

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 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

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:

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

David Guggenmos (2013-)
Po-He Tseng (2013-)
R. Sankaranarayani (2012-)
Arjun Ramkrishnan (2012-)
Miguel Vieira (2009-)
Eric Thomson (2004-)
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

Yoon Woo Byun (2014-)
Allen Yin (2013-)
Vivek Subramanian (2012-)
Amol Yadav (2010-)
Marek Laska (2010-)
Katie Zhuang (2009-)
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

Andrew IL Young (2010-2011)
Amol Yadav (2009-2010)
Tian Jiang (2008-2009)
Bjorn Omarsson (2008-2009)

Medical Students

Joel Martin, 3rd year medical student (2011-2013)

Undergraduate Students

Michael Lee
Kevin Mauro

Diana Anthony
Andrew Lokker

Julie Hong
 Junho Oh
 Jason Pedowitz
 Peter Mullen
 Jay Canarick
 Prabhanjan Didwania
 Jean Giudice
 Tugce Capraz
 Kyle Rand
 Sachin Doshi
 James Stark
 Michael Adams
 Olga Mutter (2011 -)
 Andrew Weitz (2011 -)
 Thomas Hasse (2011)
 Anthony Lin (2011)
 Edward Kim (2011)
 Anne McDonough (2011)
 Vivek Subramanian (2010 - 2012)
 Jason Lou (2009-)
 Sidney Primas 2009-)
 Vyshak Shandra /2009-)
 Laamia Islam (2009-)
 Tammy Lin (2009)
 Rhea Kaw (2009)
 Jay Lehew (2009)
 Thais Vinholo (2009)
 Danielle Sedlak (2009)
 Joseph Hall (2009)
 Kenneth Shen (2009)
 Mary Caitlin Cook (2008-)
 Jin Young Kim (2008-)
 Kirti Johal (2008-)
 Anna Nikolich (2008-)
 Kevin Nathan (2008-)
 Karen Schroeder (2008-)
 Philip Coter (2008-2009)
 David McMullen (2008-2009)
 Andrew Hawkey (2008-2009)
 Melanie Subramanian (2008-2009)
 Nicholas Soo (2008-2009)
 Hyung Ju Jeon (2008)
 Thomas Cestare (2008)
 Eric Fitzsimmons (2008)
 Harold Wesley Phillips (2008)
 Ade Adekunle (2008)

Juan Potes (2007-)
 Jenna Maloka (2007-2009)
 Max Hodak (2007- 2009)
 Katherine Chang (2007-2008)
 Rajasree Roy (2007-2008)
 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.

Published and Submitted Papers

1. Filho JW, Schoveri Jr. R, Garcia YM, Machado C, Ferreira ML, Barreira PL, Batista MC, Nicoletis 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, Nicoletis 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, Nicoletis 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. Nicoletis MAL, Carvalho CRR. Computer-aided standardization of antimicrobial therapeutics. **Rev Hosp Clin Fac Med Sao Paulo** 40: 227-232, 1985 (Portuguese).
5. Nicoletis 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.
 34. Nicolelis MAL, Chapin JK, Lin RCS. Development of the direct projections from the zona incerta to the primary somatosensory cortex in rats. **Neuroscience** 65: 609-631, 1995.
 35. Nicolelis MAL, Baccala LA, Lin RCS, Chapin JK. Sensorimotor encoding by synchronous neural ensemble activity at multiple levels of the somatosensory system. **Science** 268: 1353-1358, 1995.
 36. Chapin JK, Nicolelis MAL. Neural network mechanisms of oscillatory brain states: characterization using simultaneous multi-single neuron recordings. In: Continuous waveform analysis, R.M. Basheiss and D.J. Vicent (eds). **Electroenceph Clin Neurophysiol**, suppl 45, pp 113-122, 1996.
 37. Nicolelis MAL, Oliveira LMO, Lin RCS, Chapin JK. Active tactile exploration influences the functional maturation of the somatosensory system. **J. Neurophysiol** 17: 2192-2196, 1996.
 38. Nicolelis MAL. Beyond maps: A dynamic view of the somatosensory system. **Braz J Med Biol Res** 29: 401-412, 1996.
 39. Lin RCS, Nicolelis MAL, Zhou HL, Chapin JK. Calbindin-containing, non-specific thalamocortical projecting neurons in the rat. **Brain Res** 711: 50-55, 1996.
 40. Lin CS, Nicolelis MAL, Chapin JK. Topography and laminar organization of the incertocortical pathway in rats. **Neuroscience** 81: 641-651, 1997.
 41. Nicolelis MAL, Lin RCS, Chapin JK. Neonatal whisker deprivation alters the encoding of tactile information by ensembles of thalamic neurons. **J Neurophysiol** 78: 1691-1706, 1997.
 42. Ghazanfar AA, Nicolelis MAL. Nonlinear processing of tactile information in the thalamocortical loop. **J Neurophysiol** 78: 506-510, 1997.
 43. Nicolelis MAL, Ghazanfar AA, Faggin B, Votaw S, Oliveira LMO. Reconstructing the engram: simultaneous, multisite, many single neuron recordings. **Neuron** 18: 529-537, 1997.
 44. Nicolelis MAL. Dynamic and distributed somatosensory representations as the substrate for cortical and subcortical plasticity. **Seminars in Neurosciences** 9: 24-33, 1997.

