Music Research Distinguished Paper, 2006.

Z. Wang, M. Hoffman, P. Cook and K. Li, "VFerret: Content-Based Similarity Tool for Continuous Archived Video," Proceedings of the 3rd ACM Workshop on Continuous Archival and Retrieval of Personal Experiences, Santa Barbara, 2006.

M. Hoffman and P. Cook, "Feature-Based Synthesis: A Tool for Evaluating, Designing, and Interacting with Music-IR Systems," Proc. of the 7th Intl. Symposium on Music Information Retrieval, Victoria, BC, 2006.

M. Hoffman, P. Cook and D. Vilkomerson, "Staining Doppler Audio," in Proceedings of the IEEE International Ultrasonics Symposium, Vancouver, BC 2006.

M. Hoffman and P. Cook, "Feature-Based Synthesis for Sonification and Psychoacoustic Research," Proceedings of the International Conference on Auditory Display, London, 2006.

G. Wang and P. Cook, "On-the-Fly Counterpoint," Artists Sketch, SIGGRAPH, the ACM Conference on Graphics and Interactive Technologies, Boston, 2006.

A. Misra, P. Cook, and G. Wang, "TAPESTREA: Sound Scene Modeling by Example," Technical Sketch, SIGGRAPH, the ACM Conference on Graphics and Interactive Technologies, Boston, August 2006.

G. Wang, P. Cook and A. Misra, "ChucK, On-the-fly Programming, and the Audicle," Technical Sketch, SIGGRAPH, the ACM Conference on Graphics and Interactive Technologies, 2006.

R. Knapp and P. Cook, "Creating a Network of Integral Music Controllers," Proceedings of the Intl. Conference on New Interfaces for Musical Expression (NIME), Paris, 2006.

G. Wang, A. Misra, and P. Cook, "Building Collaborative Interfaces in the Audicle," Proceedings of the Intl. Conference on New Interfaces for Musical Expression (NIME) Paris, 2006.

P. Cook, "Musical Coffee Mugs, Singing Machines, and Laptop Orchestras," 151st Meeting of the Acoustical Society of America, Providence, May 2006.

T. Park and P. Cook, "Radial/Elliptical Basis Function Neural Networks for Timbre Classification," Proceedings of the International Computer Music Conference, Barcelona, September, 2005.

