

## CURRICULUM VITAE

Miguel A. L. Nicolelis, MD, PhD

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### Education:

1984	M.D.	University of Sao Paulo Medical School Sao Paulo, SP, Brazil
1988-1989	Ph.D.	Institute of Biomedical Science Department of Physiology University of Sao Paulo, Brazil
1989-1992		Postdoctoral Fellow Department of Physiology and Biophysics Hahnemann University

### Honors and Awards:

1984	"Oswaldo Cruz" Award for research excellence in the field of Internal and Preventive Medicine. University of Sao Paulo
1985	Pre-doctoral Fellowship, Sao Paulo State Foundation for Research
1987	"Original and Outstanding Presentation" Award, XIV Computers in Cardiology Congress
1989	Postdoctoral Fellowship, Sao Paulo State Foundation for Research
1990	International Research Fellowship, International Research and Awards Branch, Fogarty International Center National Institute of Health
1990	Award from the International Center for Theoretical Physics, International Atomic Energy Agency. To attend the College on "Neural correlates of behavior, development, plasticity and memory".
1994	Whitehead Scholar Award
1996	Klingenstein Fellowship Award
1997-98	Member of the NIMH, CNF Study Section
1998-99	Member of the Human Brain Mapping Special Panel
1999	Member of the especial NIMH review panel for the Silvio Conte Center Awards
1999	Human Frontier Research Program Grant Award
2001	Grass Lecture Award, University of Kansas, Kansas City
2001	MIT Review's Top 10 Emerging Technologies
2002	DARPA Award for Sustained Excellence by a Performer

2002 Ruth and A. Morris Williams, Jr. Faculty Research Prize  
 2003 Duke University Thomas Langford Lectureship Award  
 2003 Grass Lecture Award, University of Colorado, Denver  
 2004 Grass Traveling Scientist Program Distinguished Lecturer, UCLA  
 2004 NARSAD Distinguished Investigator Award  
 2004 Dean's Lecture, Mount Sinai School of Medicine  
 2004 James C. White Neurosurgery Lecture, Harvard Medical School  
 2004 Ramon y Cajal Chair, University of Mexico, Mexico City  
 2004 Editor-in-Chief, *Frontiers in Neuroscience*  
 2004 Elected AAAS Fellow  
 2004 Third Annual Scientific American 50-Research Leader in  
 Biomedical Engineering  
 2004 America's Best and Brightest, *Esquire Magazine*  
 2005 Santiago Grisolia Chair, Catedra Santiago Grisolia and Fundacion  
 Museo de las Ciencias Principe Felipe  
 2005 Segerfalk Lecture, Lund University, Wallenberg Neuroscience  
 Center, Segerfalk Foundation, Lund, Sweden  
 2005 Robert Dow Neuroscience Award, Neurological Sciences Institutes,  
 Oregon Health & Science University, Portland, OR  
 2005 Keynote Speaker, Heller Lecture Series, ICNC, Hebrew University  
 2006 Hovland Endowed Colloquium Speaker, Yale University  
 2007 Sustained Excellence by a Performer, DARPA Tech 2007  
 2007 Invited Keynote Speaker, Nobel Forum, Stockholm, Sweden  
 2008 Invited Speaker, World Economic Forum, Davos, Switzerland  
 2008 Edmond J. Safra Memorial Lecture, King's College, London  
 2008 International Blaise Pascal Research Chair, Fondation de l'Ecole  
 Normale Supérieure  
 2008 Sterling Visiting Professorship, Albany Medical College  
 2008 Honorary Doctorate, Universidade Federal do Rio Grande de Norte  
 (UFRN), Natal, Brazil  
 2009 Fondation IPSEN Neuronal Plasticity Prize, Boulogne-Billancourt,  
 France  
 2009 Scientific Advisory Board, Brain and Behavior Discovery Institute,  
 Medical College of Georgia  
 2009 Scientific Advisory Board, Center for Neural Engineering,  
 University of Washington  
 2009 Board of Advisors, *Scientific American Magazine*  
 2009 Scientific Advisory Board, Center for Neuroprosthetics, Ecole  
 Polytechnique Federale de Lausanne, Lausanne, Switzerland  
 2009 Sandoz Family Foundation Chair, Edmond and Lily Safra  
 International Institute of Neuroscience of Natal, Brazil  
 2009 Cesar Timo-Iaria Lifetime Achievement Award, Brazilian Society  
 for Neuroscience  
 2009 Elected Foreign Member, French Academy of Science, Institute of  
 France, Paris, France  
 2009 Elected Full Member, Brazilian Academy of Science, Rio de  
 Janeiro, Brazil

2009	Invited to participate in 2011 Nobel Symposium “3M: Mind, Machines and Molecules,” Stockholm, Sweden
2010	Order of Rio Branco, awarded by the President of Brazil and the Minister of Foreign Affairs
2010	Latin American Neuroscience Chair Bernardo Houssay, Latin American University
2010	Medal of the Order of the Ipiranga of the State of Sao Paulo, Brazil
2010	Ralph Gerard Lectureship Award, University of California at Irvine
2010	Scopus Award, Hebrew University of Jerusalem
2010	NIH Director’s Pioneer Award
2010	NIH Director’s Roadmap Transformative Research Project Award
2010	Appointed Member, Pontifical Academy of Sciences, Vatican City, Italy
2011	Appointed Chairman, President’s Commission on the Future of Brazilian Science
2011	Named Brazilian Personality of the Year, Jornal O Globo’s 2011
2012	Alberto Santos Dumont Medal, Brazil
2012	Cabangu Commendation, Brazil
2013	Named as one of 100 Most Influential People in Brazil by Epoca Magazine
2015	Named as The 100 Leading Global Thinkers of 2015 by Foreign Policy Magazine
2015	Appointed, Council of Social and Economic Development of the Brazilian Presidency
2016	Received the World Information Technology And Services Alliance (WITSA) 2016 Imminent Persons Award
2016	MY HERO Award Winner, for Virtual Reality for social good with a significant impact.
2017	IEEE Daniel E. Noble Award for Emerging Technologies - for seminal contributions to brain-machine interfaces.
2017	Elected as an Eminent Engineer to Tau Beta Pi, National Engineering Honor Society

**Society Memberships:**

Society for Neuroscience  
International Society for Neuroscience  
American Association for the Advancement of Science  
Brazilian Society of Animal Physiology  
French Academy of Sciences  
Brazilian Academy of Sciences  
Pontifical Academy of Sciences

**Professional Experience:**

2016-	Professor, Neurology, Duke University Medical Center
2007-	Professor, Psychology and Neuroscience, Duke University
2005-	Duke School of Medicine Professor in Neuroscience, Duke University
2001-	Co-Director, Center for Neuroengineering, Duke University
2001-	Professor of Neurobiology, Duke University
2001-	Professor of Psychological and Brain Sciences, Duke University
2001-	Professor of Biomedical Engineering, Duke University
1999-2001	Associate Professor of Experimental Psychology, Duke University
1999-2001	Associate Professor of Biomedical Engineering, Duke University
1998-2001	Associate Professor (tenured), Department of Neurobiology, Duke University Medical Center
1994-1997	Assistant Professor, Department of Neurobiology, Duke University Medical Center
1989-1994	Research Instructor, Department of Physiology and Biophysics, Hahnemann University
1988-1992	Assistant Professor, Department of Pathology, University of Sao Paulo, Brazil
1986-1988	Research Instructor, Department of Pathology, University of Sao Paulo, Brazil
1985-1986	Research Associate, Department of Pathology, University of Sao Paulo, Brazil
1983-1984	Internships. University of Sao Paulo, Sao Paulo, Brazil. Internal Medicine, Pediatrics, General Surgery, Obstetrics and Gynecology, Emergency Medicine, Psychiatry, Infectious Diseases and Dermatology, and Family Practice.

