Curriculum Vitae
Perry R. Cook
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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. May 1986.
Major in voice. Secondary emphasis in recording and electronic music.

RESEARCH INTERESTS

Physics-based synthesis of musical and real-world sounds. Singing voice analysis/synthesis. History of music tech. Expressive devices for computer music control and human-computer interaction. Music/DSP languages and systems. Human perception of audio and music. Audio analysis and MIR. Laptop Orchestras and Ensembles. Assistive technologies. Audio synthesis/analysis applications, auditory display, sound for immersive environments.

WORK EXPERIENCE

June 2008-Present: SMule (Sonic Mule), Menlo Park/Palo Alto/San Francisco (iPhone Apps).
Intellectual Property Strategist, Consultant and Advisor (since Founding), Member of Board of Advisors.
Jan. 2020-Present Faculty, Music (Technology), California Institute of the Arts
Previous CalArts: 2010-2019 Visiting Professor/Artist
June 2013-Mar. 2018 Co-Founder, Executive Vice President, Kadenze (Kannu) Inc. (Online (Arts) Education)
2010-2012 Advisor/Researcher, Stanford CCRMA, Chavin de Huantar Acoustic Archeology Project
Feb. 1996 - Present: Professor (Emeritus as of Oct. 9/10), 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. Other Consulting Contracts, Sound and Music Software, Design Review, Patent Analysis, etc.: Interval Research, Chromatic Research, Xenon Inc., 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/stage systems for over 90 live performances at 4100 seat (plus additional grass seating) 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 Assistant 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 Publications

P. Cook (as P-Ray), "Behold the Ch!Ld ," Communications of the Association of Computing Machinery, Future Tense (speculative fiction), 64:5, May, 2021.

P. Cook "COVID 19 Pan Tongue Drum: A Robot Sonification of the SARS-2 COVID Virus Genome," Sienna Solstice, Issue 01: June, 2020.

P. Cook (as P-Ray), "Cantando con la Corrente (Singing with Current)," Communications of the Association of Computing Machinery, Future Tense (speculative fiction), 62:11, November, 2019.

P. Cook, "Adding Art to STEM," Communications of the Association of Computing Machinery 59:10, Oct. 2016.

G. Wang, P. Cook, S. Salazar, "ChucK: A Strongly Timed Computer Music Language," Computer Music Journal, 39:4, Winter 2015.

A. Fink, A. Spanias, and P. Cook, "Derivation of a New Banded Waveguide Model Topology for Sound Synthesis," Journal of the Acoustical Society of America, Vol. 133(2), pp. EL76-EL81, 2013.

M. Kolar, J. Rick, P. Cook and J. Abel, "Ancient Pututus Contextualized: Integrative Archaeoacoustics at Chavín de Huántar, Perú ," Flower World: Music Archeology of the Americas, Vol. 1, Ekho Verlag, Berlin, 2012.

P. Cook, "In Memory of Max Mathews, Computer Music Journal, 35:3, Feb. 2011.

P. Cook and S. Smallwood, "SOLA: Sustainable Orchestras of Laptops and Analog," Leonardo Music Journal, 20, pp. 89-95, 2010.

X. Ma, C. Fellbaum & P. Cook, 2010, "Semantic Labeling of Nonspeech Audio Clips," EURASIP Journal of Audio, Speech, and Music Processing, 2010.

P. Cook, "In Memory of Manfred Schroeder," Computer Music Journal, 34:3, Fall 2010.

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.

P. Cook, "Review of Book: New Digital Musical Instruments:, Control and Interaction Beyond the Keyboard, by Eduardo Reck Miranda and Marcello Wanderley" Organised Sound, 12:2, August 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.

H. Chen, G. Wallace, A. Gupta, K. Li, T. Funkhouser, P. Cook, "Experiences with Scalability of Display Walls," in Proceedings of the Immersive Technology Symposium (IPT), Orlando, 2002.

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. Cook, "Review of Book: *Mother Tongue*, by Eduardo Reck Miranda," Computer Music Journal, 28:4, 2004.