A. Misra, G. Wang and P. Cook, “SndTools: Real-time Audio DSP and 3D Visualization,” Proceedings of the International Computer Music Conference, Barcelona, September, 2005.
G. Wang, P. Cook and A. Misra, “Designing and Implementing the ChucK Programming Language,” Proceedings of the International Computer Music Conference, Barcelona, September, 2005.
G. Wang, A. Misra, P. Davidson and P. Cook, “Co-Audicle: A Collaborative Audio Programming Space,” Proceedings of the International Computer Music Conference, Barcelona, September, 2005.
G. Scavone and P. Cook, “RtMIDI, RtAudio, and a Synthesis (STK) Update,” Proceedings of the International Computer Music Conference, Barcelona, September, 2005.
R. B. Knapp and P. Cook, “The Integral Music Controller: Introducing a Direct Emotional Interface to Gestural Control of Sound Synthesis,” Proc. of the International Computer Music Conference, Barcelona, Sept. 2005.
P. Cook, “Real-Time Controllers to Enable Conveying Emotion With Sound (A Fancy Name for Interactive Computer Music), (Invited) Proc. of the Intl. Conference on Human-Computer Interaction, Las Vegas, 2005.
A. Kapur, G. Tzanetakis, N. Virji-Babul, G. Wang and P. Cook, “A Framework for Sonification of Vicon Motion Capture Data,” Proceedings of the Intl. Conference on Digital Audio Effects (DAFX), Madrid, 2005.
G. Wang, A. Misra, A. Kapur and P. Cook, “Yeah, CHUCK IT => Dynamic, Controllable Interface Mapping,” Proc. of the Intl. Conference on New Interfaces for Musical Expression (NIME) Vancouver, May 2005.
P. Cook, “Real Time Performance Controllers for Synthesized Singing,” Proceedings of the Intl. Conference on New Interfaces for Musical Expression (NIME) Vancouver, May 2005.
G. Wang and P. Cook. "ChucK: A Programming Language for On-the-fly, Real-time Audio Synthesis and Multimedia." Proc. of ACM Multimedia, New York, Oct. 2004. (Invited, Winner of the 2004 ACM Multimedia Open Source Software Competition).
G. Wang and P. Cook, “The Audicle: A Context-Sensitive, On-the-fly Audio Programming Environ/Mentality,” Proceedings of the International Computer Music Conference, Miami, Nov. 2004. (ICMC Best Presentation)
A. Kapur, A. Lazier, P. Davidson, R.S. Wilson, and P. Cook, “The Electronic Sitar Controller,” Proceedings of New Interfaces for Musical Expression (NIME), Hamamatsu, Japan, June 2004.
G. Wang and P. Cook, “On-the-fly Programming: Using Code as an Expressive Musical Instrument,” Proceedings of New Interfaces for Musical Expression (NIME), Hamamatsu, Japan, June 2004.
P. Cook and S. Lakatos, “Using DSP-Based Parametric Physical Synthesis Models to Study Human Sound Perception,” Proc. of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, Mohonk, NY, Oct. 2003.
P. Cook, “Perceiving our Instruments: Psychoacoustics Meets Aesthetics in the Design of New Performance Interfaces,” (Invited) Proceedings of the 40th Anniversary Celebration for the Institute for Psychoacoustics and Electroacoustic Music (IPEM40!), Ghent, Oct. 2003.
G. Wang and P. Cook, "ChucK: A Concurrent, On-the-fly, Audio Programming Language," (Winner, Best Presentation Award) Proceedings of the International Computer Conference, Singapore, Oct. 2003.
A. Lazier and P. Cook, “MoSievius: Feature-Driven Interactive Audio Mosaicing,” Proceedings of the Conference on Digital Audio Effects (DAFX), London, Sept. 2003.
G. Essl and P. Cook, "The principle of closed wavetrains, resonance and efficiency: past, present and future," In the Proceedings of the Stockholm Music Acoustics Conference (SMAC-03), Stockholm Sept. 2003.
P. Cook, “Remutualizing the Instrument: Co-design of Synthesis Algorithms and Controllers,” (Invited), Proceedings of the Stockholm Music Acoustics Conference, Aug. 2003.
S. Lakatos and P. Cook, “Human Perception of Real-World Sound Effects,” Acoustical Society of America, Nashville, May 2003.
G. Tzanetakis, A. Ermolinskyi and P. Cook, "Pitch Histograms in Audio and Symbolic Music Information Retrieval" In Proc. Int. Conference on Music Information Retrieval (ISMIR) , Paris, France, October 2002
G. Essl and P. Cook, “Banded Waveguides on Circular Topologies and of Beating Modes: Tibetan Singing Bowls and Glass Harmonicas,” Proc. Intl. Computer Music Conference, Gothenborg, Sweden, Sept. 2002.
G. Tzanetakis, A. Ermolinskyi and P. Cook, “Beyond the Query-by-Example Paradigm: New Query Interfaces for Music Information Retreival,” Proc. Intl. Computer Music Conference, Gothenborg, Sweden, Sept. 2002.
G. Tzanetakis, P. Cook and G. Essl, “Human Perception and Computer Extraction of Beat Strength,” Proc. Conference on Digital Audio Effects (DAFX), Hamburg, Germany, Sept. 2002.
E. Brazil, M. Fernstrom, G. Tzanetakis, and P. Cook, “Enhancing Sonic Browsing using Audio Information Retrieval,” Proc. Int. Conf. On Auditory Display, Kyoto Japan, July 2002.
P. Cook, “Modeling Bill’s Gait: Analysis and Parametric Synthesis of Walking Sounds,” Proc. Audio Engr. Society 22nd Conference on Virtual, Synthetic and Entertainment Audio, Helsinki, Finland, June 2002.
A. Kapur, G. Essl, P. Davidson, and P. Cook, “The Electronic Tabla Controller,” Proceedings of the Conference on New Interfaces for Musical Expression, (NIME), Dublin, Ireland, May 2002.
G. Scavone, S. Lakatos, S., P. Cook, & C. Harbke, “Perceptual spaces for sound effects obtained with an interactive similarity rating program,” Intl. Symposium on Musical Acoustics, Perugia, Italy, Sept. 2001.

G.Tzanetakis, G. Essl, and P. Cook , “Audio Analysis using the Discrete Wavelet Transform, Proc. WSES Int. Conf. Acoustics-Music: Theory and Applications (AMTA), Skiathos, 2001.

P. Cook, R.Dannenberg, J.Foote, G.Tzanetakis and C.Weare, “New Directions in Music Information Retrieval” Proc. Int. Computer Music Conf. (ICMC), Havana, Sept., 2001.

P. Cook, C. Leider, T. Park, and G. Tzanetakis, “Princeton Sound Kitchen Open Source Software Report,” Proc. of the International Computer Music Conference, Havana, Cuba, Sept. 2001.

G.Tzanetakis and P.Cook, “Automatic Musical Genre Classification of Audio Signals,” Proc. Int. Symposium on Music Information Retrieval, Bloomington, Aug. 2001.

Lakatos, S., Scavone, G.P., & Cook, P.R., “An interactive similarity rating program for large timbre sets.” Poster presented at the 141st meeting of the Acoustical Society of America, Chicago, IL., June 2001.

P. Cook, “Physically Informed Stochastic Modal Sound Synthesis,” Invited paper presentation at the 141st meeting of the Acoustical Society of America, Chicago, IL., June 2001.

P. Cook, “Life with Computer Voxens,” (Invited) Banff Human/Computer Vox. Summit, Jun. 01.

G.Tzanetakis and P.Cook, “MARSYAS3D: A prototype audio browser-editor using a large scale immersive visual and audio display,” Proc. Int. Conf. Auditory Display (ICAD), Helsinki, 2001.

P. Cook, “Principles for Designing Computer Music Controllers,” ACM CHI Workshop in New Interfaces for Musical Expression (NIME), Seattle, April, 2001.