### Teaching Experience:

1994 -	Lecturer and laboratory instructor, Medical Neuroscience Course. Duke University
1994 -2001	Director System Neuroscience course for graduate students. Duke University
1989 - 1994	Lecturer and laboratory instructor, Medical Neurosciences. Hahnemann University
1991 - 1993	Lecturer in the Surgery Department, Physiology course for Residents. Hahnemann University
1988	Lecturer. Medical Informatics Course for Residents. Department of Pathology, University of Sao Paulo, Brazil
1986 -1988	Co-organizer and lecturer, Medial Informatics Course for medical students. Department of Pathology, University of Sao Paulo, Brazil

### Academic Responsibilities:

Lecturer: Neurobiology for Graduate Students (1993-2013)  
Lecturer: Introduction to Neurobiology for Undergraduates (1999- 2004)  
Co-organizer: Population Coding Course (1998)  
Lecturer: History of Neuroscience Course (1997)  
Director and Lecturer, Systems Neuroscience Course for Graduate Students (1997-2005)  
Lecturer and Laboratory Instructor: Medical Neuroscience Course (1995- 2004)

### **Administrative Assignments:**

Duke University, Institutional Animal Care and Use Committee (1999-2000)  
Duke University Department of Neurobiology Space Committee (1998-2004)  
Duke University Department of Neurobiology Admissions Committee (1996-2005)  
Duke University Department of Neurobiology Steering Committee (1996-2005)  
Duke University Department of Neurobiology Computer Committee (1996-2003)  
Duke University Department of Neurobiology Translational Neuroscience Search Committee (2003)  
Duke University Department of Neurobiology Synaptic Physiologist Search Committee (2004-2005)  
Duke University Department of Neurobiology Systems Neuroscience Search Committee (2011-12)

### **Thesis Committees:**

Mr. Adam Kohn, Ph.D. Committee, Department of Neuroscience, UNC, Chapel Hill (1998-2003)  
Ms. Wan-hsun Wu, Ph.D. Committee, Department of Psychology, Vanderbilt University (1996-2000)  
Mr. Asif Ghazanfar, Ph.D. Committee, Duke University Medical Center (1994-1998)  
Ms. Erika Fanselow, Ph.D. Committee, Duke University Medical Center (1996-2001)  
Mr. Marshal Shuler, Ph.D. Committee, Duke University Medical Center (1997-2001)  
Mr. Justin Crowley, Ph.D. Committee, Duke University Medical Center (1996-2000)  
Mr. James McNamara, Ph.D. Committee, Duke University Medical Center (1996-1998)  
Mr. William Bosking, Ph.D. Committee, Duke University Medical Center (1994-1999)  
Ms. Merri Rosen, Ph.D. Committee, Duke University Medical Center (1996-2003)  
Mr. Matthew Helms, Ph.D. Committee, Duke University Medical Center (1996-2004)  
Mr. Iyad Obeid, Ph.D. Committee, Duke University Medical Center (2001-2004)  
Mr. George Hughes, Ph.D. Committee, Duke University (2002-2003)  
Ms. Allison McCoy, Ph.D. Committee, Duke University Medical Center (2001-2005)  
Ms. Colleen Hanlon, Ph.D. Committee, Duke University Medical Center (2003-2005)  
Mr. Stephen Shepherd, Ph.D. Committee, Duke University Medical Center (2003-2005)  
Mr. Joseph O'Doherty, Ph.D. Committee, Duke University Medical Center (2003- )

### **Research Interests:**

1. Computational properties of large neural ensembles in behaving animals
2. Sensorimotor plasticity in adult and developing sensory animals
3. Neuronal basis of sensorimotor learning.
4. Development of brain-machine Interfaces and neuroprosthetic devices for restoring neurological function.
5. Neuronal basis of tactile perception
6. Pathophysiology of Parkinson's disease.
7. Neurophysiological basis of social behaviors in non-human primates.

### **Peer Review Functions:**

American Scientist  
Behavior and Brain Research  
Brain Research Bulletin  
Brazilian Journal of Medical and Biological Research  
Cerebral Cortex  
Experimental Brain Research  
IEEE Transactions of Biomedical Engineering  
International Journal of Neuroscience  
Journal of Comparative Neurology  
Journal of Neurophysiology  
Journal of Neuroscience  
Journal of Neuroscience Methods  
Journal of Physiology (London)  
Nature  
Nature Neuroscience  
Neural Computation  
Neuron  
Neuroscience  
Proceedings of the National Academy of Sciences (USA)  
Science  
Somatosensory Motor Research  
Trends in Neuroscience

### **Editorial Board:**

Neuroinformatics  
Journal of Neuroscience Methods  
IEEE Transactions of Biomedical Engineering (Editor for special edition)  
Editor-in-Chief, Frontiers in Neuroscience  
IEEE TNSRE Editorial Board  
Board of Advisors, Scientific American Magazine  
Neuroinformatics  
Revista Brasileiros

### **Advisory Boards:**

Scientific Advisory Board, Center for Neuroprosthetics, Ecole Polytechnique Federale de  
Lausanne, Lausanne, Switzerland  
Scientific Advisory Board, Brain and Behavior Discovery Institute, Medical College of Georgia  
Scientific Advisory Board, Center for Neural Engineering, University of Washington  
Editorial Board, Scientific American  
Futuragene Inc., Brazil

### **Grant Reviewing:**

1992- present	Sao Paulo State Foundation for Research
1994	Thomas F. and Kate Miller Jeffress Memorial Trust
1996	Belgium Foundation for Science
1997	National Science Foundation
1997-98	Member of the Cognitive Function Study Section National Institute of Mental Health
1998-99	Member of the Human Brain Project Study Section National Institute of Mental Health
1999	NIMH Silvio Conte Center Grant Review Panel
2012	NIH Director's New Innovator Award Program

## Supervised Postdoctoral Fellows and Students

### Postdoctoral fellows

Bobae An (2015-)  
 Amol Yadav (2015-)  
 Po-He Tseng (2013-)  
 R. Sankaranarayani (2012-)  
 Eric Thomson (2004- )  
 Arjun Ramkrishnan (2012-2015)  
 David Guggenmos (2013-2015)  
 Miguel Vieira (2009-2015)  
 Andrew Tate (2008-2013)  
 Zheng Li (2010 - 2012) Junior Faculty Position, Beijing Normal University  
 Hao Zhang (2009-2012) Research Scientist, Pfizer, Inc.  
 Shashank Tandon (2010-2012) Research Fellow, Dept. of Physiology, University of Utah.  
 Janaina Pantoja (2009-2011) Translation Operations Director, American Journal Experts, Durham, NC.  
 Georgia Alexander (2006-2011) National Institute of Environmental Health Sciences, RTP, NC  
 Nathan Fitzsimmons (2009-2010) Associate/Consultant, McKinsey & Company, Palo Alto, CA  
 Jorge Maia (2008-2010 ) Clinical Research Fellow, Champalimaud Neuroscience Program  
 Craig Roberts (2008-2010) Assistant Professor of the Practice, Duke Institute for Brain Sciences  
 Romulo Fuentes (2006-2010) Scientific Director, ELS-IINN, Brazil.  
 Kafui Dzirasa (2007-2009) Assistant Professor, Dept Psychiatry, Duke University  
 Shih-Chieh Lin (2006-2009) Principal Investigator, National Institute on Aging, NIH, Bethesda, Maryland  
 Per Petersson (2006-2008) Assistant Professor, University of Lund, Sweden  
 Aaron Sandler (2005-2006) Resident, Duke University Medical School, Durham NC  
 Ivan Araujo (2004- 2007) Assistant Professor, John B. Pierce Lab, Yale University, New Haven CT  
 Tetsuji Ochiai, Ph.D. (2003-2005) Assistant Professor, University of Tokyo, Japan  
 Lucas Santos (2003-2006 ) Wake Forest University  
 Antonio Pereira, Ph.D. (2003-2005), Assistant Professor, UFRN, Brazil  
 Rui Costa, Ph.D. (2002-2006), Philip Morris, Scientist, NIAAA/NIH  
 Parag Patil M.D. (2002-2003) Assistant Professor, Neurosurgery, University of Michigan  
 Jose Carmena, Ph.D. (2002-2005), Associate Professor, University of California, Berkeley  
 Michael Wiest, Ph.D. (2001-2008) Assistant Professor, Wellesley College

Damien Gervasoni, Ph.D. (2000-2005) Senior Research Scientist, CNRS, France  
Roy Crist, Ph.D. (2000-2002; 2005-2008)  
Dragan Dimitrov, M.D. (2000-2003) Private Practice, Neurosurgery, Carmel, CA  
Jerald Kralik, Ph.D. (1999-2002) Assistant Professor, Dartmouth University  
Johan Wessberg, M.D., Ph.D. (1999-2000) Professor, University of Gottenburg.  
Assistant Professor, University of Goteborg, Sweden  
Dana Cohen, Ph.D. (1999-2004) Professor,, Gonda Brain Research Center, Bar Ilan University, Israel  
Pamela Beck, Ph.D. (1998-2002) Postdoctoral Fellow, NIH training award. NRSA NEI  
Donald Katz, Ph.D. (1997-2002) Associate Professor, Professor, Brandeis University  
Mark Laubach, Ph.D. (1997-2001) Associate Professor, Yale University.  
Amy Brisben, Ph.D. (1997-1998) Postdoctoral Fellow, NIH training award  
David Krupa, Ph.D. (1996-2004) Postdoctoral Fellow, NRSA NIMH  
Barbara Faggin, Ph.D. (1995-1996), Research Scientist, Federal University Sao Paulo

