

## **JAMSHED BHARUCHA**

Founding Vice-Chancellor, Sai University, Chennai  
President Emeritus, *The Cooper Union for the Advancement of Science and Art*, New York

### **EDUCATION**

Harvard University, PhD, Psychology 1983  
Yale University, MA, Philosophy 1979  
Vassar College, BA, General and Departmental Honors, Biopsychology 1978  
Trinity College of Music, London, Associate's Diploma in Violin Performance  
(ATCL, International Exam Board) 1973

### **LEADERSHIP & FACULTY POSITIONS**

#### *Sai University*

Founding Vice Chancellor, 2020-

Launched a new university in Chennai with Founder/Sponsor KV Ramani

Created Schools of Arts & Science, Computing & Data Science, and Law

Crafted the first liberal education system in India with an integrated undergraduate program encompassing the arts, sciences, technology, and law – which typically exist in specialized, stand-alone institutions

Launched interdisciplinary majors new to India

Built a stellar international faculty in residence and online

Created a novel model of active learning and international engagement

Currently recruiting our third undergraduate class

Currently recruiting our first PhD students

#### *SRM University – AP, Amaravati*

Inaugural Vice Chancellor, 2018-2020

Launched a new university Amravathi, Andhra Pradesh, India, with Founder/Sponsor P. Satyanarayanan

A unique opportunity to build a university from scratch in a new, planned city, in a region with tremendous high school talent but with few fine universities, being one of the first multi-school research universities in India to emphasis liberal education and active forms of learning.

Created Schools of Liberal Arts and Engineering.

Crafted interdisciplinary options new to India.

Created unique programs of international engagement.

#### *The Cooper Union for the Advancement of Science and Art*

President Emeritus 2015-present

President 2011-2015

Confronted massive deficits that had drained most of the endowment.

Introduced 50% tuition to replace free tuition

Increased financial aid for student housing

Increased percentage of Pell-eligible students

#### *Tufts University*

Provost & Senior Vice President 2002-2011

Chief Academic Officer, responsible for:

Deans, Faculty, Tenure & Promotion, Research, Technology Transfer, Strategic Planning

School of Arts & Sciences

School of Engineering  
Fletcher School of Law & Diplomacy  
School of Medicine  
School of Dentistry  
Friedman School of Nutrition Science & Policy  
School of Veterinary Medicine  
Jean Mayer USDA Human Research Center on Aging

Faculty appointments 2002-2011

Professor of Psychology  
Professor of Neuroscience (Medical School)  
Professor of Music 2007-2011

*Dartmouth College*

Distinguished Fellow 2016-2018 (<https://scholar.g>)  
Dean of the Faculty of Arts & Sciences 2001-2002  
Deputy Provost 2000-2001  
Associate Dean of the Faculty (Social Sciences) 1997-2000  
Faculty Appointments (Departments):  
John Wentworth Professor of Psychological & Brain Sciences 1997-2002  
Professor of Psychology 1995-1997  
Associate Professor of Psychology 1989-1995  
Assistant Professor of Psychology 1983-1989  
Faculty Appointments (Interdisciplinary Programs):  
Program in Linguistics & Cognitive Science 1989-2002  
Program in Electro-Acoustic Music 1989-2002  
Program in Cognitive Neuroscience 1991-2002

**VISITING APPOINTMENTS & FELLOWSHIPS**

*Harvard University* Graduate School of Education Visiting Scholar 2015-2016  
*Stanford University*: Fellow, Center for Advanced Study in the Behavioral Sciences 1993-1994  
*Stanford University*, sabbatical 1987  
*Carnegie-Mellon University*, sabbatical 1986  
*Tata Institute for Fundamental Research*, Mumbai, India, Visiting Scientist 1986  
*Cornell University*, Research Support Technician 1982-1983

**HONORS & AWARDS**

Pride of America Honoree, Carnegie Corporation of New York 2011  
Honorary Fellow, Foreign Policy Association 2011  
Distinguished Achievement Award, Alumnae and Alumni of Vassar College 2005  
Undergraduate Teaching Initiative Special Award, Dartmouth College (given by the Student Assembly) 2002  
Honorary member of the Dartmouth Class of 2002 awarded by the graduating class  
Huntington Teaching Award, Dartmouth College 1989  
Fellow, American Institute of Indian Studies 1985  
Swinbourne Prize in Biology, Vassar College 1978  
Phi Beta Kappa 1978

## RESEARCH GRANTS

### National Institutes of Health

- 1999-2004: "Brain Imaging and Auditory Cognition" (\$376,825), Co-PI on program project grant "Program in Cognitive Neuroscience" (\$5,555,811), PI: M.S. Gazzaniga, 2P50 NS17778-18
- 1990-1993: "Cortical Networks in Auditory Pattern Perception", Co-PI with M. Tramo on program project grant "Program in Cognitive Neuroscience", PI: MS Gazzaniga, NS17778
- Chair, Steering Committee, Clinical and Translational Science Institute, 2008-2011  
Funded and designated by National Institutes of Health, Clinical and Translation Science Award, PI: Harry P Selker, UL1 RR025752.