G.Tzanetakis and P.Cook, “3D Graphics Tools for Isolated Sound Collections,” Proc. Int. Conf. on Digital Audio Effects (DAFX), Verona, Dec., 2000.

P. Cook and C. Leider, “Making the Computer Sing: The SqueezeVox,” Proceedings of the XIII Colloquim on Musical Informatics, L’Aquila, Italy, Sept. 2000.

G. Tzanetakis and P. Cook, "Sound Analysis using MPEG compressed Audio," IEEE International Conference on Acoustics, Speech and Signal Processing, Istanbul 2000.

P. Cook and C. Leider, "SqueezeVox: A New Controller for Vocal Synthesis Models," International Computer Music Conference, Berlin, Aug. 2000.

Lakatos, S., Scavone, G.P., & Cook, P.R., “Obtaining Perceptual Spaces for Large Numbers of Complex Sounds: Sensory, Cognitive, and Decisional Constraints.” In C. Bonnet (Ed.), Proceedings of the Sixteenth Annual Meeting of the International Psychophysics Society, 245-250, 2000.

Scavone, G.P., Lakatos, S., & Cook, P.R. “Knowledge acquisition by listeners in a source learning task using physical models,” (Invited) 139th meeting of the Acoustical Society of America, Atlanta, GA., June, 2000.

G. Tzanetakis and P. Cook "Experiments in Computer-Assisted Annotation of Audio," International Conference on Auditory Display, Atlanta, Apr. 2000.

L. Dubois, C. Ghez, T. Rikakis, P. Cook, "An Auditory Display System for Aiding Interjoint Coordination," International Conference on Auditory Display, Atlanta, Apr. 2000.

D. Trueman, C. Bahn, P. Cook, "Alternative Voices for Electronic Sound: Spherical Speakers and Sensor-Speaker Arrays (SenSAs)," International Computer Music Conference, Berlin, Aug. 2000

G.Tzanetakis and P.Cook, “Audio Information Retrieval (AIR) Tools.” Proc. Int. Symposium on Music Information Retrieval (ISMIR), Plymouth, MS, 2000.

G. Tzanetakis and P. Cook, "Multi-Feature Audio Segmentation for Browsing and Annotation," IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, October, 1999.

G. Tzanetakis and P. Cook, "A Framework for Audio Analysis based on Classification and Temporal Segmentation," EuroMicro, Milan, Sept. 1999.

P. Cook, "Toward Physically-Informed Parametric Synthesis of Sound Effects," Invited Keynote Address, IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, October, 1999.

P. Cook and G. Scavone, "The Synthesis ToolKit (STK)," Intl. Computer Music Conference, Beijing, Oct. 1999.

G. Essl and P. Cook, "Banded Waveguides: Towards Physical Modeling of Bowed Bar Percussion Instruments," International Computer Music Conference, Beijing, Oct. 1999.

P. Cook, G. Essl, G. Tzanetakis, and D. Trueman "N>>2: Multi-Speaker Display Systems for Virtual Reality and Spatial Audio Projection," International Conference on Auditory Display, Glasgow, 1998.

P. Cook, "Toward the Perfect Audio Morph," (Invited Keynote) First European COST Conference on Digital Audio Effects, Barcelona, 1998.

P. Cook and D. Trueman, "NBody: Interactive Multidirectional Musical Instrument Body Radiation Simulations, and a Database of Measured Impulse Responses," International Computer Music Conference,Ann Arbor 1998

G. Scavone and P. Cook, "Real-time Computer Modeling of Woodwind Instruments," International Symposium on Musical Acoustics, Acoustical Society of America, Woodbury, NY, 1998.

P. Cook and D. Trueman, "A Database of Measured Musical Instrument Body Radiation Impulse Responses, and Computer Applications for Exploring and Utilizing the Measured Filter Functions," International Symposium on Musical Acoustics, Acoustical Society of America, Woodbury, NY, 1998.