### **Ph.D. Graduate Students**

Joshua Khani (2015-)  
Yoon Woo Byun (2014-)  
Allen Yin (2013-)  
Vivek Subramanian (2012-)  
Katie Zhuang (2009-2015)  
Amol Yadav (2010-2015) Postdoctoral Fellow, Dept. Of Neurobiology, Duke University  
Marek Laska (2010-2015)  
David Schwarz (2009-2014)  
Peter Ifft (2009-2014)  
Je Hi An (2008-2013)  
Andrew Fuller (2010-2012), Master's Degree, BME Duke University  
Jesse Winans (2008-2012), Master's Degree, BME Duke University  
Timothy Hanson (2004-2012) Associate Engineer, University of California, San Francisco.  
Joseph O'Doherty (2004-2011) Postdoctoral Fellow, University of California, San Francisco  
Hao Zhang (2004-2009) Postdoctoral Fellow, Department of Neurobiology, Duke University  
Janaina Pantoja (2004-2009) Postdoctoral Fellow, Department of Neurobiology, Duke University  
Jorge Maia (2005-2008) Clinical Research Fellow, Champalimaud Neuroscience Program  
Xinwu Shi (2005-2008)  
Monica Coelho (2006-2009) Graduate Program, EPFL, Lausanne, Switzerland  
Nathan Fitzsimmons (2004-2009) McKinsey & Company, Palo Alto, CA  
Kafui Dzirasa (2004-2007) Assistant Professor, Dept. Psychiatry, Duke University  
Shih-Chieh Lin (2002-2006) Investigator, National Institute on Aging, NIH, Bethesda, Maryland  
David Santucci (2002-2004) Postdoctoral Fellow, Brandeis University  
Jennifer Stapleton (2002-2007) Postdoctoral Fellow, Wake Forest University School of Medicine,  
Aaron Sandler (2001-2005) Anesthesiology Resident, Duke University Medical School  
Nicholas Bentley (2000-2002)  
Marshall Shuler (1997-2001) Assistant Professor, Johns Hopkins University  
Mathew Matell (1996-2000) Assistant Professor, Villanova University  
Erika Fanselow (1996-2001) Assistant Professor, University of Pittsburgh  
Asif Ghazanfar (1995-1998) Associate Professor, Neurosciences, Princeton University



## **Master's Degree Graduate Students**

Will Huffman  
Keaton Armentrout  
Daniel Candrea  
Shuja Rayaz  
Andrew Young (2010-2011)  
Amol Yadav (2009-2010)  
Tian Jiang (2008-2009)  
Bjorn Omarsson (2008-2009)

## **Medical Students**

Paul Thompson (2014 - )  
Joel Martin (2011-2013)

## **Undergraduate Students**

Michael Lee	Rhea Kaw (2009)
Kevin Mauro	Jay Lehew (2009)
Diana Anthony	Thais Vinholo (2009)
Andrew Lokker	Danielle Sedlak (2009)
Julie Hong	Joseph Hall (2009)
Junho Oh	Kenneth Shen (2009)
Jason Pedowitz	Mary Caitlin Cook (2008-)
Peter Mullen	Jin Young Kim (2008-)
Jay Canarick	Kirti Johal (2008- )
Prabhanjan Didwania	Anna Nikolich (2008-)
Jean Giudice	Kevin Nathan (2008- )
Tugce Capraz	Karen Schroeder (2008-)
Kyle Rand	Philip Coter (2008-2009)
Sachin Doshi	David McMullen (2008-2009)
James Stark	Andrew Hawkey (2008-2009)
Michael Adams	Melanie Subramanian (2008-2009)
Olga Mutter (2011 - )	Nicholas Soo (2008-2009)
Andrew Weitz (2011 - )	Hyung Ju Jeon (2008)
Thomas Hasse (2011)	Thomas Cestare (2008)
Anthony Lin (2011)	Eric Fitzsimmons (2008)
Edward Kim (2011)	Harold Wesley Phillips (2008)
Anne McDonough (2011)	Ade Adekunle (2008)
Vivek Subramanian (2010 -)	Juan Potes (2007-)
Jason Lou (2009- )	Jenna Maloka (2007-2009)
Sidney Primas 2009-)	Max Hodak (2007- 2009)
Vyshak Shandra (2009-)	Katherine Chang (2007-2008)
Laamia Islam (2009-)	Rajasree Roy (2007-2008)
Tammy Lin (2009)	

Jamila Williams (2007-2008)  
Wai-Man Chan (2007-2008)  
Erin Conway (2007)  
Joanna Bersin (2007)  
Turan Kayagil (2006-2008)  
Benjamin Grant (2006-2009)  
John Choi (2006-2009)  
Ian Peikon (2006-2009)  
Leonardo Moore (2006-2007)  
Geoffrey Southmaid (2005-2007)  
Wailan Yip (2005-2007)  
Joanna Forbes (2005-2007 )  
Andres Grosmark (2005-2007)  
Hyun Kim (2004)  
Jonathan Ross (2003-2005)  
Matthew Englehard (2003-2005)  
Xinwu Shi (2004-2005)  
Albert Chu (2002-2003)  
Madeline Sackler (2002-2003)  
Kristin Shanklin (2002-2002)  
Elizabeth Brantley (2001-2002)  
Monica Coelho (2001-2003)

Sourav Sengupta (2001-2002)  
Wendy Illick (2001-2002)  
Greg Daut (2001-2002)  
Kurt Rote (2001-2002)  
Kamalkumar Kollapa (2001-2002)  
Dave Naeger (2000)  
David Vegari (2000)  
Jennifer Rainey (2000-2002)  
Nipun Chhabra (2000-2002)  
Adam Albano (2000-2002)  
Katie Berlacher (2000-2001)  
Molly Daymont (2000-2001)  
Elizabeth Race, (2000-2002)  
Mandi Silberman (2000-2002)  
Ashlan P. Reid (1999-2000)  
Christopher R. Stambaugh (1997-1998)  
Agnes Yu (1996-1997)  
Laura Fitzpatrick (1996-1997)  
Suzette Casal (1995-1996)  
Brett Carswell (1995-1996)  
Kevin Tri Nguyen (1995-1996)

### **Visiting Students**

Angelo Takigami (2013)  
Andressa Alczuk (2012)  
Guilherme Correia (2012)  
Eric Moraes (2012)  
Jing Wang (2012)  
Wenwen Bai (2011-2013)  
Rafael Carra (2011)  
Chi-Han Wang (2010-2011)  
Ernesto Soares (2002-2004)

### **Patents**

Miniaturized High-Density Multichannel Electrode Array for Long-Term Neuronal Recordings, Patent No. 6,993,392, January 31, 2006.

Apparatus for Acquiring and Transmitting Neural Signals and Related Methods. Patent No. US 7,187,968 B2, March 6, 2007.

Closed Loop Brain Machine Interface. Patent No. US 7,209,788 B2, April 24, 2007.

Method of Treating Parkinson's Disease and Other Movement Disorders. US Application U.S. Application No. 12/733,886. Patent Pending.

### **Published and Submitted Papers**

1. Filho JW, Schoveri Jr. R, Garcia YM, Machado C, Ferreira ML, Barreira PL, Batista MC, Nicolelis MAL, Carvalho Filho ET. Comparative analysis of methods for evaluation of the renal function in elders. **Geriatrics em Sintese** 1: 14-16, 1984 (Portuguese)
2. Saldiva PHN, Massad E, Caldeira MPR, Calheiros DF, Saldiva CD, Nicolelis MAL, Bohm GM. Pulmonary function of rats exposed to ethanol and gasoline fumes. **Brazilian J Med Biol Res** 18: 573-577, 1985.
3. Massad E, Furuie SS, Moura Jr LA, Saldiva PHN, Nicolelis MAL, Bohm GM. The use of a personal computer in the pulmonary function tests of laboratory rats. **Meth Inform Med** 24: 197-199, 1985.
4. Nicolelis MAL, Carvalho CRR. Computer-aided standardization of antimicrobial therapeutics. **Rev Hosp Clin Fac Med Sao Paulo** 40: 227-232, 1985 (Portuguese).
5. Nicolelis MAL, Martins MA, Meireles LP, Birolini D. Computer-aided analysis of patterns of bacterial incidence and sensitivity in a surgical unit. **Rev Assoc Med Brasil** 32: 134-140, 1986 (Portuguese).
6. Nicolelis MAL, Baccala LA, Tinone G, Yu CH. Mathematical approach to bacterial sensitivity rhythm patterns. Proceedings of the MEDINFO Congress, Ifip-Imia, Washington, 480-482, 1986.
7. Nicolelis MAL, Massad E, Utzler R, Engel A, Rodrigues E, Bazzone JRC, Tomida RM. Mathematical model of *Klebsiella pneumoniae*'s resistance to amikacin and gentamicin. **Braz J Med Biol Res** 20: 35-41, 1987.
8. Massad E, Engel A, Nicolelis MAL. A mathematical model for spirometry. **Comput Biomed Res** 20(2): 105-112, 1987.
9. Nicolelis MAL, Sameshima K, Furuie SS, Gutierrez MA. A signal processing system to analyze the neural control on the cardiovascular function. Proceedings of the VII International Congress Medical Informatics Europe, Rome, 1987, Vol 3, 1318-1322.
10. Nicolelis MAL, Baccala LA. Time series analysis of rhythmic bacterial resistance development to antibiotics. **Comput Biomed Res** 21: 137-157, 1988.
11. Lages S, Gutierrez MA, Nicolelis MAL, Furuie SS. A bedside computerized system for monitoring and processing biological signals in an intensive care unit. Proceedings of the XIV Computers in Cardiology Congress, IEEE Computer Society, Leuven, 561-564, 1988.