### National Science Foundation

- 1996-2000: "Auditory Anchoring" (\$205,610), SBR-9601287
- 1993-96: "Modeling and Studies of Auditory Cognition" (\$188,782), DBS-9222358
- 1993-94: Grant toward Fellowship at Center for Advanced Study in the Behavioral Sciences, Stanford, SES-9022192
- 1989-92: "Modeling the Acquisition of Expectancies in Music" (\$100,248), BNS-8910778

### McDonnell and Pew Foundations

- 1989-1992: Training grant in Cognitive Neuroscience, Co-PI with PI: M.S. Gazzaniga

### Keck Foundation

- 1988: Scientific Courseware Grant, "A Neural Net Learning Simulator"
- 1985: Scientific Courseware Grant, "MindLab, a Macintosh Laboratory for Perception & Cognition" Co-PI with John C Baird

### Dartmouth College

- 1987: Faculty Fellowship
- 1993: Senior Faculty Grant
- 1988-1990: Rockefeller Center, "Mind and Music: A Cross-Cultural Simulation", Co-PI with David E Jones

## BOARDS

### Governing Board, Sai University, Chennai

#### Board of Trustees, Vassar College

2012-2022

Chair, Committee on Academic Affairs, 2015-2019

Other committees: Executive Committee; Audit; Budget & Finance

1991-1999

Chair, Committee on Budget & Finance, 1995-1999

Other committees: Executive Committee; Buildings & Grounds

### Board of Governors, SRM University – Amaravati, India, 2018-2019

### Board of Advisors, IIMUN (India's International Movement to Unite Nations), 2017-present

Board of Trustees, The Cooper Union for the Advancement of Science and Art, 2012-2015  
Board of Trustees, NY State Commission on Independent Colleges & Universities, 2015  
Board of Directors, Vellore Christian Medical College Foundation, 2013-2016  
Council of Presidents, Association of Governing Boards, 2014-2015  
Boston Global Bridge Institute, 2009-2011  
Board of Visitors, Longy School of Music, Cambridge, MA, 2008-2011  
Board of Corporators, Hallmark Health System, 2006-2011  
Advisory Board, NAMM Foundation (International Foundation for Music Research), 2000-2010  
Board of Governors, University Press of New England, 2000-2001  
Board of Directors, Society for Music Perception and Cognition, 1992-1994  
Board of Directors, Alumnae and Alumni of Vassar College, 1991-1995

## **PROFESSIONAL SERVICE**

Leadership Conclave, IIT-Gandhinagar

New England Association of Schools and Colleges, visiting team for accreditation review:  
Quinnipiac University (Chair), 2014  
Al Akhawayn University, Morocco, 2009  
University of Vermont, 2009  
University of Connecticut, 2007

Middle States Commission on Higher Education, visiting team for accreditation review:  
New York Academy of Art (Chair), 2016  
Corcoran College of Art and Design (Chair), 2014

Eastern Massachusetts Health Care Initiative (Executive Committee), 2009

Canada Fund for Innovation and Fonds de recherche du Québec, Expert Committee, 2006

National Science Foundation, Advisory Panel, Program in Human Cognition & Perception, 1993-1997

## **EDITORIAL**

### *Music Perception*

Editor, 1994-1998  
Associate Editor, 1992-94  
Consulting Editor, 1986-92

### *Journal of Experimental Psychology: Human Perception & Performance*

Consulting Editor, 1989-1994

Manuscripts and grant proposals reviewed for numerous academic journals, funding agencies, and book publishers.