P. Cook, "Non-Linear Recursion in Acoustics and Music," (Invited Keynote) International Mathematica Symposium, Rovaniemi, Finland, July, 1997.
P. Cook, "Using Musical Acoustics to Teach Digital Signal Processing, Scientific Computing, and Human-Computer Interface Technology," (Invited) Acoustical Society of America, Penn. State, 1997.
K. Tsahalinas, K. Tzedaki, S. Psaroudakes, D. Kamaratos, P. Cook, and T. Rikakis, "Physical Modeling Simulation of the Ancient Greek Elgin Auloi," Intl. Computer Music Conference, Thessaloniki, 1997.
J. Weinstein and P. Cook, "FAUST: A Framework for Algorithm Understanding and Sonification Testing," International Conference on Auditory Display, Palo Alto, 1997.
P. Cook, "Hearing, Feeling, and Performing: Masking Studies with Trombone Players," International Conference on Music Perception and Cognition, Montreal, 1996.
P. Cook, "Physically Informed Sonic Modeling (PhISM): Percussive Synthesis," International Computer Music Conference, Hong Kong, Sept. 1996.
P. Cook, "Speech and Singing Synthesis Using Physical Models, Some History and Future Directions," Symposium on Physical Models and Applications in Psychoacoustics, Thessaloniki, Greece, July, 1995.
P. Cook, "An Investigation of Singer Pitch Deviation as a Function of Pitch and Dynamics," Thirteenth International Congress of Phonetic Sciences, Stockholm, Sweden, August, 1995.
D. Levitin and P. Cook, "Absolute Memory for Musical Tempo," (invited) Audio Engr. Society, New York, 1995.
P. Cook, "Greek Aulos Project Status Report: Acoustics of Double Reed Cylindrical Bore Instruments," Symposium on Physical Models and Applications in Psychoacoustics, Thessaloniki, Greece, July, 1995.
P. Cook, "Integration of Physical Modeling for Synthesis and Animation," International Computer Music Conference, Banff, 1995.
P. Cook, "A Hierarchical System for Controlling Synthesis by Physical Modeling," International Computer Music Conference, Banff, 1995.
G. Scavone and P. Cook, "Combined Linear and Non-Linear Periodic Prediction in Calibrating Models of Musical Instruments to Recordings," International Computer Music Conference, Aarhus, DK, Sept. 1994.
P. Cook, "Physical Models, Control Schemes, and Real-Time Controllers for Music Synthesis," (Invited) IRCAM Symposium on Computer Music, Paris, France, March, 1993.
P. Cook, "New Control Strategies for the Singer Articulatory Voice Synthesis System," Stockholm Music Acoustics Conference, Stockholm, Sweden, July, 1993.
P. Cook, D. Kamarotos, T. Diamantopoulos, and G. Philippis, "IGDIS: A Modern Greek Text to Speech/ Singing Program for the SPASM/Singer Instrument," Intl. Computer Music Conference, Tokyo, Sep., 1993.
P. Cook, D. Morrill, and J. O. Smith, "A MIDI Control and Performance System for Brass Instruments," International Computer Music Conference, Tokyo, Sept., 1993.
P. Cook, D. Morrill, and J. O. Smith, "An Automatic Pitch Detection and MIDI Control System for Brass Instruments," Acoustical Society of America Conference, New Orleans, Nov., 1992.
P. Cook, "A Meta-Wind-Instrument Physical Model, and a Meta-Controller for Real Time Performance Control," International Computer Music Conference, San Jose, Oct., 1992.
J. Smith and P. Cook, "The Second-Order Digital Waveguide Oscillator," International Computer Music Conference, San Jose, Oct., 1992.
P. Cook, "Aperiodicities in the Singer Voice Source," (Invited) Acoustical Soc. of America,Salt Lake, May, 1992.
P. Cook, "Physical Models for Music Synthesis, and a Meta-Controller for Real-Time Performance," International Computer Music Conference and Festival at Delphi, Greece, 1992.
P. Cook, "Noise and Aperiodicity in the Glottal Source: A Study of Singer Voices," (Invited) Twelfth International Congress of Phonetic Sciences, Aix-en-Provence, France, August, 1991.
P. Cook, "Non-Linear Periodic Prediction for On-Line Identification of Oscillator Characteristics in Woodwind Instruments," Proceedings of the International Computer Music Conference (ICMC), Montreal, Oct. 1991.
P. Cook, "TBone: An Interactive WaveGuide Brass Instrument Synthesis Workbench for the NeXT Machine," International Computer Music Conference, Montreal, October, 1991.
P. Cook, "LECTOR: An Ecclesiastical Latin Control Language for the SPASM/singer Instrument," International Computer Music Conference, Montreal, October, 1991.
S. Hirschman, P. Cook, and J. Smith. "Digital Waveguide Modeling and Simulation of Reed Woodwind Instruments: An Interactive Development Environment on the NeXT Computer," Proc. ICMC, Oct. 1991.
P. Cook, "SPASM: a Real-Time Vocal Tract Physical Model Editor/Controller and Singer: the Companion Software Synthesis System," Colloque les Modeles Physiques Dans L'Analyse, la Production et la Creation Sonore, ACROE, Grenoble, 1990.
P. Cook, C. D. Chafe and J. O. Smith, "Pulsed Noise in Musical Systems, Techniques for Extraction, Analysis and Visualization," International Computer Music Conference, Glasgow, 1990.

D. Morrill and P. Cook, "Hardware, Software, and Compositional Tools for a Real-Time Improvised Solo Trumpet Work," International Computer Music Conference, Columbus, OH, 1989.

P. Cook, "Synthesis of the Singing Voice Using a Physically Parameterized Model of the Human Vocal Tract," International Computer Music Conference, pp. 69-72, Columbus, OH, 1989

PATENTS

"Music Synthesis Controller and Method," US Patent 6049034, Assigned to Interval Research, Apr. 2000.

"System and Method for Real Time Sinusoidal Signal Generation Using Waveguide Resonance Oscillators," US Patent 5701393, with Julius O. Smith, Assigned to Stanford University, Dec. 1997.

"Economical Generation of Exponential and Pseudo-Exponential Decay Functions in Digital Hardware," US Patent 5557227, with Bryan Colvin, Assigned to Media Vision, Sep. 1996.