45. Faggin BM, Ngyuen KT, Nicolelis MAL. Immediate and simultaneous sensory reorganization at cortical and subcortical levels of the somatosensory system. **Proc. Natl. Acad. Sci.** 94: 9428-9433, 1997.
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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.
- 251.** Brys I, Fuentes R, Schneider B, Morya E, Pereira A, Nicolelis MAL. A chronic animal model of Parkinson's disease based on uni- and bilateral overexpression of α -synuclein in the substantia nigra. Soc Neurosci Abst 38: 53.16/G22, 2012.
- 252.** Shokur S, Winans J, O'doherty J, Lebedev M, Bleuler H, Nicolelis M. Beyond the homunculus: Visual responses of primary somatosensory cortex (S1) neurons to virtual touch of a virtual arm. Soc Neurosci Abst 38: 277.25/OO4, 2012.
- 253.** Kunicki AC, Morya E, Fuentes R, Nicolelis M. Individual learning performance on whisker-dependent tactile discrimination tasks of wistar rats. Soc Neurosci Abst 38: 377.09/SS3, 2012.
- 254.** Miranda TAB, Morya E, Cristante AF, Sameshima K, Nicolelis MAL. Sensorimotor cortical spike activity of spinal cord injured Wistar rats during treadmill training. Soc Neurosci Abst 38: 450.05/J15, 2012.
- 255.** Medina LE, Lebedev MA, O'Doherty JE, Nicolelis MAL. Noise-enhanced intracortical microstimulation for virtual touch. Soc Neurosci Abst 38: 480.14/OO20, 2012.
- 256.** Fuentes RA, Petersson P³, 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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- 259.** Ifft P, Lebedev MA, Li Z, Nicolelis MAL. Bimanual brain-machine interface. Soc Neurosci Abst 38: 682.12/PP14, 2012.
- 260.** Santana M, Palmér T, Simplicio H, Pereira A, Petersson P, Fuentes R, Nicolelis MAL. Quantitative evaluation of motor impairment in the common marmoset after the two-stage injection of 6-hydroxydopamine. Soc Neurosci Abst 38: 757.22/K2, 2012.