## **TEACHING and ADVISING**

Sai University, Frontiers in Arts & Sciences (required Foundation Course for freshmen)

Cooper Union, World Forum (undergraduate)

Undergraduate Courses taught (at Dartmouth except where specified):

- Higher Education in Crisis: Finance, Policy & Pedagogy
- Introductory Psychology (team taught)
- Cognition
- Thought, Memory and Language
- Experimental Study of Cognition
- Experimental Design, Methodology & Data Analysis
- Auditory Perception & Music Cognition
- Modeling Cognition with Neural Nets
- Sophomore Tutorial (Harvard, Department of Psychology)

Graduate courses taught (Dartmouth):

- Graduate Proseminar (team taught)
- Graduate Core Seminar in Perception and Cognition
- Auditory Perception and Music Cognition
- Measurement and Statistics II

Guest lectures in courses (Dartmouth)

- Children's Musical Development and Learning (Department of Child Development, Tufts)
- Culture and Learning: Issues for Education (Department of Child Development, Tufts)
- Psychology of Music (Department of Music, Tufts)
- Physics of Music (Department of Physics, Dartmouth)
- Reason & Argument (Department of Philosophy, Dartmouth)
- Chance (Department of Mathematics, Dartmouth)
- Artificial Intelligence (Department of Computer Science, Dartmouth)

Undergraduate honors/research students and thesis committees (Dartmouth unless indicated otherwise):

Curtis Snook (Harvard), Joanna Morris, Tracy Gleason, Mark Wachen, Kristine Taylor, Ian Davis, Subhobrata Mitra, Mark McNellis, Vadim Sarma, Kristin Maczko, Laura Gibson, Benjamin Berk, Lauren Fontein, Jeffrey Birk

PhD and Master's students and thesis committees (Dartmouth unless indicated otherwise):

Paula Schnurr, Terri Lustick, Nicholas Oram (Queens University, Canada), Catherine Stevens (University of Sydney), Bernice Laden (University of Washington), Keiko Stoeckig, Timothy Hubbard, Hasan Tekman, Christopher Langmead, Damen Peterson, Einar Mencl, Jeremy Goodridge, Timothy Justus, Rebecca Pittenger, Barbara Tillmann (Université de Bourgogne), Meagan Curtis, Josh McDermott (MIT), Peter Todd (Stanford).

Postdoctoral fellows: Mark Wessinger, Barbara Tillmann, Petr Janata, Meagan Curtis

## SELECTED MUSICAL ACTIVITIES

Bombay Chamber Orchestra  
Vassar College Orchestra (Concert Master)  
Calhoun College Orchestra, Yale University  
Harvard-Radcliffe Orchestra, Harvard University  
Bach Society Orchestra, Harvard University

## PUBLIC COMMENTARY

Panelist, “Reimagining higher education leadership: Getting future-ready with creativity, diversity & digital mindset”, 24<sup>th</sup> *Elets World Education Summit*, Hyderabad, July 27, 2022.

“Future of Global Higher Education: Disruption, Innovation, and Transformation”. AAC&U *Virtual Conference on Global Learning Reimagined*, October 8, 2021.

“A greenfield university in a greenfield city: An Indian adventure”, *Forum for the Future of Higher Education*, Aspen Institute, Aspen, June 12, 2019.

“Realizing change: Practical solutions for major reform in higher education” (with Ben Nelson and Mallory Dwinal), *ASU GSV Summit*, San Diego, April 23, 2019.

“Bridging the gap between institution and industry” (with Padma Jaiswal), Engineering Excellence Conclave, *BW Business World*, New Delhi, July 3, 2019.

“SRM AP is a Greenfield Project, Agile on its Feet and Growing Rapidly”, *BW Education World*, December 2018.

Michael Bloomberg, Mayor of New York, *Great Hall at Cooper Union*, May 29, 2013.

Bill de Blasio, Mayor of New York, *Great Hall at Cooper Union*, April 11, 2014.

Rubin Museum “Brainwave” (with Maya Beiser), January 11, 2014.

“Sunday at the Met: Art and the Mind” (with Luke Syson), *World Science Festival*, Metropolitan Museum of Art, New York, June 2, 2013.

“The Dirty Little Secret About Learning”, *TEDx*, April 24, 2012.

“Music and Mind: The Magical Power of Sound”, *New York Academy of Sciences* (Noor Foundation), December 12, 2012.

“What ought universities look like in 20 to 30 years? (With Goldstein, M., Grabois, N., Zimmer, R. & Van Zandt, D.) *Social Research*, 79 [Special issue on The Future of Higher Education], 551-572, 2012.

“Great Soul: Mahatma Gandhi and his Struggle with India” (with Joseph Lelyveld), *Great Hall at Cooper Union*, April 16, 2012.