"Residual Excited Waveguide," US Patent 5543578, with Bryan Colvin, Assigned to Media Vision, Aug. 1996.

"Digital Waveguide Speech Synthesis System and Method," US Patent 5528726, June 1996.

"Sound Synthesis Model Incorporating Sympathetic Vibrations of Strings," US Patent 5468906, with Bryan J. Colvin, Assigned to Media Vision, Nov. 1995.

"Accurate Pitch Tracking System and Method," US Patent 5353372, with Julius O. Smith, Assigned to Stanford Univ., Oct. 1994.

"Tone Generator for Use With Hearing Aids," US Patent 5266919, with Leo Boyd, Dec. 1993.

GRANTS & FELLOWSHIPS

Humanities Council Gardner '68 Magic Fund Grant, "Virtual Augmented Chorale," $29,600 for 1 year, 2008.

MacArthur Foundation, Digital Learning Initiative Grant, "Mobile Music Laboratory," for Princeton Laptop Orchestra, with Dan Trueman, $250,000 for 1 year, April 2008.

Microsoft, Intelligent Systems for Assisted Cognition "mini-grant" Competition, $50,000 December 2007.

National Institutes of Health, "New Ultrasound Instrument for Carotid Screening," subcontract on NIH 5R44HL072534-03 to DVX, LLC (David Vilkomerson), $61,746 Sept. 2006 – Aug. 2007.

National Science Foundation CNS-0509447, "CSR-PDOS Content-Searchable Storage for Feature-Rich Data," with Kai Li, Olga Troyanskaya, Moses Charikar, $900k 2005-08.

Princeton Grants for Princeton Laptop Orchestra: Council on Science and Technology, Freshman Seminar Program, Sophomore Initiative, Humanities Council, with Dan Trueman, 2005.

John Simon Guggenheim Jr. Memorial Foundation Fellowship Grant, $35,000, 2003.

New Jersey Commission on Science and Technology, "Technology Center: Pervasive Information Systems," with Wayne Wolf, Bede Liu, and Vince Poor, others at Rutgers and NJIT, approx. $1.5M over 5 years.

National Science Foundation CAREER Grant, "Parametric Synthesis and Control of Sound for the Computer-Mediated Experience," $256,650 over 4 years, April 2000.

Princeton SEAS Dean's Grant for Graduate Course Development, "Pervasive Computing", with Wayne Wolf, Vince Poor, and Bede Liu, 1999.

Intel Technology for Education 2000 Grant. Approx. $100,000 over 3 years of a University-Wide $2.7 Million over 3 years, Intel computers and software, 1997-2000.

Hewlett Packard Philanthropy Program for Educational Institutions $123,000 Equipment, PCs and Printers for CS Labs, 1997.

Princeton 250th Program for Innovation in Teaching, Human Computer Interface Technology course development, $27,350 for Equipment and Summer Support, 1997.

AT&T Lucent Special Purpose Grants Program in Science and Engineering, $19,500 + $19,500 Princeton Gordon Wu Fund Matching, for Human-Computer Interface Course Videoconference Equipment, 1996.

POSITIONS, AFFILIATIONS, CERTIFICATIONS

Board Memberships and Officer Positions:

Sonic Mule, LLC (iPhone Apps), Member, Board of Advisors, June 2008-Present.

International Computer Music Association, Member of Board 2000-07, President 04-07, VP for Membership 00-03.

International Community for Auditory Display, Member of Board 1999-04.

Accentus LLC (Stock Data Sonification Company), Member of Technical Advisory Board, 2003-07.

Editorial Positions:

Associate Editor, ACM Transactions on Applied Perception

Program/Papers Chair:

IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, Mohonk, NY, 2001.

Internal Conference on Auditory Display, Atlanta Georgia, April 2000.

International Computer Music Conference, Thessaloniki, Greece, September, 1997.

Professional Society Memberships:

Association for Computing Machinery, Acoustical Society of America, Computer Music Association, Institute for Electrical and Electronics Engineers (Senior Member since 2007), Electronic Music Foundation, Tau Beta Pi, Phi Kappa Phi, Eta Kappa Nu, Missouri Engineer in Training Certification earned Aug. 1986

Residencies:

Artist in Residence, with Interface, Renssalaer Polytechnic Institute iEAR Electronic Arts, Spring 2003

FELLOWSHIPS, HONORS & AWARDS

Fellow of the Association for Computing Machinery, 2008, "For Contributions to Computer Music, Physics-Based Sound Synthesis, and Voice Analysis/Synthesis."
Journal of New Music Distinguished Paper Award, ICMC 2006.
Princeton School of Engineering and Applied Science Outstanding Teaching Commendation, Spring 2006
UMKC Alumni Achievement Award, Conservatory of Music, 2005
Journal of New Music Distinguished Paper Award, ICMC 2004.
ACM Multimedia Best Open Source Software Award, 2004.
John Simon Guggenheim Foundation Fellowship, 2003, "Technology and Vocal Expression"
Journal of New Music Research Distinguished Paper Award, ICMC, 1999
Princeton Engineering Council Distinguished Teaching Award, Dec. 2001.
Swets and Zeitlinger Distinguished Paper Award, ICMC, 1999
UMKC Alumni Achievement Award, Engineering, 1992.
Friends of UMKC Harry S. Truman Campus Outstanding Student Award, 1986
UMKC Chancellor's Honor Student, 1986 UMKC Dean's list, 1973, 1984-1986
IEEE Student Paper Competition 1st Place, 1985-86
Roland Synthesizer/Tape Composition Competition: 2nd place Professional Class 1985
1st place Professional Class 1984
2nd place Amateur Class 1982