12. Gutierrez MA, Furuie SS, Nicolelis MAL, Lages S. Developing a multi-purpose microcomputer-based system for biological signal analysis to cardiovascular protocols. Proceedings of the XIV Computers in Cardiology Congress, IEEE Computer Society, 505-508, 1988.
13. Nicolelis MAL, Yu CH. Application of a microcomputer-based system in the analysis of infection data at the emergency units of a large hospital. **Int J Biomed Comput** 22: 183-198, 1988.
14. Nicolelis MAL, Baccala LA. Do bacteria have an intrinsic rhythmic sensitivity pattern? **Critical Care Med** 16(6): 650, 1988.
15. Bohm GM, Massad E, Nicolelis MAL, Sameshima K. Teaching medical informatics at the Faculty of Medicine, University of São Paulo, Brazil. In: Lecture notes in medical informatics, Proceedings of the VIII International Congress on Medical Informatics Europe 88, P.L. Reichertz and D.A.B. Lindberg eds, Springer-Verlag, 35: 316-320, 1988.
16. Nicolelis MAL, Yu CH. Defining criteria for quantitative analysis of the neural network responsible for the cardiovascular function control by means of a microcomputer system. In: Proceedings of the XII Symposium on Computer Applications in Medical Care, R.A. Greenes ed., IEEE Computer Society, Washington, 256-260, 1988.
17. Nicolelis MAL, Younes RN. Dissociation of left and right ventricle heart beats during severe hemorrhagic shock in dogs. **Circ Shock** 28(4): 281-282, 1988.
18. Nicolelis MAL. Development of an integrated microcomputer-based system and its application in the analysis of neural network structural properties and biological signal processing. Ph.D. thesis, Institute of Biomedical Science, University of Sao Paulo, 1988.
19. Montes GS, Nicolelis MAL, Brentani-Samaia HP, Furuie SS. Collagen fibril diameters in mice arteries: A comparison of manual and computer-aided morphometric analyses. **Acta Anatomica** 135: 57-61, 1989.
20. Nicolelis MAL, Tinone G, Sameshima K, Timo-Yaria C, Yu CH, Van de Bild MT. Connection, a microcomputer program for storing and analyzing neural circuits. **Comput Biomed Res** 23: 64-81, 1989.
21. Yu CH, Baccala LA, Nicolelis MAL. Applying graph theory on a neural network responsible for the cardiovascular function control: a correlation between structural properties and physiological functions. In: Proceedings of the VI Conference on Medical Informatics. (B. Barber, D. Cao, D. Qin and G. Wagner, eds) pp 87-91, Singapore, 1989.
22. Baccala LA, Nicolelis MAL. Using computers to survey the epidemiological, environmental and genetic factors involved in the process of bacterial resistance acquisition. XIII Symposium on Computer Application in Medical Care, pp 261-265, 1989.
23. Nicolelis MAL, Yu CH, Baccala LA. Structural characterization of the neural circuit responsible for the cardiovascular function control in high vertebrates. **Comput Biol Med** 20(6): 379-400, 1990.

24. Nicolelis MAL, Baccala LA. Rhythms in the bacterial sensitivity behavior at a large hospital. **J Clin Epidemiol** 44(2): 191-205, 1991.
25. Baccala LA, Nicolelis MAL, Yu CH. Structural analysis of neural circuits using the theory of directed graphs. **Comput Biomed Res** 24: 7-28, 1991.
26. Lin CS, Nicolelis MAL, Schneider JS, Chapin JK. A major direct GABAergic pathway from zona incerta to neocortex. **Science** 248: 1553-1556, 1990.
27. Nicolelis MAL, Lin CS, Chapin, JK. Ontogeny of corticocortical projections of the rat somatosensory cortex. **Somat Mot Res** 8: 193-200, 1991.
28. Nicolelis MAL, Chapin JK, Lin RCS. Thalamic plasticity induced by early whisker removal in rats. **Brain Res** 561: 344-349, 1991.
29. Nicolelis MAL, Chapin JK, Lin RCS. Neonatal whisker removal in rats stabilizes a transient projection from the auditory thalamus to the primary somatosensory cortex. **Brain Res** 567: 133-139, 1991.
30. Nicolelis MAL, Chapin JK, Lin RCS. Somatotopic maps within the zona incerta relay parallel GABAergic somatosensory pathways to the neocortex, superior colliculus, and brainstem. **Brain Res** 577: 134-141, 1992.
31. Nicolelis MAL, Lin RCS, Woodward DJ, Chapin JK. Dynamic and distributed properties of many-neuron ensembles in the ventral posterior medial (VPM) thalamus of awake rats. **Proc Natl Acad Sci** 90: 2212-2216, 1993.
32. Nicolelis MAL, Lin RCS, Woodward DJ, Chapin JK. Induction of immediate spatiotemporal changes in thalamic networks by peripheral block of ascending cutaneous information. **Nature** 361: 533-536, 1993.
33. Nicolelis MAL, Chapin JK. The spatiotemporal structure of somatosensory responses of many-neuron ensembles in the rat ventral posterior medial nucleus of the thalamus. **J Neurosci** 14: 3511-3532, 1994.
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- 244.** Hanson TL, Lebedev MA, Nicolelis MAL. Wireless Multichannel System for Recording Neuronal Ensemble Activity from Primate Brain. Soc Neurosci Abst, Neuroscience 2011.

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- 246.** Li Z, Tate AJ, Lebedev MA, Nicolelis MAL. Software-based scalable multichannel spike acquisition. Soc Neurosci Abst, Neuroscience 2011.
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- 250.** Raghavan RT, Lebedev MA, O'Doherty JE, Nicolelis MAL. Emergent preparatory neural activity underlying learning in premotor and primary motor cortex. Soc Neurosci Abst, Neuroscience 2011.
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- 256.** Fuentes RA, Petersson P<sup>3</sup>, Santana MB, Simplicio H, Palmer T, Nicolelis MAL. Spinal cord stimulation restores motor function in a primate model of Parkinson's disease. Soc Neurosci Abst 38: 546.18/G4, 2012.
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- 262.** R. Savoldi, R. Fuentes, M. A. L. Nicolelis, E. Morya. The scientist of the future program: integrating neuroscience and education. Neuroscience 2013: 24.18SU/NN5.
- 263.** P. F. Cavalcanti, P. M. I. Schneider, T. Faggion Vinholo, R. Savoldi, A. C. B. Kunicki, E. Morya, R. Fuentes, M. A. L. Nicolelis, M. A. Freire. Teaching brain morphology by immunohistochemical staining methods for high school students Neuroscience 2013: 24.20SU/NN7.
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- 288.** P. Ifft, A. Ramakrishnan, M. Pais-Vieira, Y. Byun, K. Z. Zhuang, M. A. Lebedev, M. A. L. Nicolelis. Computing arm movements with a monkey brainet. *Neuroscience* 2014. 444.08/LL11.
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- 291.** L. Sawaki, A. C. Donati, A. N. Nogueira, C. Garabello, C. M. Gitti, D. Campos, D. Yoshihara, G. A. Pereira, I. Araújo, J. Campos, L. Ferreira, M. Ares, M. Santos, P. B. Augusto, S. Tripodi, E. Morya, M. A. L. Nicolelis. Novel rehabilitative strategy to facilitate EEG-triggered locomotor training in chronic spinal cord injury patients: Preliminary results of an ongoing study. *Neuroscience* 2014. 629.17/HH10.
- 292.** A. Ramakrishnan, K. P. Rand, M. A. Lebedev, M. A. L. Nicolelis. Neural basis for motor learning: Sensorimotor cortical ensembles multiplex spatial, temporal and reward-related information. *Neuroscience* 2014. 635.25/MM6.
- 293.** R. C. Moioli, F. L. Brasil, S. Shokur, A. L. Lin, K. Fast, N. Peretti, A. Takigami, D. Schwarz, E. Morya, M. A. L. Nicolelis. The Walk Again Project: Analysis of brain activity of spinal cord injury patients during training with a BMI. *Neuroscience* 2014. 636.14/MM21.
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- 295.** S. Shokur, S. Gallo, J. Olivier, N. Peretti, A. Takigami, A. L. Lin, K. Fast, R. Moioli, F. Brasil, E. Morya, G. Cheng, H. Bleuler, M. A. L. Nicolelis. The walk again project (WAP): Sensory feedback for brain controlled exoskeleton. *Neuroscience* 2014. 636.16/MM23.