“The Power of Cultural Influences and Inspirations for Success: Parts I and II” (with Zubin Mehta), *Zoroastrian Association of Greater New York*, Rose Auditorium at Cooper Union, March 14, 2014.

Mary Robison, former President of Ireland and UN Higher Commissioner for Human Rights, in the *Great Hall at Cooper Union*.

Burt Neuborne, John Jay Islen Memorial Lecture, “A Tale of Three Constitutions”, C-Span, in the *Great Hall at Cooper Union*, October 4, 2012.

Education Update (with Pola Rosen), March 11, 2011.

“This is My Brain on Music” (with Faith Salie, Debra Fischer, Mark Moffett, Mario Livio), Scientific Idle Spotlight, *World Science Festival*, New York, June 5, 2010.

“Music and the Spark of Spontaneity” (with John Schaefer, Pat Methany, Charles Limb, Aaron Berkowitz, Gary Marcus), *World Science Festival*, New York, June 4, 2011. [Covered in The New York Times by Pam Belluck, June 26, 2011.]

“Good Vibrations: The Science of Sound” (with John Schaefer, Rob Schwimmer & Mark Stewart of Polygraph Lounge, Christopher Shera, Mark Whittle, & Jacob Kierkegaard), *World Science Festival*, June 3, 2010.

“Notes and Neurons: In Search of the Common Chorus” (with John Schaefer, Bobby McFerrin, Daniel Levitin & Lawrence Parsons), *World Science Festival*, June 12, 2009.

“Behind the Universal Language” (with John Schaefer, Laura-Lee Balkwill), *WNYC Soundcheck*, New York, June 12, 2009. [Covered in “Listening to Illusions of Sound”, *Discover Magazine*, Joseph Calamia, June 8, 2010.]

“Reconciliation in Iraq” (Barbara Macleod), *New England Cable News (NECN)*, July 8, 2008.

“Iraqi Leaders Find Common Ground in Secrecy” (John Moroney), *New England Cable News (NECN)*, April 28, 2008.

“The Library Café” (with Thomas Hill), *WVKKR*, Poughkeepsie, NY, February 26, 2008.

“Grey Matters: Music and the Brain” (with Mandy Patinkin), *Public Radio International*, March 1998.

Sandra Blakeslee, “The Mystery of Music: How it Works in the Brain”, *New York Times*, May 16, 1995.

WF Allman, “The Musical Brain”, *US News and World Report*, June, 1990, pp 56-62.

“DartNet” (with Giles Bateman), *PCTV*, January, 1995.

James Shreeve, “Music of the Hemispheres”, *Discover Magazine*, October 1, 1995.

## **PUBLICATIONS**

*Google Scholar*: Citations 7833, h-index 36

Bharucha, J. (2021). [Encouraging a Creative Curriculum](#), *The Hindu* (October 16).

Bharucha, J. (2021). [Multiple Views Aide Conflict Resolution](#), *Deccan Herald* (September 21).

Bharucha, J. (2019). [The critical importance of the first five years](#). *Education World: Anniversary Essay*.

Bharucha, J. (2019). [From passive to active learning](#). *India Today* (August).

Large, E., Kim, J.C., Flaig, N., Bharucha, J. & Krumhansl, C. (2016). A neurodynamic account of musical tonality. *Music Perception*, 33, 319-331.

Bharucha, J. (2013). [Education in South Asia: Time bomb or silver bullet?](#) In A. Najam & M. Yusuf (Eds.), *South Asia 2060: Envisioning Regional Futures*, pp 246-253. NY: Anthem Press.

Bharucha, J, Curtis, M.E. & Paroo, K. (2011). Musical communication as alignment of brain states. In P. Rebuschat, M. Rohrmeier, J.A. Hawkins & I. Cross (Eds.), *Language and Music as Cognitive Systems*. Oxford: Oxford University Press.

Bharucha, J., Curtis, M.E. & Paroo, K. (2011). Alignment of brain states: Response to commentaries. In P.M. Rebuschat, M. Rohrmeier, P.A. Hawkins & I. Cross (Eds.), *Language and Music as Cognitive Systems*. Oxford: Oxford University Press.

Curtis, M.E. & Bharucha, J. (2010). The minor third communicates sadness in speech, mirroring its use in music. *Emotion*, 10, 335-348.

Bharucha, J. (2009). The synchronization of brains. In J Brockman (Ed), *This Will Change Everything*. New York: Harper Perennial.