V. Stiefel, D. Trueman and P. Cook, "Re-coupling: the uBlotar Synthesis Instrument and the sHowl Speaker-Feedback Controller," Proc. International Computer Music Conference, 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 & P. Cook, "BoSSA: The Deconstructed Violin Reconstructed," Journal of New Music Research, 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/Award-Winning 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, “Principles for Designing Computer Music Controllers,” Reprinted (with author & respondent (Wanderley) commentary) in A *NIME Reader: Fifteen Years of New Interfaces for Musical Expression*, Springer, 2017.
A. Kapur, P. Cook, S. Salazar, G. Wang, *Programming for Musicians and Digital Artists, Creating Music with ChucK*, New York, Manning Publications, December 2014.
P. Cook, “Sound Synthesis for Auditory Display,” Chapter 9 in *The Sonification Handbook*, T. Hermann, A. Hunt, and J. Neuhoff eds., Logos, Berlin, 2011.
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.

Blog Articles

P. Cook, “How to Use Code-Generated Animations to Engage Learners Online,” Kannu.com Blog, Dec. 2017
P. Cook, “How to Create Active Learning Experiences With In-Video Quizzes,” Kannu.com Blog, Jan. 2018
P. Cook, “Learning Music Online 3: Curriculum, Robot Graders and Teachers,” Class Central, Oct. 2016.
P. Cook, “Learning Music Online 2: Social Networks, and the Future,” Class Central, Sept. 2016.
P. Cook, “Adding Art to STEM,” Association of Computing Machinery Blog, April 2016.
P. Cook, “Learning Music Online: Creative Education for the World,” Part 1 of 3pt. series, Class Central, Aug. 2016. All available at: https://www.classcentral.com/report/learning-music-online
P. Cook, “Live-Coding: Insider Nerd Art, High Wire Act, or Virtuoso Music?,” Kadenze.com Blog, Aug. 2016

Published Animations and Research Videos

P. Cook, "Corona (COVID-19) Robot," Sienna Solstice Online, Issue 01, June 2020. https://youtu.be/hnOiar0S-To

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 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.

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.

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.

Conference Papers

S. Wager, G. Tzanetakis, S. Sullivan, P. Cook, 2019, "Intonation: A Dataset of Quality Vocal Performances Refined by Spectral Clustering on Pitch Congruence," IEEE Conf. on Acoustics, Speech, and Signal Processing.

A. Kapur, P. Cook, J. Hochenbaum, O. Vallis, S. Reid, "The Future of Online Arts and Creative Education, Exploring Science in the Studio, AICAD Symposium, Nov. 2015.

A. Kapur, P. Cook & M. Bryant, 2013, "Teaching Computer Science to Digital Artists through Music and Sound," In Proceedings of the International Computer Music Conference. Perth, Australia.

P. Cook, 2010, "Laptop Orchestras, Robotic Drummers, Singing Machines, and Musical Kitchenware: Learning Programming, Algorithms, User Interface Design, and Science Through the Arts," Invited Keynote, Consortium for Computing Sciences in Colleges Northwestern Conference, Evergreen State College.

M. Kolar, P. Cook, J. Abel & J. Rick; with demonstration by J. Coronel, 2011, "Acoustics, Architecture, and Instruments in Ancient Chavín de Huántar, Perú " XII Congress ICTM Study Group for Music Archaeology, Sound and Ritual: Bridging Material and Living Cultures. University of Valladolid, Spain, Sept. 2011.

M. Kolar, J. Rick, P. Cook and J. Abel, 2012, "A Multidisciplinary Methodology for Studying Ancient Auditory Environments," American Association for the Advancement of Science, Vancouver, BC, Feb. 2012.

B. Mechtley, A. Spanias & P. Cook, 2012, "Shortest Path Techniques for Annotation and Retrieval of Environmental Sounds," Proc. of the International Symposium on Music Information Retrieval (ISMIR).

R. Fiebrink, D. Trueman & P. Cook, 2011, "Human Model Evaluation in Interactive Supervised Learning," Proc. ACM CHI11, pp. 147-156.

P. Cook, J. Abel, M. Kolar, P. Huang, J. Huopaniemi, J. Rick, C. Chafe & J. Chowning, 2010, "Acoustic Analysis of the Chavín Pututus (Strombus Galeatus Marine Shell Trumpets)," Invited paper presented at 2nd Pan American/Iberian Meeting on Acoustics, Cancún, México, November 2010.

R. Fiebrink, D. Trueman, C. Britt, M. Nagai, K. Kaczmarek, M. Early, M. Daniel, A. Hege & P. Cook 2010, "Toward Understanding Human-Computer Interactions in Composing the Instrument," Proc. of ICMC 2010.

