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Education.

B.S. (Mathematics), MIT, 1980.

Ph.D. (Mathematics), Harvard, 1986.

Employment history.

1982-1986	Research specialist, MIT Experimental Music Studio/MIT Media Lab
1986-1987	Research scientist, MIT Media Lab
1987-1993	Research staff member, IRCAM, Paris, France
1993-1994	Head, Real-time Applications Group, IRCAM, Paris, France
1994-1996	Assistant Professor, Music department, UCSD
1996-present	Professor, Music department, UCSD

Publications.

1. Puckette, M., Vercoe, B. and Stautner, J., 1981. "A real-time music11 emulator," Proceedings, International Computer Music Conference. (Abstract only.) P. 292.
2. Stautner, J., Vercoe, B., and Puckette, M. 1981. "A four-channel reverberation network," Proceedings, International Computer Music Conference, pp. 265-279.
3. Stautner, J. and Puckette, M. 1982. "Designing Multichannel Reverberators," Computer Music Journal 3(2), (pp. 52-65.) Reprinted in The Music Machine, ed. Curtis Roads. Cambridge, The MIT Press, 1989. (pp. 569-582.)
4. Puckette, M., 1983. "MUSIC-500: a new, real-time Digital Synthesis system." International Computer Music Conference. (Abstract only.)
5. Puckette, M. 1984. "The 'M' Orchestra Language." Proceedings, International Computer Music Conference, pp. 17-20.
6. Vercoe, B. and Puckette, M. 1985. "Synthetic Rehearsal: Training the Synthetic Performer." Proceedings, International Computer Music Conference, pp. 275-278.
7. Puckette, M. 1986. "Shannon Entropy and the Central Limit Theorem." Doctoral dissertation, Harvard University, 63 pp.
8. Favreau, E., Fingerhut, M., Koechlin, O., Potacsek, P., Puckette, M., and Rowe, R. 1986. "Software Developments for the 4X real-time System."

- Proceedings, International Computer Music Conference, pp. 43-46.
9. Puckette, M. 1986. "Interprocess communication and timing in real-time computer music performance," Proceedings, International Computer Music Conference, pp. 43-46.
 10. Brown, J. and Puckette, M. 1987. "Musical information from a narrowed autocorrelation function," Proceedings, International Computer Music Conference, pp. 84-88
 11. Puckette, M. 1988. "The Patcher," Proceedings, ICMC, pp. 420-429.
 12. Brown, J. and Puckette, M. 1989. "Calculation of a Narrowed Autocorrelation Function," Journal of the Acoustical Society of America 85/4, pp. 1595-1601.
 13. Puckette, M. 1989. "Max reference manual for version 2.0." IRCAM internal documentation, 31 pp.
 14. Stautner, J. and Puckette, M. 1989. "Designing Multichannel Reverberators." The Music Machine . Ed, Curtis Roads. Cambridge: the MIT Press, pp 569-582.
 15. Puckette, M. 1990. "Amplifying Musical Nuance." Journal of the Acoustical Society of America 87 (supplement 1): p. S39.
 16. Puckette, M. 1990. "EXPLODE: A User Interface for Sequencing and Score Following," Proceedings, International Computer Music Conference, pp. 259-261.
 17. Puckette, M. 1991. "FTS: A Real-time Monitor for Multiprocessor Music Synthesis." Computer Music Journal 15(3): pp. 58-67.
 18. Puckette, M. 1991. "Combining Event and Signal Processing in the MAX Graphical Programming Environment." Computer Music Journal 15(3): 68-77.
 19. Puckette, M. 1991. "Something Digital." (invited paper, Colloquium in Honor of John Pierce's 80th Birthday, Nov. 1990, Evanston, Ill) Computer Music Journal 15(4): pp. 65-69.
 20. Puckette, M. and Zicarelli, D. 1991. MAX Development Package Manual. Palo Alto: Opcode, Inc.
 21. Puckette, M. and Lippe, A. C. 1992. "Score Following in Practice." Proceedings, International Computer Music Conference, pp. 182-185.
 22. Brown, J. C. and Puckette, M., 1992. "An Efficient Algorithm for the Calculation of a Constant Q Transform." Journal of the Acoustical Society of America 92, pp. 2698-2701.
 23. Puckette, M. and Settel, J. 1993. "Nonobvious Roles for Electronics in Performance Enhancement." Proceedings, International Computer Music Conference, pp. 134-137.
 24. Lippe, C., Puckette, M., Settel, Z., Puig, V., and Jullien, J.-P., 1993. "The IRCAM signal processing workstation and IRCAM Max user groups: future