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- 298.** I. Brys, R. Fuentes, J. Nunes, B. Schneider, P. Aebischer, M. A. L. Nicolelis. mechanisms from motor symptoms of the Alpha-synuclein Parkinson Disease rat model. *Neuroscience* 2014. 794.26/K8.
- 299.** A. Ramakrishnan, K. Rand, M. Lebedev, M.A.L. Nicolelis. Representation of reward in sensorimotor cortical areas. 25th Annual Meeting of the Society for the Neural Control of Movement, Charleston, SC, 2015.
- 300.** E. E. Thomson, K. Hartmann, M. A. L. Nicolelis. Constructing a distributed infrared sensory modality in the adult rat. *Neuroscience* 2015, Chicago, IL.
- 301.** M. Lee, J. Hong, S. Rajangam, M. Lebedev, M. A. Nicolelis. Wireless brain-machine interface operated by freely behaving monkeys. *Neuroscience* 2015, Chicago, IL.
- 302.** S. Rajangam, P-H Tseng, A. Yin, M. Lebedev, M. A. Nicolelis. A brainet for wholebody navigation. *Neuroscience* 2015, Chicago, IL.
- 303.** P. Thompson, M. Lebedev, M. A. Nicolelis. Cortical Representation of Bimanual Movements: Patterns of Interference. *Neuroscience* 2015, Chicago, IL.
- 304.** G. Bao, S. Shokur, A. C. Donati, Y. Byun, D. Campos, D. Fischer, M. Nicolelis. Virtual anatomical biofeedback for motor rehabilitation in spinal cord injury patients. *Neuroscience* 2016, 59.21 / JJ3, San Diego, CA.
- 305.** A. Essig, S. Shokur, A. Schaller, S. Gallo, A. C. Donati, G. Bao, M. Bouri, H. Bleuler, M. Nicolelis. Measuring lower limb peripersonal space in spinal cord injury patients using an audio-tactile stimulation. *Neuroscience* 2016, 532.05 / ZZ9, San Diego, CA.
- 306.** S. Shokur, A. C. Donati, D. Campos, D. Fischer, P. Augusto, C. Gitti, G. Bao, E. Morya, M. Nicolelis. Partial sensorimotor recovery in chronic complete spinal cord injury patients following a 24 month neuro-rehabilitation training with brain-machine interface controlled virtual and robotic gait devices. *Neuroscience* 2016, 627.08 / YY8, San Diego, CA.
- 307.** E. E. Thomson, I. Zea, Y. Thenaisie, F. Wendy, W. Windham, M. Nicolelis. Merging visible and invisible light in rat V1 using a cortical prosthetic system. *Neuroscience* 2016, 805.07 / FF3, San Diego, CA.

## Selected Invited Presentations:

- 2017 Dean's Scholars Honors Program, Distinguished Lecture Series, University of Texas, Austin
- 2017 Austin Conference on Learning and Memory, University of Texas, Austin
- 2017 NIMH Director's Innovation Speaker Series, Rockville, MS
- 2017 Invited Speaker, NeuroTech Conference at Stanford University, CA
- 2016 Invited Speaker, Dept. of Electrical Engineering and Computer Science Seminar, Case Western University, Cleveland, OH
- 2016 Invited Speaker, The Hartwell Foundation Annual Meeting, Cleveland, Ohio
- 2016 Invited Speaker, 3rd Annual Neurotechnology Center Kavli Futures Meeting, Columbia University, New York, NY
- 2016 Keynote Speaker, Academy of Spinal Cord Injury Professionals, Nashville, TN
- 2016 Featured Speaker, World Science Festival, New York, NY
- 2016 Plenary Lecture, Association for Behavior Analysis International Meeting, Chicago, IL
- 2016 Presentation, 9th World Congress for Neurorehabilitation, Philadelphia, PA
- 2016 Invited Speaker, MedStar National Rehabilitation Network Grand Rounds, Washington, DC
- 2016 Invited Speaker, Interdisciplinary Program in Neuroscience, Georgetown University, Washington DC
- 2016 Panelist, A Scientific Planning Workshop for Coordinating Brain Research Around the Globe, Johns Hopkins University, Baltimore, MD
- 2016 Keynote Speaker, BRASCON, Harvard University, Cambridge, MA
- 2016 Invited Speaker, Brain Awareness Series, Northeastern University, Boston, MA
- 2016 Featured Speaker, Center for Brain Health Lecture Series, University of Texas, Dallas Texas
- 2016 Invited Speaker, Distinguished Scholar Series, University of Miami Graduate School, Miami, Florida
- 2016 Keynote Speaker, Winter Conference on Brain Research, Breckenridge, Colorado
- 2016 Featured Speaker, 5th Congress of the Future, invited by Chilean President Michelle Bachelet, Santiago, Chile
- 2015 Featured Speaker, Mammalian Circuits Underlying Somatosensation Research Symposium, Janelia Research Campus, Ashburn, VA
- 2015 Keynote Speaker, I Encontro Ciência Sem Fronteiras - Brazilian Expert Network (CSF/BEN), Brazilian Embassy, Washington, DC
- 2015 Invited Speaker, Dept. of Stem Cell and Regenerative Biology, Harvard University, Cambridge, MA
- 2015 Featured Speaker, ASPIRE Seminar, Colorado State University, Fort Collins, CO

- 2015 Invited Speaker, Spinal Cord Injury Division, Department of Physical and Rehabilitative Medicine, Craig Hospital/Colorado State University, Fort Collins, CO
- 2015 Invited Speaker, Department of Stem Cell and Regenerative Biology at Harvard University, Cambridge, MA
- 2015 Invited Speaker, Graduate Program in Areas of Basic and Applied Biology (GABBA), Porto, Portugal
- 2015 Featured Speaker, International Max Planck Research School (IMPRS), Leipzig, Germany
- 2015 Featured Speaker, Neurizons 2015, Gottingen, Germany
- 2015 Featured Speaker, Conscious Curiosity: Searching for the Next Breakthrough, Seoul Digital Forum, Seoul, South Korea
- 2015 Invited Speaker, NASA Goddard Scientific Colloquium, NASA Goddard Space Flight Center, Greenbelt, MD
- 2015 Keynote Speaker, Brazilian Undergraduate Student Conference, Columbia University, New York, New York
- 2015 Invited Speaker, “Micro-, meso-, and macro-dynamics of the brain”, 23<sup>rd</sup> Annual IPSEN Foundation Meeting, Paris, France
- 2015 Featured Speaker, 2015 Brain Forum, Lausanne, Switzerland
- 2015 Keynote Speaker, 6<sup>th</sup> Conference on Systems Neuroscience and Rehabilitation, Tokyo, Japan
- 2014 Plenary Lecture, American College of Neuropsychopharmacology Annual Meeting, Phoenix, Arizona
- 2014 Plenary Speaker, Queensland Brain Institute Post-Graduate Symposium, University of Queensland, Australia
- 2014 Keynote Speaker, SINAInnovation, Mount Sinai School of Medicine, New York, New York
- 2014 Plenary Speaker, IEEE EMBS BRAIN Grand Challenges Conference, Washington DC
- 2014 Invited Speaker, Neuroscience Program, Yale University, Hartford, Connecticut
- 2014 Featured Speaker, Mind Science Foundation, San Antonio, Texas
- 2014 Grand Rounds, University of Texas Health Science Center, San Antonio, Texas
- 2014 Featured Speaker, SAP CEO Summit, New York, New York
- 2014 Featured Speaker, TED Global 2014, Rio de Janeiro, Brazil
- 2014 Invited Speaker, Board of Visitors Meeting, Pratt School of Engineering, Duke University
- 2014 Keynote Speaker, Texas Brain and Spine Institute Annual Neuroscience Symposium, Texas A&M University, College Station, Texas
- 2014 US Department of State Keynote Speaker, National Institute of Higher Education, Research, Science and Technology (NIHERST) Youth Science Forum, Trinidad and Tobago
- 2013 Keynote Speaker, The Brain Forum 2013, Jeddah, Saudi Arabia
- 2013 Invited Speaker, 2013 Nov2K Science Symposium, Karolinska Institute, Sweden