S. Nikolova, M. Tremaine & P. Cook, 2010, "Click On Bake to Get Cookies: Guiding Word Finding With Semantic Associations," Proc. of ACM ASSETS10, pp. 155-162.

S. Nikolova, X. Ma, M. Tremaine & P. Cook 2010. "Vocabulary Navigation Made Easier," Proc. of ACM 15th Intl. Conf. on Intelligent User Interfaces (IUI10), pp. 361-364.

S. Nikolova & P. Cook, “Building Semantic Networks to Improve Word Finding in Assistive Communication Tools,” in SAMAIS ’10, Proceedings of the 1st Intl. Workshop on Semantic Models for Adaptive Interactive Systems, ACM New York, pp. 19-23, 2010.

X. Ma, C. Fellbaum & P. Cook 2010, “Enviromental Sounds as Concept Carriers for Communication,” Proc. of 16th ICAD10.

X. Ma, C. Fellbaum & P. Cook 2010, “A Multimodal Vocabulary for Augmentative and Alternative Communication from Sound/Image Label Datasets,” Proc. NAACL Human Language Technologies Workshop of Speech and Language Processing for Assistive Technologies.

X. Ma, C. Fellbaum & P. Cook, “SoundNet: Investigating a Language Composed of Environmental Sounds,” Proc. ACM CHI10, pp. 1945-1954.

M. Hoffman, D. Blei & P. Cook, 2010, “Bayesian Nonparametric Matrix Factorization for Recorded Music,” Proc. of ICML10, pp. 439-446.

S. Smallwood, P. Cook, D. Trueman, L. McIntyre, “Don't Forget the Loudspeaker – A History of Hemispherical Loudspeakers at Princeton, Plus a DIY Guide,” New Interfaces for Musical Expression, June, 2009.

M. Hoffman, D. Blei & P. Cook, 2009, "Easy as CBA: A Simple Probabilistic Model for Tagging Music," Proc. of the 10th International Conference on Music Information Retrieval (ISMIR), Kobe, 2009.
(Winner of the best student paper award at ISMIR 2009.)

M. Hoffman, D. Blei & P. Cook, 2009, "Audio Tagging with CBA," ISMIR MIREX.

M. Hoffman, D. Blei & P. Cook, 2009, "Finding Latent Sources in Recorded Music With a Shift-Invariant HDP," Proc. of the 12th International Conference on Digital Audio Effects, Como.
(2nd place winner, best student paper award, New York Academy of Sciences, Machine Learning Symp. 2009)

M. Hoffman, P. Cook & D. Blei, "Bayesian Spectral Matching: Turning Young MC into MC Hammer via MCMC Sampling," Proc. of the 2009 International Computer Music Conference, Montreal, 2009.

A. Misra, G. Wang & P. Cook, 2009, “TAPESTREA: A New Way to Design Sound,” Proc. of ACM Multimedia 2009, pp. 1033-1036.

A. Misra & P. Cook 2009, “Toward Synthesized Environments: A Survey of Analysis and Synthesis Methods for Sound Designers and Composers,” Proceedings of ICMC 2009.

R. Fiebrink, P. Cook & D. Trueman 2009, “Play-Along Mapping of Musical Controllers,” Proc. ICMC 2009.

G. Wang, G. Essl, J. Smith, S. Salazar, P. Cook, R. Hamilton, R. Fiebrink, J. Berger, D. Zhu, M. Ljungstrom, A. Berry, J. Wu, T. Kirk, E. Berger and J. Segal, “SMule = Sonic Media: An Intersection of the Mobile, Musical, and Social,” Proc. of ICMC 2009.

R. Fiebrink, D. Trueman & P. Cook, 2009, “A Meta-Instrument for Interactive, On-the-fly Machine Learning,” Proc of NIME09, Pittsburgh.

M. Kolar, J. Rick, J. Abel, P. Huang, J. Smith, J. Chowning & P. Cook, “Auditory Implications of Gallery Acoustics at Chavín de Huántar,” Institute of Andean Studies 49th Annual Meeting, Berkeley, CA, 2009.

R. Fiebrink, P. Cook, S. Smallwood, D. Trueman & G. Wang 2009, “Laptop Orchestras and Machine Learning in Real-Time Music Performance,” Computational Creativity Support Workshop, ACM CHI09.