- developments and platforms." Proceedings, International Computer Music Conference, pp. 446-448.
25. Brown, J. C. and Puckette, M. 1993. "A High-Resolution Fundamental Frequency Determination Based on Phase Changes of the Fourier Transform." *Journal of the Acoustical Society of America* 94/2, pp. 662-667.
26. Puckette, M. 1994. "Is there life after MIDI?" Special invited talk. Proceedings, International Computer Music Conference, p. 2.
27. Dechelle, F., De Cecco, M., Puckette, M., and Zicarelli, D., 1994. "The IRCAM 'real-time platform': evolution and perspectives." Proceedings, International Computer Music Conference, pp. 228-229.
28. Puckette, M. and Lippe, A. C. 1994. "Getting the Acoustic Parameters from a Live Performance." Proceedings of the International Conference for Musical Perception and Cognition (Liege, Belgium), pp. 63-65.
29. Puckette, M. 1995. "Score following using the sung voice." Proceedings, International Computer Music Conference, pp. 175-178.
30. Otto, P. and Puckette, M. 1995. "Studio report, UCSD." Proceedings, International Computer Music Conference, pp. 269-272.
31. Puckette, M. 1995. "Formant-based audio synthesis using nonlinear distortion." *JAES* 43/1, pp. 40-47.
32. Puckette, M. 1995. "Synthese Parole Musique," patent number 94 02655 (France).
33. Puckette, M. 1995. "Phase-locked Vocoder." Proceedings, IEEE ASSP Workshop on Applications of Signal Processing to Audio and Acoustics.
34. Puckette, M. 1996. "Pure Data: another integrated computer music environment." Proceedings, Second Intercollege Computer Music Concerts, Tachikawa, Japan, pp. 37-41.
35. Puckette, M. 1996. "Process and device for musical and vocal dynamic sound synthesis by non-linear distortion and amplitude modulation" U.S. patent number 5,524,173.
36. Puckette, M. 1996. "Pure Data." Proceedings, International Computer Music Conference, pp. 269-272.
37. Puckette, M. 1997. "Trevor Wishart: Audible Design." review, in *CMJ* 20/1, pp. 108-109.
38. Puckette, M. and Brown, J. 1997. "Accuracy of frequency estimates using the phase vocoder." *IEEE Trans. Speech and Audio Processing* pp.166-176.
39. Puckette, M. 1997. "Pure Data: recent progress." Proceedings, Third Intercollege Computer Music Festival, Tokyo, Japan, pp. 1-4.