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- 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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- 265.** M. Pais-Vieira, M. Lebedev, M. Nicolelis. Top-down modulation of the thalamocortical loop during active tactile discrimination Neuroscience 2013: 72.02/OO14-DP6.
- 266.** A. Ramakrishnan, P. J. Ifft, Z. Li, S. Shokur, M. A. Lebedev, M. A. L. Nicolelis. Brain-machine interface featuring cooperation and social interaction. Neuroscience 2013: 79.19/VV17.
- 267.** K. Z. Zhuang, M. A. Lebedev, M. A. L. Nicolelis. Decoding rhythmic versus discrete movements from cortical ensembles. Neuroscience 2013: 79.20/VV18.
- 268.** V. A. Subramanian, H. M. Ghadyali, Y. C. Xie, D. Schwarz, P. J. Ifft, M. A. Lebedev, M. A. L. Nicolelis. Sparse subspace clustering for automated spike sorting. Neuroscience 2013: 79.22/VV20.
- 269.** R. Sankaranarayani, A. Lin, D. Schwarz, G. Lehew, M. Lebedev, M. A. L. Nicolelis. Navigation through space enabled by a brain-machine interface. Neuroscience 2013: 79.24/VV22.
- 270.** D. Schwarz, S. Rajangam, V. Subramanian, H. Powell, T. L. Hanson, D. F. Dimitrov, G. Lehew, J. Melloy, M. Lebedev, M. A. L. Nicolelis. Multichannel wireless recordings of freely moving rhesus monkey behaviors. Neuroscience 2013: 79.25/WW1.
- 271.** P. Ifft, M. A. Lebedev, M. A. L. Nicolelis. Correlation dynamics of large-scale cortical ensemble activity during upper-limb reaching tasks. Neuroscience 2013: 79.26/WW2.
- 272.** M. Santana, T. Palmer, H. Simplicio, P. Petersson, M. Nicolelis, R. Fuentes. Characterization of long-term motor deficits in the 6-OHDA model of Parkinson's disease in the common marmoset. Neuroscience 2013: 241.01/N2.
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- 274.** P. Halje, M. Santana, H. Simplício, M. Nicolelis, R. Fuentes, P. Petersson. Effects of spinal cord stimulation on the neuronal population dynamic of the cortico-basal ganglia-thalamic circuit in a primate model of Parkinson's disease. *Neuroscience* 2013: 241.03/N4.
- 275.** U. Richter, P. Halje, M. Santana, M. Nicolelis, R. Fuentes, P. Petersson. Functional coupling in the cortico-basal ganglia-thalamic loop in a primate model of Parkinson's disease. *Neuroscience* 2013: 241.04/N5.
- 276.** R. A. Fuentes, P. Petersson, M. Santana, H. Simplício, T. Palmer, M. A. L. Nicolelis. Effects of spinal cord stimulation on the neuronal firing rate and synchronization of the cortico-basal ganglia-thalamic circuit in a primate model of Parkinson's disease. *Neuroscience* 2013: 241.05/N6.
- 277.** P. Petersson, P. Halje, M. Santana, R. Fuentes, M. A. L. Nicolelis. A method for characterization of activity patterns in cortico-basal ganglia-thalamic structures related to reaching in a primate model of Parkinson's disease. *Neuroscience* 2013: 241.06/N7.
- 278.** I. Brys, B. Schneider, M. M. Freire, M. Nicolelis, R. Fuentes. Chronic Spinal Cord Stimulation alleviates motor asymmetry in an Alpha-synuclein animal model of Parkinson Disease. *Neuroscience* 2013: 241.07/N8.
- 279.** T. Faggion Vinholo, M. B. Santana, M. F. P. Araújo, H. Simplício, B. Schneider, R. Fuentes, M. A. L. Nicolelis, M. A. M. Freire. Expression efficiency of rAAV6 and rAAV9 serotypes in the ventral midbrain of common marmosets. *Neuroscience* 2013: 241.08/N9.
- 280.** M. F. P. Araujo, R. C. Moioli, F. L. Brasil, R. Fuentes, M. A. L. Nicolelis. Analysis of local field potentials in a common marmoset (*Callithrix jacchus*) during rest and locomotion. *Neuroscience* 2013: 241.09/N10.
- 281.** M. Pais-Vieira, L. M. Oliveira, M. Lebedev, C. Kunicki, M. A. L. Nicolelis. Development of a brain-to-brain interface for real-time sharing of sensorimotor information. *Neuroscience* 2013: 373.03/GGG.
- 282.** E. Morya, T. Monteiro, V. Albuquerque, K. Sameshima, M. A. L. Nicolelis. Spontaneous spatiotemporal activity pattern in rat motor sensory cortex. *Neuroscience* 2013: 373.15/HHH12.
- 283.** E. E. Thomson, K. Sylvester, Â. Takigami, J. Lou, M. Nicolelis. Population coding of stimulus and reward in rat basal forebrain. *Neuroscience* 2013: 581.07/LLL46.
- 284.** C. Sardeto Deolindo, A. C. B. Kunick, F. L. Brasil, R. C. Moioli, M. A. L. Nicolelis. Phase Locking Value Analysis in active tactile discrimination task. *Neuroscience* 2014. 40.12./D24.
- 285.** R. A. Fuentes, M. Santana, P. Halje, H. Simplício, U. Richter, M. Freire, P. Petersson, M. Nicolelis. Spinal cord stimulation alleviates motor symptoms and decreases beta oscillatory activity in bilateral 6-OHDA marmosets. *Neuroscience* 2014. 414.19/T2.