P. Cook 2009, “Re-Designing Principles for Computer Music Controllers: A Case-Study of SqueezeVox Maggie,” Proc. of NIME09.

S. Lakatos, P. Cook, and G. Scavone 2009, “Learning About Acoustical Properties Through Computer-simulated Sound Sources,” Proc. 16th Intl. Congress on Sound and Vibration.

S. Nikolova, J. Boyd-Graber, C. Fellbaum & P. Cook, 2009, “Better vocabularies for assistive communication aids: connecting terms using semantic networks and untrained annotators,” Proc.ACM ASSETS10, pp171-178.

S. Nikolova, J. Boyd-Graber & P. Cook, 2009, “The design of ViVA: a mixed-initiative visual vocabulary for aphasia,” Proc. of ACM CHI09, pp. 415-420.

X. Ma, J. Boyd-Graber, S. Nikolova, & P. Cook, 2009, “Speaking through pictures: images vs. icons,” Proc. of ACM ASSETS09, pp. 163-170.

X. Ma, S. Nikolova & P. Cook, 2009, “W^{2}ANE: When Words are Not Enough: An online multimedia language assistant for people with aphasia,” Proc. of 17th ACM Multimedia09, pp. 749-752.

X. Ma & P. Cook, 2009, “How Well do Visual Verbs Work in Daily Communication for Young and Old Adults?” Proc. ACM CHI09.

X. Ma and P. Cook, "Creating and Evaluating a Video Vocabulary for Communicating Verbs for Different Age Groups," ACM SIG ASSETS Conference on 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," Proc. ISMIR, Philadelphia, September 2008.

G. Wang, R. Fiebrink & P. Cook, 2008 “Music Information Retrieval in ChucK: Real-Time Prototyping for MIR Systems and Performance,” ISMIR 2008, Philadelphia, PA.

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.

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.

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.

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 Graphical 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.

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.
C. Chen, Y. Huang and P. Cook, “Visual/Acoustic Emotion Recognition,” IEEE Multimedia, 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.
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)
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.
S. Lakatos and P. Cook, “An Assessment Tool for Auditory Realism,” 113th Meeting of the Acoustical Society of America, 2003.
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.
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.
O. Ben-Tal, J. Berger, B. Cook, M. Daniels, G. Scavone and P. Cook, “SONART: The Sonification Application Research Toolbox,” International Conference on Auditory Display, 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.
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

NOTE: Various other patents filed, in process, assigned to Smule and Kadenze, protected under trade secret.

Utility Patents Assigned to Smule:

US 10,103,820 Oct 16, 2018 System and method for communication between mobile devices using digital/acoustic techniques (P. Cook, sole inventor)
(4 total in this family)
US 9,083,451 Jul 14, 2015 US 9,596,036 Mar 14, 2017 US 8,750,473 Jun 10, 2014

US 11,127,407 Sep 21, 2021 Automatic conversion of speech into song, rap or other audible expression having target meter or rhythm, with Parag Chordia, Mark Godfrey, Alex Rae, Prerna Gupta

US 11,093,210 Aug 17, 2021 Wireless handheld audio capture device and multi-vocalist method for audiovisual media application, with Ben Hersh, John Shimmin, Jeannie Yang

US 11,074,923 Jul 27, 2021 Coordinating and mixing vocals captured from geographically distributed performers with Ari Lazier, Tom Lieber, Turner Kirk.

US 11,032,602 Jun 8, 2021 Audiovisual collaboration method with latency management for wide-area broadcast with Anton Holmberg, Benjamin Hersh, Jeannie Yang, Jeff Smith

US 10,943,574 Mar 9, 2021 Non-linear media segment capture and edit platform with David Steinwedel, Andrea Slobodien, Jeff Smith

US 10,930,296 Feb 23, 2021 Pitch correction of multiple vocal performances with Ari Lazier, Tom Lieber, Turner Kirk.