Ambady, N. & Bharucha, J. (2009). [Culture and the brain](#). *Current Directions in Psychological Science*, 18, 342-345.

Bharucha, J. (2009). Overlapping crises. *Inside Higher Ed*, December 10.

Bharucha, J. (2009). From frequency to pitch, and from pitch class to musical key: Shared principles of learning and perception. *Connection Science*, 21, 177-192.



- Curtis, M.E. & Bharucha, J. (2009). Memory and musical expectation for tones in cultural context. *Music Perception*, 26, 365-375.
- Bharucha, J. (2009). Stretching your mind. In J Brockman (Ed.), *What Have You Changed Your Mind About?* New York: Harper Collins.
- Bharucha, J. & Curtis, M.E. (2008). Affective spectra, synchronization and motion: Aspects of the emotional response to music. *Behavioral and Brain Sciences*, 31, 579.
- Bharucha, J. (2008). In Helsinki, a meeting of minds. *Tufts Magazine*, XV(4), 10-11.
- Tillmann, B., Janata, P., Birk, J. & Bharucha, J. (2008). Tonal centers and expectancy: Facilitation or inhibition of chords at the top of the harmonic hierarchy? *Journal of Experimental Psychology: Human Perception and Performance*, 34, 1031-1043.
- Bharucha, J. (2008). Cognitive dilemmas in higher education. In M.E. Devlin (Ed), *Futures Forum 2008*. Cambridge, MA: Forum for the Future of Higher Education and NACUBO.
- Bharucha, J. (2008). Expectation as an implicit process (Tribute to Leonard B Meyer). *Music Perception*, 25, 477-478.
- Bharucha, J. (2008). [America can teach Asia a lot about science, technology, and math](#). *Chronicle of Higher Education*, 54 (20), January 25, pp A33-34.
- Bharucha, J. (2007) The globalization of higher education. In J. Brockman (Eds), *What Are You Optimistic About?* New York: Harper Collins.
- Bharucha, J. (2007). Mind over music. A space for music. *Tufts Magazine*, XIV(2), 15-18.
- Bharucha, J. (2006). [Squeeze a bit more from this sponge](#). *Times Higher Education Supplement*, September 8, p. 4. London: TSL Education.
- Bharucha, J., Curtis, M.E. & Paroo, K. (2006). Varieties of musical experience. *Cognition*, 100, 131-172.
- Janata, P., Birk, J., Van Horn, J.D., Leman, M., Tillmann, B. & Bharucha, J. (2003). The cortical topography of tonal structures underlying Western music. *Science*, 298, 2167-2170.
- Tillmann, B., Bharucha, J. & Bigand, E. (2003). Learning and perceiving musical structures: further insights from artificial neural networks. In R. Zatorre & I. Peretz (Eds.), *The Cognitive Neuroscience of Music*. Oxford University Press.
- Tillmann, B., Janata, P. & Bharucha, J. (2003). Activation of the inferior frontal cortex in musical priming. *Cognitive Brain Research*, 16, 145-161.

- Janata, P., Birk, J.L., Tillmann, B. & Bharucha, J. (2003). Online detection of tonal pop-out in modulating contexts. *Music Perception*, 20, 283-306.
- Tillmann, B., Janata, P., Birk, J. & Bharucha, J. (2003). The costs and benefits of tonal centers for chord processing. *Journal of Experimental Psychology: Human Perception and Performance*, 29: 470-482.
- Janata, P., Tillmann, B., & Bharucha, J. (2002). Listening to polyphonic music recruits domain-general attention and working memory circuits. *Cognitive, Affective, and Behavioral Neuroscience*, 2, 121-140.
- Tillmann, B. & Bharucha, J. (2002). Effect of harmonic relatedness on detection of temporal asynchronies. *Perception & Psychophysics*, 64, 640-649.
- Justus, T.C. & Bharucha, J. (2002). Music perception and cognition. In H. Pashler & S. Yantis (Eds.), *Stevens Handbook of Experimental Psychology (3rd Ed)*. New York: Wiley.
- Justus, T.C. & Bharucha, J. (2001). Modularity in musical processing: The automaticity of harmonic priming. *Journal of Experimental Psychology: Human Perception and Performance*, 27, 1000-1011.
- Tillmann, B., Bharucha, J., & Bigand, E. (2001). Implicit learning of regularities in Western tonal music by self-organization. In R.M. French & J.P. Sogne (Eds.), *Connectionist Models of Learning, Development and Evolution*. Heidelberg: Springer.
- Tillmann, B., Bharucha, J. & Bigand, E. (2000). Implicit learning of tonality: A self-organizing approach. *Psychological Review*, 107, 885–913.
- Tillmann, B. & Bharucha, J. (1999). Perceiving and learning harmonic structure: Some news from MUSACT. *International Journal of Computing Anticipatory Systems*, 4, 289-300.
- Bharucha, J. (1998). Neural nets, temporal composites and tonality. In D. Deutsch (Ed.), *The Psychology of Music* (2d Ed). New York: Academic Press [Reprinted in D.L. Levitin (Ed.) (2002), *Foundations of Cognitive Psychology*. Cambridge: MIT Press]
- Tekman, H.G. & Bharucha, J. (1998). Implicit knowledge versus psychoacoustic similarity in priming of chords. *Journal of Experimental Psychology: Human Perception & Performance*, 24, 252-260.
- Bharucha, J. (1996). Melodic anchoring. *Music Perception*, 13, 383-400.
- Bharucha, J. & Mencl, W.E. (1996). Two issues in auditory cognition: Self-organization of categories and pitch-invariant pattern recognition. *Psychological Science*, 7, 142-149.
- Bharucha, J. (1995). Neural nets and musical cognition. In R. Steinberg (Ed.), *Music and the Mind Machine*. Berlin/New York: Springer.