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- 287.** P.-H. Tseng, S. Rajangam, A. Yin, G. Lehew, D. Schwarz, M. Lebedev, M. A. L. Nicolelis. Wheelchair navigation with wirelessly recorded cortical ensembles. *Neuroscience* 2014. 444.02/LL5
- 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 brainnet. *Neuroscience* 2014. 444.08/LL11.
- 289.** V. A. Subramanian, D. Carlson, M. A. L. Nicolelis. Joint inference for spike sorting and decoding for brain-machine interface. *Neuroscience* 2014. 444.10/LL13.
- 290.** K. Z. Zhuang, T. Vouga, J. Olivier, M. Bouri, H. Bleuler, M. A. Lebedev, M. A. L. Nicolelis. Cortical control of a lower-limb exoskeleton in rhesus monkeys. *Neuroscience* 2014. 444.12/LL15.
- 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.
- 294.** A. Lin, D. Schwarz, R. Sellaouti, S. Shokur, R. C. Moioli, F. L. Brasil, K. R. Fast, N. A. Peretti, A. Takigami, S. Gallo, K. Lyons, P. Mittendorfer, M. Lebedev, S. Joshi, G. Cheng, E. Morya, A. Rudolph, M. Nicolelis. The walk again project: Brain-controlled exoskeleton locomotion. *Neuroscience* 2014. 636.15/MM22.
- 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.
- 296.** F. L. Brasil, R. C. Moioli, S. Shokur, K. Fast, A. L. Lin, N. A. Peretti, A. Takigami, K. Lyons, D. J. Zielinski, L. Sawaki, S. Joshi, E. Morya, M. A. L. Nicolelis. The Walk Again Project: An EEG/EMG training paradigm to control locomotion. *Neuroscience* 2014. 636.17/MM24.
- 297.** M. A. L. Nicolelis, S. Shokur, A. Lin, R. C. Moioli, F. L. Brasil, N. Peretti, K. Fast, A. Takigami, E. Morya, G. Cheng, L. Sawaki, R. Kopper, D. Schwarz, S. Gallo, M. Lebedev, S. Joshi, H. Bleuler, A. Rudolph. The Walk Again Project: Using a Brain-Machine Interface for establishing a bi-directional Interaction between paraplegic subjects and a lower limb exoskeleton. *Neuroscience* 2014. 636.18/MM25.

298. I. Brys, R. Fuentes, J. Nunes, B. Schneider, P. Aebischer, M. A. L. Nicoletis. mechanisms from motor symptoms of the Alpha-synuclein Parkinson Disease rat model. Neuroscience 2014. 794.26/K8.

Selected Invited Presentations:

- 2015 Keynote Speaker, Brazilian Undergraduate Student Conference, Columbia University, New York, New York
- 2015 Invited Speaker, “Micro-, meso-, and macro-dynamics of the brain”, 23rd Annual IPSEN Foundation Meeting, Paris, France
- 2015 Featured Speaker, 2015 Brain Forum, Lausanne, Switzerland
- 2015 Keynote Speaker, 6th 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
- 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 7th 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, 125th 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, 2nd 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 11th 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 6th 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 1st International Symposium for Neuroscience for The International Institute for Neuroscience Natal, Natal Brazil

2004 Grass Traveling Scientist Lecturer, Department of Neuroscience, UCLA

2004 8th International Conference on Cognitive and Neural Systems, Boston MA

2004 2nd 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 8th 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 15th 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 21st 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, 14th 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