US 10,930,256 Feb 23, 2021 Social music system and method with continuous, real-time pitch correction of vocal performance and dry vocal capture for subsequent re-rendering based on selectively applicable vocal effect(s) schedule(s), with Jeannie Yang, Nick Kruge, Greg Thompson

US 10,726,874 Jul 28, 2020 Template-based excerpting and rendering of multimedia performance with Jeff Smith, David Steinwedel, Ka Yee Chan

US 10,685,634 Jun 16, 2020 Continuous pitch-corrected vocal capture device cooperative with content server for backing track mix with Spencer Salazar, Rebecca Fiebrink, Ge Wang, Mattias Ljungstrom, Jeff Smith

US 10,672,375 Jun 2, 2020 Continuous score-coded pitch correction with Spencer Salazar, Rebecca Fiebrink, Ge Wang, Mattias Ljungstrom, Jeff Smith

US 10,607,650 Mar 31, 2020 Coordinated audio and video capture and sharing framework, with Parag Chordia, Mark Godfrey, Prerna Gupta, Nick Kruge, Randal Leistikow, Alex Rae, Ian Simon

US 10,587,780 Mar 10, 2020 Coordinating and mixing audiovisual content captured from geographically distributed performers, with Mark Godfrey

US 10,565,972 Feb 18, 2020 Audiovisual media application platform with wireless handheld audiovisual input with Ben Hersh, John Shimmin, Jeannie Yang

US 10,460,711 Nov 29, 2019 Crowd sourced technique for pitch track generation with Stefan Sullivan, John Shimmin, Dean Schaffer

US 10,424,283 Sep 24, 2019 Automated generation of coordinated audiovisual work based on content captured from geographically distributed performers with Kevin Sung, Bona Kim, Jon Moldover, John Shimmin, Jeannie Yang

US 10,395,666 Aug 27, 2019 Coordinating and mixing vocals captured from geographically distributed performers with Ari Lazier, Tom Lieber, Turner Kirk

US 10,339,906 Jul 2, 2019 Musical composition authoring environment integrated with synthetic musical Instrument, with Charles Espeleta, Jeannie Yang, Oscar Corral, Jon Moody, Ran XIE, Jeff Smith, Dean Schaffer

US 10,290,307 May 14, 2019 Automatic conversion of speech into song, rap or other audible expression having target meter or rhythm, with Parag Chordia, Mark Godfrey, Alex Rae, Prerna Gupta

US 10,229,662 Mar 12, 2019 Social music system and method with continuous, real-time pitch correction of vocal performance and dry vocal capture for subsequent re-rendering based on selectively applicable vocal effect(s) schedule(s), with Jeannie Yang, Nick Kruge, Greg Thompson

US 9,911,403 Mar 6, 2018 Automated generation of coordinated audiovisual work based on content captured geographically distributed performers with Kevin Sung, Bona Kim, Jon Moldover, John Shimmin, Jeannie Yang

US 9,866,731 Jan 9, 2018 Coordinating and mixing audiovisual content captured from geographically distributed performers with Mark Godfrey

US 9,852,742 Dec 26, 2017 Pitch-correction of vocal performance in accord with score-coded harmonies with Ari Lazier, Tom Lieber, Turner Kirk

US 9,761,209 Sep 12, 2017 Synthetic musical instrument with touch dynamics and/or expressiveness control with Jeannie Yang, Yuning Woo, John Shimmin, Randal Leistikow, Michael Berger, Jeff Smith

US 9,754,572 Sep 5, 2017 Continuous score-coded pitch correction with Spencer Salazar, Rebecca Fiebrink, Ge Wang, Mattias Ljungstrom, Jeff Smith

US 9,754,571 Sep 5, 2017 Continuous pitch-corrected vocal capture device cooperative with content server for backing track mix
with Spencer Salazar, Rebecca Fiebrink, Ge Wang, Mattias Ljungstrom, Jeff Smith

US 9,721,579 Aug 1, 2017 Coordinating and mixing vocals captured from geographically distributed performers
with Ari Lazier, Tom Lieber, Turner Kirk

US 9,666,199 May 30, 2017 Automatic conversion of speech into song, rap, or other audible expression having target meter or rhythm, with Parag Chordia, Mark Godfrey, Alex Rae, Prerna Gupta

US 9,601,127 Mar 21, 2017 Social music system and method with continuous, real-time pitch correction of vocal performance and dry vocal capture for subsequent re-rendering based on selectively applicable vocal effect(s) schedule(s), with Jeannie Yang, Nick Kruge, Greg Thompson

US 9,459,768 Oct 4, 2016 Audiovisual capture and sharing framework with coordinated user-selectable audio and video effects filters, with Parag Chordia, Mark Godfrey, Prerna Gupta,
Nick Kruge, Randal Leistikow, Alex Rae, Ian Simon