- Bharucha, J. (1995). Editorial. *Music Perception*, 3, 271-272.
- Bharucha, J. (1993). Tonality and expectation. In R. Aiello (Ed.), *Musical Perceptions*. Oxford: Oxford University Press (Translated into Japanese).
- Tekman, H.G. & Bharucha, J. (1992). Time course of chord priming. *Perception & Psychophysics*, 51, 33-39.
- Bharucha, J. (1992). Tonality and learnability. In M.R. Jones & S. Holleran (Eds.), *Cognitive bases of musical communication*. Washington, DC: American Psychological Association.
- Tramo, M.J. & Bharucha, J. (1991). Musical priming by the right hemisphere post-callosotomy. *Neuropsychologia*, 29, 313-325.
- Bharucha, J. (1991). Cognitive and brain mechanisms in perceptual learning. In J., Sundberg, L. Nord & R. Carlson (Eds.), *Music, Language, Speech and Brain*. London: Macmillan.
- Bharucha, J. (1991). Pitch, harmony and neural nets: A psychological approach. In P. Todd & G. Loy (Eds.), *Music and Connectionism*. Cambridge: MIT Press.
- Bharucha, J., & Todd, P. (1991). Modeling the perception of tonal structure with neural nets. *Computer Music Journal*, 13, 44-53. [Reprinted in P. Todd & G. Loy (Eds.), *Music and Connectionism* (pp 128-137). Cambridge: MIT Press.]
- Tramo, M.J., Bharucha, J. & Musiek, F.E. (1990). Music perception and cognition following bilateral lesions of auditory cortex. *Journal of Cognitive Neuroscience*, 2, 195-212.
- Bharucha, J. & Olney, K.L. (1989). Tonal cognition and artificial intelligence: Priming studies and connectionist modeling. *Contemporary Music Review*, 4, 341-356. [Reprinted in McAdams, S. & Deliege, I. (Eds.), *Music and the Cognitive Sciences*. New York: Harwood. [Translated and published in French as *La Musique et les Sciences Cognitives*, Brussels: Pierre Mardaga Editions].
- Hubbard, T.L., & Bharucha, J. (1988). Judged displacement in apparent vertical and horizontal motion. *Perception & Psychophysics*, 44, 211-221.
- Bharucha, J. (1987). Music cognition and perceptual facilitation: A connectionist framework. *Music Perception*, 5, 1-30.
- Bharucha, J. & Stoeckig, K. (1987). Priming of chords: Spreading activation or overlapping frequency spectra? *Perception & Psychophysics*, 41, 519-524.
- Bharucha, J. (1987). MUSACT: A connectionist model of musical harmony. In *Proceedings of Ninth Annual Conference of the Cognitive Science Society* (pp508-517). Hillsdale, NJ: Lawrence Erlbaum.