GRADUATE STUDENTS COMPLETED

Michael Klingbeil, DMA, Columbia University Dept. of Music (Ext. Reader), "Sinusoidal Partial Editing, Analysis, and Resynthesis," Completed Nov. 2008.
Ge Wang, PhD Computer Science, Princeton University, "The ChucK Audio Programming Language: A Strongly-Timed and On-the-Fly Environ/mentality," May 2008.
Ajay Kapur, Univ Victoria Interdisciplinary PhD, (External Advisor/Reader), "Digitizing North Indian Performance: Extension and Preservation Using Multimodal Sensor Systems, Machine Learning, and Robotics," Fall 2007.
Henri Penttinen, "Loudness and Timbre Issues in Plucked Stringed Instruments ' Analysis, Synthesis, and Design," External reader and "opponent" for PhD, Helsinki University of Technology, 2006.
John Hainsworth, "Enabling Truly Collaborative Writing on a Computer," Princeton Computer Science PhD, 2006.
Colby Lieder, "Dissonance Theory of Sound Objects," Princeton Music PhD, 2006.
Stephania Serafin, PhD Computer Music, Stanford CCRMA (Outside Reader), "The Sound of Friction: Real-Time Models, Playability and Musical Applications," Completed Spring 2004.
David Merrill, Masters of Media Arts and Sciences, MIT Media Lab, 2004.
Tom Briggs, Princeton Masters of Computer Science, 2004.
Youngmoo Kim, PhD, MIT Media Lab (Outside Reader) "Singing Voice Analysis/Synthesis", July 2003.
Peter Velikonja, (2nd reader) Princeton PhD. Music, "Autonomous Music via Artificial Evolution," Dec., 2003.
Roger Luke DuBois, Columbia University Music PhD, (Outside Reader) "Applications of Generative String Substitution Systems in Computer Music," 2003.
Mary Wright, PhD Princeton Music Composition (non-reader composition advisor), "Project Arbol I: Deer B. Gone" 46.2 Moving Speaker Installation, November 2001, Thesis completed May 2002.
George Tzanetakis, PhD Princeton Computer Science, "Manipulation, Analysis and Retrieval Systems for Audio Signals," May 2002.
Eli Brandt, PhD, Carnegie Mellon University Computer Science (Outside Reader), "Temporal Type Constructors for Computer Music Programming," June 2002.
Georg Essl, PhD Princeton Computer Science, "Physical Wave Propagation Modeling for Real-Time Synthesis of Natural Sounds," July 2002.
Cumhur Erkut, DS, Helsinki University of Science and Technology, "Aspects in Analysis and Model-Based Sound Synthesis of Plucked String Instruments," 2002
Eric Scheirer, PhD, MIT Media Lab, (Ext. Reader) "Structured Audio and Machine Listening", Apr. 2000.
Stefan Bilbao, Stanford CCRMA (Ext. Reader), "Wave and Scattering Methods for the Numerical Integration of Partial Differential Equations," October 2000.
Tony Verma, PhD Stanford EE (Ext. Reader), "Spectral Modeling with Sines, Noise, and Transients", Apr. 1999.

Jon Forsyth, Princeton Masters of Computer Science, May 1999.
Dan Trueman, Princeton PhD Composition (Music), "Reinventing the Violin," Dec. 1999.
John Puterbaugh, Princeton PhD Composition (Music), "Timbre and Sonopoesis," Dec. 1998.
Gary Scavone, Stanford PhD Computer Music, "Digital Models of Reed and Jet Woodwind Instruments," Mar 1997.

GRADUATE STUDENTS IN PROCESS

Betsey Biggs, Princeton Music PhD, 6th year.
Ananya Misra, Princeton PhD Computer Science, 6th year.
Matt Hoffman, Princeton CS PhD, 5th year.
Sonya Nikolova, Princeton CS PhD, 4th year.
Xiaojuan Ma, Princeton CS PhD, 3nd year.
Rebecca Fiebrink, Princeton CS PhD, 3rd year.