40. Puckette, M. and Apel, T. 1998. "Real-time audio analysis tools for Pd and MSP". Proceedings, International Computer Music Conference, pp. 109-112.
41. Puckette, M. 2001. New Public-Domain Realizations of Standard Pieces for Instruments and Live Electronics. Proceedings, International Computer Music Conference, pp. 377-380.
42. Puckette, M. 2001. Synthesizing Sounds with Specified, Time-Varying Spectra. Proceedings, International Computer Music Conference, pp. 361-364.
43. Puckette, M. 2002. "Max at seventeen." Computer Music Journal 26(4): pp. 31-43.
44. Puckette, M. 2002. "Using Pd as a score language." Proceedings, International Computer Music Conference, pp. 184-187.
45. Puckette, M. 2004. "Low-dimensional parameter mapping using spectral envelopes." Proceedings, International Computer Music Conference, pp. 406-408.
46. Puckette, M. 2004. "Who owns our software? - a first-person case study." Proceedings, ISEA, pp. 200-202.
47. Puckette, M. 2005. "Phase bashing for sample-based formant synthesis." Proceedings, International Computer Music Conference, pp. 733-736.
48. Puckette, M. 2005. "A Divide Between compositional and performative aspects of Pd. Proceedings, first international PD-convention, 2004. Also available on-line:
<http://puredata.info/community/projects/convention04/lectures/tk-puckette/First>
International Pd Convention, Graz, Austria.
49. Puckette, M. 2006. "Phase-bashed packet synthesis: a musical test." Proceedings, International Computer Music Conference.
50. Puckette, M. 2005. "Some Mathematical Tools for Music-Making." Art+Math conference, Boulder, Co.
51. Puckette, M. 2006. "Computing While Composing." Preface to the OM Composer's book (Carlos Agon et al., eds.), Editions Delatour France / IRCAM.
52. Puckette, M. 2007. The Theory and Technique of Electronic Music. World Scientific Press, Singapore, xiv+331 pp.
53. Puckette, M. 2007. "On timbre stamps and other frequency-domain filters." Proceedings, International Computer Music Conference, pp.
54. Puckette, M. 2007. "Patch for Guitar." Proceedings, Pd-convention. On line: artengine.ca/~catalogue-pd/19-Puckette.pdf
55. Puckette, M. 2009. "Not Being There." Contemporary Music Review 28/4, pp. 409-412 [reprint]
(Previously III.B.1.13)

56. Puckette, M. 2009. "Who Owns our Software? A first-person case study." econtact 11/3
(http://cec.concordia.ca/econtact/11_3/) (Previously III.B.1.14)
57. Puckette, M. 2010. "Grafting synthesis patches into live musical instruments". Proceedings, International Computer Music Conference, pp. 250-253.
58. Puckette, M. 2011. "Infuriating Nonlinear Reverberator." Proceedings, International Computer Music Conference.
59. Puckette, M. 2013. Afterword to Eric Lyon, *Designing Audio Objects for Max/MSP and Pd*, A-R editions
60. Puckette, M. 2014. "The Deadly Embrace Between Music Software and Its Users." Online Proceedings, Electroacoustic Music Studies Conference, Berlin.
61. Puckette, M. 2014. "Processes in real-time computer music." Proceedings, Linux Audio Conference, Karlsruhe, pp. 137-141.
62. Puckette, M. 2015. "Maximally uniform sequences from stochastic processes." Seamus Conference, reprinted on <http://msp.ucsd.edu/Publications/seamus15.pdf>
63. Puckette, M. 2015. "The Sampling Theorem and its Discontents." invited keynote lecture, International Computer Music Conference. To appear in *Array*.
64. Surges G., Smyth, T., and Puckette, M. 2016. *Generative Audio Systems Using Power-Preserving Allpass Filters*. *Computer Music Journal* 40, no. 1. 2016. pp. 54-69

Other work.

1. Lipsody (2013). Sound installation at Avatar gallery, Quebec City, Quebec, Canada.
2. Illud Etiam, Video, 15' duration (sound design and various production roles). First shown at the Festival Berlioz, Cote-Saint-Andre, France, August 2016.
3. Four Sound Portraits (2016). Sound installation at the third Kochi-Muziris Biennale, Cochin, India.

Published Software.

1. Max, Opcode Systems, Inc. 1990.
2. Max/MSP, Cycling74, Inc., 1998.
3. Pd (open source music software), 1997-present.
4. PDRP (Pd Repertory Project), 2002-present.

Awards and honors.

1. First place, 1979-1980 William Lowell Putnam Mathematics Competition (USA and Canada.)
2. NSF graduate fellowship, 1980 - 1983; William Lowell Putnam graduate fellowship 1983-1984.
3. Keyboard Magazine's 1990 Software Innovation of the Year award.
4. Invited speaker, 1994 International Computer Music Conference, Aarhus, Denmark.
5. Keynote speaker, 2007 WOCMAT conference, Hsinchu, Taiwan.
6. Keynote speaker, 2008 Linux Audio Conference, Cologne, Germany.
7. Seamus award, 2008 Seamus conference, Salt Lake City, Utah.