US 9,324,330 Apr 26, 2016 Automatic conversion of speech into song, rap or other audible expression having target meter or rhythm, with Parag Chordia, Mark Godfrey, Alex Rae, Prerna Gupta

US 9,176,610 Nov 3, 2015 Audiovisual sampling for percussion-type instrument with crowd-sourced content sourcing and distribution, with Nick Kruge, Ge Wang

US 9,147,385 Sep 29, 2015 Continuous score-coded pitch correction
with Spencer Salazar, Rebecca Fiebrink, Ge Wang, Mattias Ljungstrom, Jeff Smith

US 9,058,797 Jun 16, 2015 Continuous pitch-corrected vocal capture device cooperative with content server for backing track mix
with Spencer Salazar, Rebecca Fiebrink, Ge Wang, Mattias Ljungstrom, Jeff Smith

US 8,996,364 Mar 31, 2015 Computational techniques for continuous pitch correction and harmony generation
with Ari Lazier, Tom Lieber

US 8,983,829 Mar 17, 2015 Coordinating and mixing vocals captured from geographically distributed performers
with Ari Lazier, Tom Lieber, Turner Kirk

US 8,868,411 Oct 21, 2014 Pitch-correction of vocal performance in accord with score-coded harmonies
with Ari Lazier, Tom Lieber, Turner Kirk

US 8,686,276 Apr 1, 2014 System and method for capture and rendering of performance on synthetic musical Instrument with Spencer Salazar, Ge Wang

US 8,222,507 Jul 17, 2012 System&method for capture&rendering of performance on synthetic musical instrument
with Spencer Salazar, Ge Wang

Smule Design Patents (15 total, same docket, system, and topic) Assigned to Smule:

"Display screen or portion thereof with (animated) graphical user interface", Issued Oct. 2017 – Mar. 2018

US D839,287	US D813,266	US D813,265	US D807,381	US D806,092	with Ben Hersch,
US D805,531	US D805,530	US D805,529	US D805,528	US D803,245	John Shimmin,
US D801,999	US D801,364	US D800,753	US D800,752	US D800,751	Jeannie Yang

Utility Patents Assigned to Kadenze:

US 10,095,850 Nov 9, 2018 User identity authentication techniques for on-line content or access
with Ajay Kapur, Owen Vallis, Jordan Hochenbaum

US 9,792,553 Nov 17, 2017 Feature extraction and machine learning for evaluation of image- or video-type, media-rich coursework,. with Ajay Kapur, Owen Vallis, Jordan Hochenbaum,
Colin Honigman, Chad Wagner, Eric Heep

US 6,049,034 Apr 11, 2000 Music synthesis controller and method, Assigned to Interval Research (Vulcan)

Utility Patents Assigned to Stanford University:

US 5,701,393 Dec 23, 1997 System and method for real time sinusoidal signal generation using waveguide resonance oscillators with Julius O. Smith

US 5,528,726 Jun 18, 1996 Digital waveguide speech synthesis system and method (P. Cook, sole inventor)

US 5,353,372 Oct 4, 1994 Accurate pitch measurement and tracking system and method
with Julius O. Smith, Assigned to Stanford University

Utility Patents Assigned to Media Vision (Aureal Semiconductor):

US 5,557,227 Sep 17, 1996 Economical generation of exponential and pseudo-exponential decay functions in digital hardware with Bryan Colvin, Assigned to Media Vision (Aureal)

US 5,543,578 Aug 6, 1996 Residual excited waveguide, Assigned to Media Vision, with B. Colvin, D. Gochnauer

US 5,468,906 Nov 21, 1995 Sound synthesis model incorporating sympathetic vibrations of strings
with Bryan Colvin, Assigned to Media Vision (Aureal)

US 5,266,919 Nov 30, 1993 Tone generator for use with hearing aids. with Leo Boyd, (inventors retain rights)

GRANTS & FELLOWSHIPS

National Science Foundation, “A New Curriculum to Teach Computer Science Principles to Students in Digital Media Arts,” Ajay Kapur and Perry Cook, $111,881 for three years.

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.

Kadenze, Inc. Member, Board of Directors, 2013-2018.

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, 2009-2013.

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 (Fellow 2008), 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

Visiting Professor/Artist, California Institute of the Arts, 2010-Present.

FELLOWSHIPS, HONORS & AWARDS

Emeritus Professor, Princeton University Computer Science (also Music), October 2010.