TEACHING EXPERIENCE

Instructor, Princeton Courses (* = New Princeton Courses)

*Spr 2009: ATL496/THR496, "Princeton Atelier :Two Sided Plays," with Laurie Anderson.
*Fall 2008: MUS 539, Graduate Music Seminar: "Laptops in Performance," with Dan Trueman.
*Spr. 2008: MUS 539, Graduate Music Seminar: "TeQWire: Voice&Technology: History and Practice"
*Fall 2005-Spr. 2009: FRS 175, MUS/COS 414,538,314/316 "The Princeton Laptop Orchestra," with D. Trueman
Spr. 2001, 2005, 2007, 2009 COS/Music 325, "Transforming Reality by Computer"
*Spr. 2004-2007: COS/ELE 479/579 "Pervasive Information Systems," with Wayne Wolf
*Fall 1996-2008 COS 436 "Human Computer Interface Technology"
*Fall 2004: MUS 539, Graduate Music Seminar: "Technology and the Expressive Voice"
Spr. 2002, COS 111, "Computers in our World"
*Fall 2001, Freshman Seminar 157, "Techno Music I: 100,000 BC to 1999"
*Spr. 2000-2002: COS 598U/ELE 580U, "Pervasive Information Systems," with W. Wolf, V. Poor, & B. Liu
*Spr. 2000: Music 539, Graduate Music Seminar: "Interactive Arts Technologies"
*Spr. 1998, Music 539, Graduate Music Seminar: "Acoustics, PsychoAcoustics, and Compositional Resources"
Spr. 1997,1999 COS217, "Introduction to Programming Systems" ANSI C, SPARC Assembly, UNIX.
*Spr 1996, COS 496, Topics: "Simulation of Systems, Real and Imagined" with Ken Steiglitz

CONFERENCE COURSES AND WORKSHOPS

Co-Organizer/Presenter, "Music Information Retrieval in ChucK: Real-time Prototyping for MIR Systems and Performance," with Ge Wang and Rebecca Fiebrink, Tutorial given at ISMIR, Philadelphia, PA, 2008.
Co-Organizer/Presenter, "Sound Design and Composing with TAPESTREA," with Ananya Misra and Ge Wang, Workshop given at ICMC, Copenhagen, 2007.
Organizer, Presenter, "Special Session: Computer Music," SIGGRAPH 2004
Organizer, Instructor, "Physics-Based Sound Synthesis for Graphics and Interactive Systems," SIGGRAPH 2003
Organizer, Instructor, "Physically Based Parametric Sound Synthesis and Control," SIGGRAPH 2000
Organizer, Instructor, "Virtual Worlds/Real Sounds," SIGGRAPH 1999
Organizer, Instructor, "Introduction Audio Compression and Representation," SIGGRAPH 1998
Panel Member, "Listen Up! Real-Time Auditory Interfaces for the Real World," SIGGRAPH 1998.
Organizer, Instructor, "Creating and Manipulating Sound to Enhance Computer Graphics," SIGGRAPH 1996.
Instructor, "Introduction to Image, Video, and Audio Compression," SIGGRAPH 1994.

Instructor, Stanford Courses

1991-95 Co-Instructor: Music 151/Psychology 261 Cognitive Psychology for Musicians
1991-94 Instructor: Music 242, Computer Analysis and Synthesis of the Human Voice, with Emphasis on Singing
1994-5 Seminar on Computational Models of Human Hearing and Audition
1994 Instructor: Music 420/EE 265, Applications of the Fourier Transform

Co-Instructor, Stanford CCRMA Summer Courses

2005-8 DSP, Physical and Spectral Modeling
2004 DSP, Physical and Spectral Modeling, CCRMA@Banff
1994-7, 99-03 DSP, Physical Modeling, and Spectral Modeling
1993 DSP and Physical Modeling
1989-92 Music Programming on NeXT Computers
1988 Computer Music on Small Systems and MIDI
1987 Computer Music Programming in MIDI Lisp

Teaching Assistant, Tutor, Grader

1990 Physical Modeling and Signal Processing: TA, Stanford CCRMA
1990 Cognitive Psychology for Musicians: TA, Stanford CCRMA
1989 Fourier Transform and Applications: TA, Stanford CCRMA
1987 Computer System Architecture: Grader, Stanford Electrical Engineering
1986 Physics: Freshman level TA, UMKC
1985 Electromagnetic Fields and Waves: Tutor, UMKC
1983-86 Calculus Tutor, Both basic freshman and freshman engineering levels, Penn Valley Com. College