- Bharucha, J., Meike, B. & Baird, J.C. (1987). The Macintosh as a user-friendly laboratory for perception and cognition. *Behavior Research Methods, Instruments, & Computers*, 19, 131-134.
- Bharucha, J., & Stoeckig, K. (1986). Reaction time and musical expectancy: Priming of chords. *Journal of Experimental Psychology: Human Perception and Performance*, 12, 403-410.
- Bharucha, J. & Pryor, J. (1986). Disrupting the isochrony underlying rhythm: An asymmetry in discrimination *Perception & Psychophysics*, 40, 137-141.
- Bharucha, J. (1986). Review of *Cognitive processes in the perception of art* by WR Crozier & AJ Chapman. *Music Perception*, 3, 315-322.
- Krumhansl, C., & Bharucha, J. (1986). 1) Absolute pitch 2) Psychology of music 3) Tests of musical capacity and ability. In D.M. Randel (Ed.), *Harvard Dictionary of Music* (Rev ed). Cambridge: Harvard University Press.
- Bharucha, J. Olney, K.L. & Schnurr, P.P. (1985). Detection of coherence-disrupting and coherence-conferring alterations in text. *Memory & Cognition*, 13, 573-578.
- Bharucha, J. (1985). Kognitive Musikpsychologie. In H. Bruhn, R. Oerter & H. Rosing (Eds. and trans.), *Musikpsychologie: Ein Handbuch in Schlüsselbegriffen* (pp 123-132). Munich: Urban & Schwarzenberg.
- Bharucha, J. (1984). Anchoring effects in music: The resolution of dissonance. *Cognitive Psychology*, 16, 485-518.
- Bharucha, J. (1984). Event hierarchies, tonal hierarchies, and assimilation: A reply to Deutsch and Dowling. *Journal of Experimental Psychology: General*, 113, 421-425.
- Castellano, M.A., Bharucha, J. & Krumhansl, C.L. (1984). Tonal hierarchies in the music of North India. *Journal of Experimental Psychology: General*, 113, 394-412.
- Bharucha, J. & Krumhansl, C.L. (1983). The representation of harmonic structure in music: Hierarchies of stability as a function of context. *Cognition*, 13, 63-102.
- Krumhansl, C.L., Bharucha, J. & Castellano, M.A. (1982). Key distance effects on perceived harmonic structure in music. *Perception & Psychophysics*, 32, 96-108.
- Krumhansl, C.L., Bharucha, J. & Kessler, E.J. (1982). Perceived harmonic structure of chords in three related musical keys. *Journal of Experimental Psychology: Human Perception and Performance*, 8, 24-36.
- Rahman, Y.E., Hanson, W.R., Bharucha, J., Ainsworth, E.J. & Jaroslow, B.N. (1978). Mechanisms of reduction of antitumor drug toxicity by liposome encapsulation. *Annals of the New York Academy of Sciences*, 308, 325-342.

## **CURRICULAR SOFTWARE DEVELOPED & DISTRIBUTED**

MindLab: Macintosh program for picture-oriented experiments in psychology. Developed with Blake Meike, John C. Baird. Sold by Intellimation Library for the Macintosh.

DartNet; Backpropagation neural net simulator for the Macintosh. Developed with Sean Nolan.

## **SELECTED INVITED LECTURES/PANELS**

*Icahn Medical School*, Mount Sinai Hospital, New York, “Music and Medicine”, October 21, 2014.

*Union County College*, “Music and the Brain”, February 25, 2014

*Union College*, Keynote Address, Symposium on Engineering and the Liberal Arts, June 7, 2013

*Peabody Institute, Johns Hopkins University*, “Music Synchronizes Brain States Through Emotion, Movement and the Recognition of Structure”, October 10, 2012

*Yale University*, Shulman Lecture: “The Alignment and Synchronization of Brain States Through Music” February 21, 2012

*New York University*, Psychology Department Colloquium, “Music Cognition: Structure and Affect”, February 2, 2012

*American Psychological Association*, panel on “Psychology as a STEM discipline”, San Diego, August 14, 2010

*Wellesley College*, neuroscience colloquium, April 13, 2010

*Council on Foreign Relations*, New York, panel on higher education partnerships with India, April 9, 2010

*US Army Soldier Systems Center*, Natick, MA, William Porter Memorial Lecture, “Music, Brain and Culture”, June 29, 2009

*Longy School of Music*, “Music, Learning & the Mind”, April 14, 2009

*New England Association of Schools and Colleges*, 123rd Annual Meeting and Conference, Boston, panel on “The Cognitive Age”, December 4, 2008

*Mass Insight Corporation*, US-China-India Innovation Partnership Conference, Boston, panel on “21<sup>st</sup> Century Science & Engineering Programs and Talent Partnerships”, December 12, 2008