- 2013 Guest Speaker, National Academy of Engineering's Grand Challenge Scholars Program, Pratt School of Engineering, Duke University
- 2013 Invited Speaker, Thayer School of Engineering Distinguished Lecture Series, Dartmouth College, Hanover, New Hampshire
- 2013 Guest Lecturer, Regeneration and Repair in the Mammalian Brain Course, Harvard University, Cambridge, Massachusetts
- 2013 Invited Speaker, NYU School of Medicine Honors Lecture Series, New York, New York
- 2013 Invited Speaker, Frankfurt International Book Fair, Frankfurt, Germany
- 2013 Icahn School of Medicine at Mount Sinai, Department of Psychiatry Grand Rounds, New York, New York
- 2013 Plenary Lecture, NEURO 2013: Joint meeting of the 36th Annual Meeting of the Japan Neuroscience Society, the 56th Annual Meeting of the Japanese Society for Neurochemistry, and the 23rd Annual Conference of the Japanese Neural Network Society, Kyoto, Japan
- 2013 Plenary Lecture, CORTEX International Meeting 2013, Lyon, France
- 2013 Guest Speaker, Distinguished Complex Systems Seminar Series, Dept. of Physics & Astronomy, Northwestern University, Evanston, IL
- 2013 Keynote Speaker, Inaugural Symposium of the Biomedical Neuroscience Institute (BNI), Santiago, Chile
- 2013 Featured Speaker, Brenda Milner Speaker Series, University of Lethbridge, Lethbridge, Canada
- 2013 Guest Speaker, Mahoney Institute for Neurological Sciences (MINS) at the University of Pennsylvania, Philadelphia, PA
- 2013 Seminar Speaker, Cold Spring Harbor Laboratory Seminar Series, Cold Spring Harbor, NY
- 2013 Keynote Speaker, Frontiers in Neuroscience Research Meeting, Medical University of South Carolina, Charleston, South Carolina
- 2013 Featured Speaker, Dallas County Community College District Foundation, STEM Institute, Dallas Texas
- 2013 Plenary Lecture, 10th Göttingen Meeting of the German Neuroscience Society, Göttingen, Germany
- 2013 Featured Speaker, 25th Anniversary of Artificial Intelligence Lab, "World Congress & Exhibition of Tobots, Humanoids, Cyborgs and More," Univ of Zurich, Switzerland
- 2013 Invited Speaker, Neuroscience Lecture Series, University of Chicago, Chicago, IL
- 2013 Featured Speaker, AAAS Annual Meeting, Boston, MA
- 2013 Invited Speaker, Qualcomm Corporation, San Diego, CA
- 2013 Dept. of Psychology Distinguished Speaker Series, University of California, Davis, CA
- 2012 Featured Speaker, 21min Knowledge of Excellence Conference, Assisi Umbria, Italy
- 2012 Featured Speaker, NeNa Conference, Tübingen, Germany
- 2012 Featured Speaker, Science Writers 2012, National Association of Science Writers Annual Meeting, Raleigh, NC

2012 Guest Lecturer, Summer School on Neurorehabilitation and Emerging Therapies -- Spain

2012 Guest Instructor, Summer Institute in Cognitive Neuroscience, Santa Barbara, CA

2012 Guest Speaker, Neurocolloquium, Max Plank Research School and Univ. of Tübingen, Germany

2012 Keynote Speaker, 2nd International Conference, UNESCO Chair in Technologies for Development, Lausanne, Switzerland

2012 Featured Speaker, Ar Event, Champalimaud Neuroscience Programme, Lisbon, Portugal

2012 Guest Speaker and Lecturer, Champalimaud Neuroscience Programme, Lisbon, Portugal

2012 Keynote Speaker, Department of Physical Medicine and Rehabilitation, University of Kentucky College of Medicine, Lexington, KY

2012 Keynote Speaker, University of Kentucky College of Medicine, Lexington, KY

2012 Guest Speaker, Departments of Anatomy and Neurobiology, University of Maryland, Baltimore, MD

2012 Guest Speaker, Neurology Grand Rounds, University of Maryland School of Medicine, Baltimore, MD

2012 Guest Speaker, American Scientist Lecture Series, Research Triangle Park, NC

2012 Featured Speaker, TEDMED 2012, Washington, DC.

2012 Guest Speaker, Distinguished Lecture Series, Institute of Biomaterials and Biomedical Engineering, University of Toronto, Canada

2012 Guest Speaker, Duke Institute for Brain Sciences, Duke University

2012 Invited Speaker, Paul M. Bass Center for Neurosurgical Innovation, University of Texas Southwestern Medical Center, Dallas, TX

2012 Guest Speaker, BRAINWAVE 2012, Rubin Museum of Art, New York City, NY

2012 Guest Speaker, Hacking Life Conference, San Jose, California

2012 Keynote Speaker, Training 2012 Conference and Expo, Georgia World Congress Center, Atlanta GA

2011 Guest Speaker, Department of Neuroscience, Neurology and Neurosurgery, Harvard University, Cambridge MA

2011 Invited Speaker, International Blaise Pascal Research Symposium, Fondation de l'Ecole Normale Supérieure, Paris, France

2011 Invited Speaker, Transformative Neuroscience Graduate Program Seminar Series, University of Virginia, Charlottesville, VA

2011 7<sup>th</sup> Annual NIH Director's Pioneer Award Symposium, Washington, DC

2011 Keynote Speaker, US-Brazil Innovation Learning Laboratory, Durham, NC

2011 Invited Speaker, Florida Hospital, Orlando FL

2011 Invited Speaker, NCCR Robotics Symposium, Zurich Switzerland

2011 Keynote Speaker, TECHNOPOLIS-Buenos Aires, Argentina

2011 Invited Speaker, Nobel Symposium "3M: Mind, Machines and Molecules," Stockholm, Sweden

2011 Invited Speaker, 2011 AAAS Meeting, Washington D.C.

2011 Invited Speaker, Cooper Union Forum, New York, NY

2010 Invited Speaker, University of Uruguay, Montevideo Uruguay

2010 Panel Moderator, 2010 Neuroscience, San Diego CA

2010 Invited Speaker, Psychology Institute, University of Sao Paulo, Brazil

2010 Plenary Keynote Speaker, EMBC 2010, Buenos Aires, Argentina

2010 Invited Speaker, Brain Machine Interfaces Symposium - Implications for science, clinical practice and society, Ystad, Sweden

2010 Invited Speaker, Sci Foo Camp 2010, Google, Mt. View, CA

2010 Invited Speaker, Annual Computation Neurosciences Meeting CNS 2010, San Antonio, TX

2010 Invited Speaker, International Symposium on Cognitive Systems: Brain, Mind and Robotics, Technical University of Munich, Munich, Germany