SELECTED MUSICAL EXPERIENCE, RECORDINGS, AND PERFORMANCES

Independent recording/production studio and concert sound engineer since 1974.
Soloist/Chorister with Grace and Holy Trinity Cathedral, Kansas City, 1974-1976.
Section leader and soloist with California Bach Society, 1990 - 1995.
Section leader and soloist with Trinity Cathedral San Jose, 1991 - 1993.
Solo performances with numerous San Francisco bay area groups, including Bay Area Lutheran Chorale, Stanford Choirs, Schola Discantus, and others.
Engineered, edited, and sang on Compact Disk, "Ockeghem, the Three Voice Masses," with Schola Discantus, released on Lyrichord Early Music Series (LEMS) 8010, 1994.
Engineered and Edited CD, "French 14th Century Sacred Music," Schola Discantus, 10/94, LEMS 8012.
Soloist/chorister on CD "Musica Barocca," with California Bach Society, released 9/94, Guidonian Records.
Singer and Editor, CD "A Stanford Christmas," released 10/94.
Engineered and Edited CD, "LaRue Mass and Lamentations" Schola Discantus, released 6/96, LEMS 8021.
Singer and Editor, CD, "Echoes of Joan of Arc, Music of Reginaldus Liebert," Schola Discantus, released 10/96, LEMS 8025.
Singer, Trinity Parish Choir of Men and Boys/Girls, Princeton, 1999-2003.
Singer on CD recording project, "so longeth my soul," Trinity Choir of Men and Girls, Fall 2000.
"sdoo," DigitalDoo on "./swank," CD with Interface (Dan Trueman and Curtis Bahn), Cycling 74 records, 2001.
"El Zorro," by Chris Chafe, for Seashells and Interactive Electronics, Delphi, Greece, 1992.
'Pico I,' for Seashells and Interactive Electronics, Intl. Mathematica Symposium, Rovaniemi, Finland, July, 1997.
Interactive Networked MIDI Jam Session, Columbia University to Tokyo, Dec. 1997.
Live Performance at International Mathematica Conference, Chicago, June 1998.
"AbOrigins," for DigitalDoo (electronically enhanced digeridoo), with Dan Trueman, electric violin and Curtis Bahn, sensor bass, Moebius, Boston, September 2000.
Also at Galapagos, Brooklyn, NY, April 10, 2001.
"Duo Monologues for two SqueezeVoxens," Princeton University, February, 2001.
Colby Leider, SqueezeVox Bart, Perry R. Cook, SqueezeVox Lisa
"7 Minutes from Tibet," for solo SqueezeVox (Lisa), Festival: Beyond the 88, Princeton Univ., February 2001. Also at Engine 27, New York, February 2001. Also, for solo SqueezeVox (Maggie) at New Interfaces for Musical Expression, JBL Theatre, Experience Music Project Museum, Seattle, Mar., 2001.
"Project Arbol: Deer B Gone," with Mary Wright, Installation for 26 tree-suspended moving speakers, 2001.
DigitalDoo, with Interface, "Transfizzle" concert, Artist Residency Program, Renssalear Polytechnical Institute iEAR Institute, May 2003.
Gigapop Ritual, Montreal, CA <==>Princeton USA Internet2/CA2Net concert, for Sitar and EDholak (CA, Ajay Kapur), DigitalDoo (CA, P. Cook), Electronic Spoon (CA, Ge Wang), Graphics (CA, Philip Davidson), Tabla and EDholak (US, Manjul Bhargava), Electric Violin and Rbow (US, Dan Trueman), and Bass (US, Tae Hong Park). New Interfaces for Musical Expression Conference, Montreal, May 2003.
On-The-Fly Counterpoint for two projected laptops, with Ge Wang, Princeton Listening in the Sound Kitchen LITSK Festival 2003.
Improvisations, Perry Cook (Controller, One With Everything (COWE)), Dan Trueman (Electronic Violin and Bowed Sensor Speaker-Array (BoSSA)), Tomie Hahn (Shakuhatsu), Curtis Bahn (Sensor-Speaker Bass (sBass)), and Pauline Oliveros (Accordion), Princeton Listening at the Sound Kitchen LITSK Festival 2003.
On-The-Fly Counterpoint for two projected laptops, with Ge Wang, New Interfaces for Musical Expression (NIME) June, 2003, Hamamatsu Japan.
"Non Specific Gamelon Taiko Fusion," by Perry Cook and Ge Wang, for Laptop Orchestra and Percussion, Dartmouth Orchestras of Sameness Festival, May 2006.
"On the Fly Counterpoint," laptop/controller improvisation with Ge Wang, Cross Currents Music Festival, Penn State University, April 2006

"Augmented Lithophone," with Jonathan Shor, Stone Xylophone Plus Electronics Sculpture for Quark Park, July-Nov. 2006.

"On the Fly Counterpoint," laptop/controller improvisation with Ge Wang, (juried) SIGGRAPH Art Gallery Performance, Boston, Aug. 2006

"Take it for Granite," by Perry Cook, for Laptop Orchestra, Electronic Music Foundation Ear to the Earth Festival, Three Legged Dog, Manhattan, NY.

"Loom: (Etude II pour un enfant seul)" by Ge Wang, Ananya Misra, and Perry Cook, for 8-channel tape, performed at the International Computer Music Conference, New Orleans, Sept. 2006. Performed Nov. 27, 2007, Princeton University Composer's Ensemble Concert.

"Scritto Improv Redux," for VOMID Controller and Computer Voice Models, Eastman Computer Music Center 25th Anniversary Festival, November 2006.

"House of Sound: NogginSonix I" Installation for "Sounded Text" Festival, Princeton Univ. Oct. 13-17, 2007.

PLOrk Performances 2008: Northwestern University Spring Festival ("Timber is a Timbre"), ACO Carnegie Hall and Annenberg Center ("Silicon/Carbon," by Dan Trueman), National Academies of Science Museum Washington DC, New Interfaces for Musical Expression, Columbia University.

PLOrk Performances 2009: MATMOS, So Percussion, and the Princeton Laptop Orchestra at the Kitchen, NY April 2009, PLOrk at the MacArthur Foundation Digital Learning Initiative Showcase, Chicago April 2009.