*Teagle Foundation*, Board of Trustees, “Cognitive Dilemmas for Higher Education”, February 22, 2008

*Vassar College*, Distinguished Visitor, Carolyn Grant '36 Endowment, “Music, Mind and the Ineffable”, February 21, 2008

*Tufts University*, Center for the Enhancement of Teaching and Learning, “Cognitive Dilemmas for Higher Education”, January 17, 2008

*American Council on Education* workshop, From Competition to Collaboration: Thriving in a Global Future/US-UK Leadership Dialogue, Chair, panel on “Emerging Models of Partnerships”, Washington, DC, 2007

*Cambridge University*, “Musical Communication as Alignment of Non-propositional Brain States”, Keynote address, Language and Music as Cognitive Systems, May 12, 2007

*Phi Beta Kappa*, Delta chapter of Massachusetts, Oration: “Learning, Cognition and the Brain” April 22, 2007

*Smith College*, “Music, Brain and Culture”, December 8, 2006

*Harvard University*, Humanities Center, series on Cognitive Theory and the Arts: "Cultural Differences in Music and Perception: Studies Using fMRI and Neural Net Models", December 7, 2006

*Hampshire College*, Program in Culture, Brain & Development, “Music, Brain and Culture”, 2006  
*Massachusetts Medical Society* (Charles River District), “Music and the Brain”, 2006  
*Tufts-New England Medical Center*, Psychiatry Grand Rounds, “Music and the Brain”, 2005  
*Massachusetts Medical Society* (Norfolk District), “Music and the Brain”, 2005  
*McGill University*, Hebb Lecture Series, “The Cognitive Nature of Music”, 2005  
*St Botolph’s Club*, Boston, 2005  
*Vassar College*, Annual Distinguished Achievement Award Lecture, “Mind, Brain and Music”, 2005  
*Hampshire College*, Program in Cognitive Science, 2003  
*Harvard University*, Humanities Center, 2001  
*McGill University*, 2001  
*Reed College*, Departments of Psychology and Music, 2000  
*Université Rene Descartes*, Department of Psychology, Paris, 1999  
*Université de Bourgogne*, Psychology Colloquium, 1998  
*Columbia University*, Department of Music Colloquium, 1998  
*National Academy of Science*, 1997  
*Dartmouth Medical School*, Department of Audiology, 1994, 1996  
*University of California, Berkeley*, Department of Psychology, 1994  
*Center for Advanced Study in the Behavioral Sciences, Stanford*, 1994  
*Vassar College*, Psychology Colloquium, 1994  
*Stanford/Berkeley Symposium in Music Cognition*, Stanford Department of Music, 1994  
*Stanford University*, Center for Computer Research in Music and Acoustics (CCRMA), 1994  
*Stanford University*, Department of Psychology, 1993  
*UCLA*, Cognitive Science, 1993  
*Harvard Medical School*, Eaton-Peabody Laboratory, 1993  
*Queens University* (Canada), Department of Psychology, 1993  
*University of Pennsylvania*, Psychology Colloquium, 1992  
*Johns Hopkins University*, Psychology Colloquium, 1992  
*Siemens Institute* (Congress on the Psychophysiology and Psychopathology of Music), Munich, Germany, 1992  
*MIT Media Lab*, 1991  
*University of Washington*, School of Music, 1991  
*Bates College*, Psychology Colloquium, 1991  
*International Wenner-Gren Symposium* on Music, Language, Speech and Brain, Stockholm, Sweden, 1990  
*Herbert von Karajan Symposium* on Musical Intelligence, Vienna, Austria, 1990  
*Ohio State University* (APA symposium on Cognitive Bases of Musical Communication), 1990  
*Columbia University*, Psychology Colloquium, 1989  
*Queens University* (Canada), 1989  
*Ohio State University*, Psychology Colloquium, 1989  
*Evergreen State College*, Colloquium, 1989  
*MIT Media Lab*, 1988  
*University of Pennsylvania*, Sloan Cognitive Science lecture series, 1988  
*Brown University*, Department of Cognitive and Linguistic Sciences, 1988  
*Stanford University*, Center for Computer Research in Music and Acoustics (CCRMA), 1988  
*Institut de Recherche et de Coordination Acoustique/Musique (IRCAM)*, Paris, 1988

*Tata Institute of Fundamental Research, Bombay, 1986*

*University of Texas at Dallas, 1984*

*Vassar College, Cognitive Science colloquium, 1984*

**List of academic research conference presentations available upon request**