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 (Advisor, CoAdvisor or Committee Reader)

Max Jaffe, " Augmented Drumming With Sensory Percussion," MFA Thesis, CalArts, 2021.
Sarah Belle Reid, "Time Within: Electronic Instruments and Musical Notation as Interfaces for Temporal Perception and Co-Creation," Cal Arts, MFA, May 2020
Cristopher Ramos Flores, "Integrating Score, Performance, and Medium in the Work-Concept: The HypeSax as a Case Study," PhD, Victoria University of Wellington, New Zealand, 2020.
Charles Van Alst Danner, "smArt: An Analytical Framework for Artistic Applications of Autonomous and Semi-Autonomous Systems," CalArts MFA 2020.
Arash Hajihosseini, "Recontextualizing Persian Music in Electronic Music," CalArts MFA 2020
Kai-Luen Liang, "Manufacturing Landscapes: Surveillance, Anxiety, Artificial Landscapes," CalArts MFA 2020.
Jingyin (Jon) He, "Re-Visioning Guqin Performance Through Interface Design, Digital Measurement, and Signal Processing," PhD, Victoria University of Wellington, New Zealand, 2017.
Brandon Metchley, "Techniques for Soundscape Retrieval and Synthesis," PhD, ASU Computer Science, 2014
Jordan Natan Hochenbaum, "L'arte di Interazione Musicale: New Musical Possibilities Through Multimodal Techniques," PhD in Sonic Arts, Victoria University of Wellington, New Zealand, 2013.
Alex Fink, "Re-Sonification of Objects, Events, and Environments," PhD, ASU Electrical Engineering, 2013.
Owen Vallis, "Contemporary Approaches to Live Computer Music: The Evolution of the Performer Composer," PhD in Sonic Arts, Victoria University of Wellington, New Zealand, 2013.
Miriam Kolar, "Archaeological Psychoacoustics at Chavín de Huántar, Perú,"PhD, Stanford Center for Computer Research in Music and Acoustics. 2013.
Seth Cluett, "Loud Speaker: Toward a Component Theory of Media," PhD Music, Princeton University, 2012.
Alex Fink, "Re-Sonification of Objects, Events, and Environments," PhD EE, Arizona State University, 2013.
Rebecca Fiebrink, PhD Computer Science, Princeton University, "Real-Time Human Interaction With Supervised Learning Algorithms for Music Composition and Performance," January 2011.
Matt Hoffman, PhD Computer Science, Princeton University, "Probabilistic Graphical Models for the Analysis and Synthesis of Musical Audio," 2010.
Betsey Biggs, PhD Music, Princeton University, "Everyone Play: Sound, Space and the (Re)Making of Place," 2009
Sonya Nikolova, PhD Computer Science, Princeton University, "Improving Word-Finding in Assistive Communication Tools: a Mixed-Initiative Approach," 2010.
Xiaojuan Ma, PhD Computer Science, Princeton University, "Communication beyond Words: Multimedia Approaches to Bridging Language Disabilities and Barriers" September 2010.
Ananya Misra, Princeton PhD Computer Science, "TAPESTREA: Techniques and Paradigms for Expressive Synthesis, Transformation, and Re-Composition of Environmental Audio," 2009.
Michael Klingbeil, DMA, Columbia University Dept. of Music (Ext. Reader), "Sinusoidal Partial Editing, Analysis, and Resynthesis," November, 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.

TEACHING EXPERIENCE

Instructor, California Institute of the Arts Courses (* = New Courses)

*Spr 2021: MTEC-155/MTEC-655 Physical Modeling Synthesis
Spr 2020: Physical Modeling Synthesis Graduate Seminar (as Kadenze online MOOC course)
2013: ChucK Programming MOOC on Coursera (now Kadenze) with Ajay Kapur, Ge Wang, Spencer Salazar

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

Instructor, Stanford Courses

2015 Creator: Kadenze MOOC on Kadenze: “Physics-Based Sound Synthesis for Games and Interactive Systems.”
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

CONFERENCE COURSES AND WORKSHOPS

Course: "Sonification in ChucK," International Conference on Auditory Display, Atlanta, GA, 2012.
Course: "Choirs of the Future? A Workshop on Voice Technologies and New Possibilities for Singers and Choirs," 1st Symposium on Laptop Orchestras and Ensembles (SLEO), Baton Rouge, LA, April 2012.
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.