2010 Keynote Speaker, Grand Challenges in Neuroengineering IEEE-EMBC Forum, 2010, Bethesda, MD

2010 BioVision 2010, Alexandria, Egypt

2010 Brasil Initiatives, Harvard University, Cambridge, MA

2009 Guest Speaker, VBC-PhD Symposium, Android and Eve Bridging Biology, Medicine and Technology, Vienna, Austria

2009 Guest Speaker, Falling Walls, Berlin, Germany

2009 Guest Lecturer, Harvard University, Cambridge

2009 Lecturer, Cognitive and Neural Systems Department, Boston University, Boston

2009 Keynote Speaker, Annual MD/PhD Seminar Series, Albert Einstein College of Medicine, New York

2009 Sage Center for the Study of the Mind, University of California, Santa Barbara, California

2009 Grodin Keynote Lecture, University of Southern California, Los Angeles

2009 Darwin Conference, Paris, France

2009 Medical Innovations Summit, The Royal Society of Medicine, London

2009 Plenary Talk, Volker-Henn Lecture, Neuroscience Center Zurich, Switzerland

2009 BNDES Seminar, Rio de Janeiro, Brazil

2009 SBNeC Congress/Águas de Lindóia, Sao Paulo, Brazil

2009 Colégio Santa Cruz, Sao Paulo, Brazil

2009 Federação do Comércio, Sao Paulo, Brazil

2009 Portuguese Society for Neuroscience, Braga, Portugal

2009 Portuguese-Brazilian Colloquium on Systems Neuroscience, Braga, Portugal

2009 Third Neurizons Conference, Max Plank Institute, Gottingen, Germany

2009 IEEE Emerging, World-Changing Technologies, 125<sup>th</sup> Anniversary Event, New York City, New York

2009 Neuroprosthetic Workshop, EPFL, Lausanne, Switzerland

2009 French Academy of Sciences, Paris, France

2009 Keynote Speaker, Association of Anatomy, Cell Biology and Neurobiology Chairpersons (AABNC), Quito, Ecuador

2008 Keynote Speaker, First Postdoctoral Symposium, University of Sao Paulo, Sao Paulo, Brazil



2008 Janelia Farms Research Campus Seminar Speaker, Howard Hughes Medical Institute, Ashburn, Virginia

2008 Lecturer, Fondation de l'Ecole Normale Supérieure, Paris, France

2008 Institute of Neurology Neuroscience Seminar, University College, London, England

2008 Sterling Visiting Professorship, Albany Medical College, Albany, New York

2008 Northwest Neural Engineering Workshop, Microsoft Research Institute, Redmond, Washington

2008 First World Neuroinformatics Conference, Stockholm, Sweden

2008 Keynote Speaker, "Neurotherapy: Progress in Restorative Neuroscience and Neurology" Amsterdam, Netherlands

2008 Congresso de Neurologia, Belim, Brazil

2008 SciFoo – Googleplex Conference, Mountain View, California

2008 Robotics: Science and Systems 2008, Zurich, Switzerland

2008 Symposium on Computational Neuroscience, Bernstein Center for Computational Neuroscience, Munich, Germany

2008 10th Taller Argentino de Neurociencias, Buenos Aires, Argentina

2008 World Science Forum, Seoul, Korea

2008 Invited Speaker, Helen Wills Institute of Neuroscience, University of California, Berkeley

2008 Seminar Speaker, Scripps Institute, La Jolla, California

2008 Invited Speaker, World Economic Forum, Davos, Switzerland

2007 Invited Speaker, Nobel Forum, Stockholm, Sweden

2007 Keynote Speaker, 2<sup>nd</sup> International Neuroscience Symposium, Natal, Brazil

2007 University of Louisville, Grass Traveling Scientist

2007 University of Illinois, Urbana-Champaign, Developmental Psychobiology and Sensory Neuroscience

2007 University of Miami, FL, The Miami Project to Cure Paralysis

2007 University of California, Irvine, Neurobiology and Behavior; Biomedical Engineering

2007 11<sup>th</sup> Berlin Colloquium, Berlin, Germany

2007 Georgia State University, Atlanta, Keynote Speaker, Neuroscience Day

2007 Dana Foundation-Cognitive Neurophysiology Conference, Los Angeles CA

2007 Aspen Ideas Festival, Aspen CO

2007 Nano2Life Research School, Neuchatel Switzerland

2007 Progress in Motor Control VI - Santos SP

2007 FENS/IBRO Summer School, Lac Lemman Switzerland

2007 Biomedical Engineering, School of Science and Engineering, Reykjavik University, Reykjavik Iceland

2007 Brain-Machine Interface-Paris France

2007 INRIA Meeting, Paris France

2006 13th International Summer School in Behavioral Neurogenetics, Federal University of Santa Catarina, Florianopolis, Brazil

2006 Brain-Machine Interface Meeting, Kyoto, Japan

2006 XV CoMau Unicamp Campinas, SP Brazil

2006 AREADNE, Santorini, Greece

2006 Hovland Endowed Colloquium Speaker, Yale University

2006 NIH NINDS, Washington DC  
 2006 World Parkinson Congress, Washington DC  
 2006 Neuroscience Program, Princeton University, Princeton NJ  
 2006 Cajal Centenary Conference, Barcelona, Spain  
 2006 Max-Planck Institute for Medical Research, Heidelberg Germany  
 2006 Academy of Achievement, Los Angeles CA  
 2005 DARPA Meeting, Arlington, VA  
 2005 Plenary Lecture, German Neuroscience Society, Gottingen  
 2005 Invited Speaker, Max-Planck Institute, Gottingen, Germany  
 2005 Invited speaker, Washington University, Neuroscience Seminar Series, St. Louis MO  
 2005 Santiago Grisolia Chair, Catedra Santiago Grisolia and Fundacion Museo de las Ciencias Principe Felipe, Valencia, Spain  
 2005 Segerfalk Lecture, Lund University, Wallenberg Neuroscience Center, Segerfalk Foundation, Lund, Sweden  
 2005 Robert Dow Neuroscience Award, Neurological Sciences Institutes, Oregon Health & Science University, Portland OR  
 2005 Keynote Speaker, Heller Lecture Series, ICNC, Hebrew University, Jerusalem, Israel  
 2005 Texas Southwestern University, "Reprogramming the Brain", Dallas TX  
 2005 Advanced Course in Computational Neuroscience, Arachon, France  
 2005 FeSBE, Aguas de Lindoia, Brazil  
 2005 Neural Prosthetic Workshop, NIH, Bethesda MD  
 2005 XX Brazilian Congress of Neurophysiology, Gramado, Brazil  
 2005 6<sup>th</sup> International IRME, Paris, France  
 2005 Innovation of Biological Systems, Bures-sur-Yvette, France  
 2004 DARPA Meeting, Arlington, VA  
 2004 Invited Speaker, Department of Mathematics, Meredith College, Raleigh, NC  
 2004 Invited Speaker, Computer Science, Duke University  
 2004 Organizer of the 1<sup>st</sup> International Symposium for Neuroscience for The International Institute for Neuroscience Natal, Natal Brazil  
 2004 Grass Traveling Scientist Lecturer, Department of Neuroscience, UCLA  
 2004 8<sup>th</sup> International Conference on Cognitive and Neural Systems, Boston MA  
 2004 2<sup>nd</sup> European School of Neuroengineering, Genoa, Italy  
 2004 FENS 2004 Lisbon, Portugal  
 2004 CNS 2004 Baltimore, MD  
 2004 IBRO Summer School: Sensory and Integrative Neuroscience: From Receptors to Behavior, Moscow, Russia  
 2004 Advanced Course in Computational Neuroscience, Obidos, Portugal  
 2004 XXV Congresso Brasileiro de Neurocirurgia, Goiania, Brazil  
 2004 DNA Brasil, Campos do Jordao, Brazil  
 2004 8<sup>th</sup> Tamagawa Dynamic Brain Forum, Ribeirao Preto, Brazil  
 2004 II IBRO School of Neuroscience, Rio de Janeiro, Brazil  
 2004 Genomic Institute of the Novartis Foundation  
 2004 "The Senses" 2004 Neuroscience, San Diego, CA

2004 2004 Neuroscience, Panel discussions: “Animals in Research’ and “Insight into Thalamic Function,” San Diego, CA

2004 James C. White Neurosurgery Lecture, Massachusetts General Hospital/Harvard School of Medicine, Boston, MA

2004 Ramon y Cajal Chair Lectures, University of Mexico, Mexico City

2004 Dean’s Lecture, Mount Sinai School of Medicine

2004 Neurobiology, Learning and Cognition Seminar, University of Ottawa, Ottawa, Ontario, Canada

2004 EPFL, Lausanne, Switzerland

2004 15<sup>th</sup> International Symposium on ALS/MND, Philadelphia, PA

2003 University of Maryland, Program in Neuroscience, Baltimore, MD

2003 Brain in Motion Symposium, Lausanne, Switzerland

2003 SIMEA, University of North Texas, Denton, TX

2003 Sixth Annual NUIN Lecture Series, Northwestern University, Chicago, IL

2003 Neural Function and Repair Symposium, University of Porto, Porto, Portugal

2003 University of California, Perspectives in Neurosciences, Davis

2003 IGERT Computational Neuroscience Seminar, Brandeis University

2003 Grass Lecturer, University of Colorado, Denver, Denver, CO

2003 Committee on Neurosciences, Yale University, New Haven, CT

2003 BARRELS Symposium, University of Pittsburgh, Pittsburgh, PA

2003 Keynote Speaker, ASSFN, New York, New York

2003 RIKEN

2003 Japan Neuroscience

2003 Japanese Neurocomputational Course

2003 University of Kyoto

2003 University of Tamagawa

2003 University of Nagoya

2003 EU Computational Advanced Course in Computational Neuroscience, Obidos, Portugal

2003 DARPA PI Meeting, Arlington, VA

2003 NSF Workshop, Arlington, VA

2003 Dynamical Neuroscience Symposium: neural variability and Noise, New Orleans, LA

2003 Germany Society for Neurological Rehabilitation, Wiemar, Germany

2003 Neuro-Visions: Brain Research in the 21<sup>st</sup> Century, Dusseldorf, Germany

2003 Tauc Conference in Neurobiology, Gif sur Yvette, France

2002 “Cognition and Information Processing,” CNRS, Paris, France

2002 Mathematical Biosciences Institute, Workshop on “System Level Modeling, Ohio State University, Columbus

2002 Bioscience Day, University of Maryland, College Park

2002 Peter Wallenberg Foundation, Stanford University, Stanford, CA

2002 IRBO School, Ribeiraro Preto, Brazil

2002 Max Planck Institute for Biological Cybernetics, Tübingen, Germany

2002 Collaborative Research Center, University of Tübingen, Germany

2002 FENS Forum, Paris, France

2002 SAB Conference, Edinburgh, Scotland

2002 Neuroengineering Workshop, Genova, Italy

2002 McGovern Institute Symposium, MIT, Cambridge MA

2002 The Royal Society, "The Essential Role of Thalamus in Cortical Functioning, London, England

2002 International Symposium "Disease-related Aspects of Neurobiology, Max Planck Institute for Neurobiology, Cologne, Germany