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, 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, 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 sculpture+electronics, 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.
Also 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.
Performances 2010: January 2010, DigitalDoo, Machine Orchestra and Guests, CalArts (REDCAT) Theater, LA.
Performances 2011: May 2011, Machine Orchestra, SqueezeVox Lisa, CalArts Modular (MOD) Theater.
Nov. 2011, "BBLVL (bubble level)," for Laptop Orchestra of Arizona State (LORkAS), Digital Arts Ranch, ASU.
Performances 2012: with SideBand, Symposium on Laptop Orchestras and Ensembles, Baton Rouge, Louisiana.
"LOrX Aeterna," for Laptop-augmented Choir, PLOrk, Richardson Auditorium, Princeton, Apr. 2012.
Cal Arts Spring Digital Arts Showcase, May 2012:
"Noggin Sonix" Installations: "PhoNoggin" and "NogginScriddux"
"Haberman," for Voice and ChucK-augmented Music Stand, ROD Hall https://vimeo.com/57894569
Performances 2013: Cal Arts Spring Digital Arts Showcase, May 2013:
"Professor Walter's Marvelous Musical Machines," for Luggage (thumper) Robots, and laptops.
"Then No Ships Go," for Solo Voice and FOWIOS (Folder-Oriented Wireless Interface Object for Singers) Perry Cook, Singer, Software, and FOWIOS design. https://vimeo.com/67866771
(Virtual) Opera: Libertaria, DVD/Movie by Sabrina Pena Young, My Roles: Simeon, Gabe, Miguel, Chorus.
Performances and Music 2014:
Cal Arts Showcase: "Lanzon: Echoes" for Seashells & Electronics, Lund Auditorium https://vimeo.com/108958046
CCRMALite 40, 50, 80 Festival, "Lanzon: Echoes" for Seashells and Live Electronics, Bing Hall, Stanford
Bone Flute to Autotune Symposium, UCal Berkeley, "Elaine and D'joan," for Voice and FOWIOS2, CNMAT https://vimeo.com/99552437
Performances and Music 2015:
Cal Arts Showcase: "Papagena Papageno Roboto Duetto," for Voice, Synthesized Voice, and CASSC-controlled electronics, Lund Auditorium, Cal Arts
"Stockhausen by Proxy Syndrome" Networked Performance for MIGSI-Trumpet, and Voice, ChucK, Skype, and more. With Sarah Belle Reid. Lund+, Cal Arts
Performances and Music 2016:
Cal Arts Showcase: "Joseph D'AlemKarpSmith's Newtonian BusyBox," for VOMID-Controlled Virtual Physical Models and Animation, Cal Arts Main Gallery
"Why Queern't Wee Jis Git Along? (an LGBTQ song)," Song and Video (as P-Ray) https://youtu.be/Padir80vCao
"Lamentation and Hope," Song and Video for HandPan and Voice(s) (as P-Ray), https://youtu.be/88JkGkcf2LU
"Carol of the Clucks," for Choked Rubber Chickens and Voice, (as P-Ray), https://youtu.be/lMzm9QeIpII
Performances and Music 2017: "ARs" (as P-Ray), Compact Disk of 15 Original and Cover Songs, April 2017.
Performances 2018: Cal Arts Showcase: "Repeal and Replace," for MIGSI-Trumpet & SqueezeVox Maggie Voice/EFX, with Sarah Belle Reid, CalArts Percussion Room/Auditorium
Performances and Music 2019:
Cal Arts Showcase: "PerioSaraquenza," Networked Performance for MIGSI-Trumpet and SqueezVox Maggie Voice/EFX, with Sarah Belle Reid, CalArts Percussion Auditorium+
"Sarah's Postcard Project: Perry's Card," for Trombone/Tether Controlled Spectrogram. With Sarah Belle Reid, Roy O. Disney Hall, Cal Arts.
"Weedlandia," (as P-Ray), Song and Video, July 2019, https://youtu.be/t9DLVqoP0To
Music 2020: "Skunk Trap" (as P-Ray), Song and Video, Aug. 2020, https://youtu.be/AVrcFsSX78g
"CV19 Drum Synth," (as P-Ray), Song and Video, Sept. 2020, https://youtu.be/dYBYQ_z73mA
Music 2021: "Delta Means Change," (as P-Ray), Song and Video, https://youtu.be/eGw08xSw60Q

---------- **END P. Cook CV** ----------