2002 AChemS Annual Meeting, Sarasota, FL

2002 Symposium on Cooperative Dynamics of Neural Systems, Pucon, Chile

2002 Cortical Plasticity Conference, Schwetzingen, Germany

2002 Neuroscience Future Conference, London, England

2002 Department of Physiology and Pharmacology, SUNY, Brooklyn, NY

2002 Department of Neurosciences, Albert Einstein, Bronx, NY

2002 Department of Electrical and Computer Engineering, University of Maryland, College Park

2002 Invited speaker, Symposium on Dynamics and Plasticity, Rotterdam, The Netherlands

2001 Invited speaker, 14<sup>th</sup> Annual ACM Symposium, UIST, Orlando, FL

2001 Invited speaker, UNESCO Chair on Developmental Biology, Rio de Janeiro, Brazil

2001 Advanced Course in Computational Neuroscience, Trieste, Italy

2001 Lecturer, Woods Hole Course on Neuroscience, Woods Hole, MA

2001 Institute of Neuroscience, University of Florida, Gainesville

2001 Department of Psychology, Florida State University, Tallahassee

2001 Grass Lecture, University of Kansas, Kansas City

2000 Biophysics Institute, Federal University of Rio de Janeiro, Brazil

2000 Department of Neurology, University of Sao Paulo Medical School, Brazil

2000 Workshop on Dynamic Neuronal Processing, Paris, France

2000 Neural Ensemble Analysis Course, Woods Hole, MA

2000 Advanced Course in Computational Neuroscience, Trieste, Italy

2000 Department of Physiology, University of Toronto, Canada

2000 Department of Neuroscience, University of Rochester, Rochester, NY

2000 Department of Brain and Cognitive Science, MIT, Cambridge, MA

2000 Department of Anatomy, Porto Medical School, Porto, Portugal

2000 Dept of Physiology and Biophysics, University of Washington, Seattle

2000 Department of Neuroscience, Baylor University, Waco, TX

2000 Sloan Center, Caltech, Pasadena, CA

1999 Arrayed Biosensor Workshop, Arlington, MD

1999 Department of Anatomy and Morphology, University Autonoma of Madrid, Spain

1999 V Bienal Symposium, Adult Brain Plasticity, NYU Center for Neuroscience

1999 Advanced Course in Computational Neuroscience, Trieste, Italy

1999 Klingenstein Foundation Meeting, Cold Spring Harbor, NY

1999 Cognitive Neuroscience meeting, Georgetown University, Washington, DC

1999 DARPA meeting, Tucson, Arizona

1999 Thalamocortical associations meeting, Cold Spring Harbor Labs, Cold Spring Harbor, NY

1999 Neuroscience Program, SUNY, Syracuse, NY

1998 Sloan Center, Salk Institute, La Jolla, CA

1998 Somatosensory system symposium, University of North Carolina, Chapel Hill, NC

1998 NIPS meeting. Colorado

1998 Dynamical Neuroscience Meeting. Los Angeles, CA

1998 Neuroprostheses Meeting, NINDS, NIH, Bethesda, MD

1998 Chairman and Speaker, Society for Neuroscience Symposium. Listening to the Entire Orchestra: What can we learn from neural ensemble recordings? Los Angeles, CA

1998 Computational Neuroscience Program, New York University, New York

1998 Department of Anatomy, Virginia Medical College, Richmond, VA

1998 Department of Psychobiology, University of California, Irvine

1998 Department of Physiology, Emory University, Atlanta, GA

1998 Rockefeller University, New York, NY

1998 Department of Neuroscience, Harvard University, Boston, MA

1998 Keynote Speaker, Brazilian Society of Neurology Meeting, Sao Paulo, Brazil

1998 European Society for Neuroscience. Symposium on Methods for Neuronal Ensemble Data Analysis, Berlin, Germany

1997 Guest Lecturer, Sensory Systems Graduate Course, Department of Zoology, North Carolina State University, Raleigh, NC

1997 Guest Speaker, Allegheny University, Meadville, PA

1997 Woods Hole Marine Laboratory, ONR Symposium on Cognitive Neuroscience, Woods Hole, MA

1997 Computational Neuroscience Course, Woods Hole Marine Lab, Woods Hole, MA

1997 Dynamical Neuroscience Symposium, Society for Neuroscience Meeting, New Orleans, LA

1997 University of Gothenburg, Sweden

1997 International Symposium on Olfaction and Taste, San Diego, CA

1997 Cerveau et Vision, INSERM, Lyon, France

1997 Department of Visual Sciences, Institute of Ophthalmology, London, England

1997 Center for Computation Neuroscience, Hebrew University, Jerusalem, Israel

1997 Sde Boker Cortical Anatomy and Function Symposium, Sde Boker, Israel

1997 Faculty, II European Course on Computation Neuroscience, University of Crete, Crete, Greece

1997 II Workshop on Neural Information Coding, Snowbird, Utah

1997 Department of Neuroscience, Brown University, Providence, RI

1996 Department of Neuroscience, Washington University, St. Louis, MO

1996 Chairman and Guest Speaker, Dynamical Neuroscience, Symposium National Institute of Mental Health, Society for Neuroscience Meeting, Washington, DC

1996 Guest Speaker, VIII Barrels Meeting, Society for Neuroscience Meeting, Washington, DC

1996 Institute of Advanced Studies, University of Sao Paulo, Sao Paulo, Brasil

1996 Neural Networks Meeting, Duke University, Durham NC

1996 V Computational Neuroscience Meeting, Boston, MA  
 1996 Institute of Neuroinformatics, University of Zurich, Zurich, Switzerland  
 1996 Faculty. I European Course on Computation Neuroscience, University of  
 Crete, Crete, Greece  
 1996 Department of Biological Science, University of Iowa, Iowa City  
 1996 Department of Zoology, University of Maryland, College Park, MD  
 1996 Neuroscience Program, University of California, San Francisco  
 1995 Guest Speaker, The Zanvyl Kriger Mind/Brain Institute, Johns Hopkins  
 University, Baltimore, MD  
 1995 Guest Speaker and Course Organizer, Meeting of the Federation of Brazilian  
 Societies for Experimental Biology, Brazilian Society for Neuroscience, Serra  
 Negra, Brazil  
 1995 Department of Physiology, Hallyn University, Chunchon, South Korea  
 1995 Department of Physiology, ChoongNam University, Taejun, South Korea  
 1995 Department of Physiology, Korea University, Seoul, South Korea.  
 1995 Department of Morphology, University Autonoma of Madrid, Madrid, Spain  
 1995 Department of Physiology, University of Tübingen, Tübingen, Germany  
 1995 Guest Speaker, Department of Neuroscience, University of Antwerp, Belgium  
 1995 Antonio Borsellino College on Neurophysics, International Centre for  
 Theoretical Physics, Trieste, Italy  
 1995 Somatosensory Workshop, Winter Conference on Brain Research  
 1994 Department of Neurobiology, College of Medicine, University of Tennessee,  
 Memphis, Tennessee  
 1994 III Appalachian Conference on Behavioral, Neurodynamics, Radford  
 University, Radford VA  
 1994 Oral Presentation, III Computation and Neural Systems, Washington DC  
 1994 Seagate II, Office of Naval Research. Florida Atlantic University, Boca  
 Raton, FL  
 1993 Computational Neuroscience Program, Caltech, Pasadena, CA  
 1993 Department of Physiology, University of California, San Francisco  
 1993 Institute for Neural Computation, University of California, San Diego  
 1993 Neurosciences Institute, Scripps Clinics, La Jolla, CA  
 1993 Department of Anatomy and Neurosciences, Pennsylvania State University  
 School of Medicine, Union Park, PA  
 1993 Institute for Developmental Neuroscience, Department of Psychology,  
 Vanderbilt University, Nashville, TN  
 1993 Department of Neurobiology, Duke University  
 1993 Oral Presentation. II Computation and Neural Systems, Washington DC  
 1993 Workshop, Winter Conference on Brain Research, Whistler, British  
 Columbia, Canada  
 1991 Department of Anatomy, Hahnemann University, Philadelphia, PA  
 1990 Laboratory of Clinical Neurophysiology, University of Sao Paulo, Sao Paulo,  
 Brazil  
 1988 XII Symposium on Computer Applications, in Medical Care, IEEE Computer  
 Society, Washington, DC  
 1988 IV Brazilian Congress on Critical Care Medicine, Brasilia, Brazil

1988 International Conference on Informatics for Health, Havana, Cuba

1987 Department of Internal Medicine, University of Sao Paulo, School of  
Medicine, Sao Paulo, Brazil

1987 Department of Surgery, University of Sao Paulo School of Medicine, Sao  
Paulo, Brazil

1987 XIV National Congress of the International, College of Surgeons and XIII  
Western Hemisphere Congress of International College of Surgeons, Sao  
Paulo, Brazil

1987 VII International Congress Medical Informatics, Rome, Italy

1986 Institute of Medical Informatics, Paulista School of Medicine,  
Sao Paulo, Brazil

1986 Department of Patology, University of Campinas, Campinas, Brazil

1986 Department of Endoscopy, University of Sao Paulo, Sao Paulo, Brazil

1986 I Brazilian Congress on Medical Informatics, Campinas, Brazil

1986 Co-chairman of the Organizing Committee, I Brazilian Congress on Medical  
Informatics

1986 V Medical Informatics Congress, (MEDINFO), Washington DC

1986 Institute of Medical Informatics, Phillips University, Marburg, Germany

1985 I National Meeting on Medical Informatics, Brasilia, Brazil

1985 XXI Congress of the Brazilian Society of Tropical Medicine, Sao Paulo,  
Brazil