

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, Highest Honor of Globo’s 2011 Making a Difference Awards

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 of Disease for Graduate Students (2003-)
 Lecturer: Introduction to Neurobiology for Undergraduates (1999-)
 Co-organizer: Population Coding Course (1998)
 Lecturer: History of Neuroscience Course (1997)
 Director and Lecturer, Systems Neuroscience Course for Graduate Students (1997-)

Lecturer and Laboratory Instructor: Medical Neuroscience Course (1995-)

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)

Thesis Committees:

Mr. Adam Kohn, PhD. 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 Fanslow, 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 for restoring neurological function.
5. Neuronal basis of tactile perception

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

Grant Reviewing:

2012	NIH Director's New Innovator Award Program
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

1999

National Institute of Mental Health
NIMH Silvio Conte Center Grant Review Panel

Supervised Postdoctoral Fellows and Students

Postdoctoral fellows

R. Sankaranarayani (2012-)
Arjun Ramkrishnan (2012-)
Miguel Vieira (2009-)
Andrew Tate (2008-)
Eric Thomson (2004-)
Zheng Li (2010-)
Hao Zhang (2009-2012) Research Scientist, Pfizer, Inc.
Shashank Tandon (2010-2012) Postdoctoral Research Fellow, Sharif Taha lab, Dept. of
Physiology, University of Utah School of Medicine
Janaina Pantoja (2009-2011)
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) Visiting Instructor, Duke Institute for Brain Sciences
Romulo Fuentes (2006-2010) Assistant Professor at Universidade Federal do Rio Grande do Norte
Kafui Dzirasa (2007-2009) Assistant Professor, Department of Psychiatry and Behavioral Sciences, Duke
University
Shih-Chieh Lin (2006-2009) Investigator, National Institute on Aging, NIH, Bethesda, Maryland
Per Petersson (2006-2008) Postdoctoral Fellow, 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) Postdoctoral Fellow, Translational Neuroscience, DUMC
Antonio Pereira, Ph.D. (2003-2005), Assistant Professor, Physiology, University of Belim, 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), Christopher Reeve Paralysis Foundation, Assistant Professor,
University of California, Berkeley
Michael Wiest, Ph.D. (2001-2008) Assistant Professor, Wellesley College
Damien Gervasoni, Ph.D. (2000-2005) INSERM Postdoctoral Fellowship, Senior Research Scientist,
EPFL, Tenured Scientist, CNRS
Roy Crist, Ph.D. (2000-2002; 2005-2008) Postdoctoral Fellow NIH training award, Postdoctoral Fellow,
Department of Neurobiology, Duke University Medical Center
Dragan Dimitrov, M.D. (2000-2003) Postdoctoral Fellow NIH training award, Private Practice,
Neurosurgery, Carmel, CA
Jerald Kralik, Ph.D. (1999-2002) Postdoctoral Fellow NIH training award. NRSA NINDS, Postdoctoral
Fellow NIMH/NIH
Johan Wessberg, M.D., Ph.D. (1999-2000) Swedish Royal Academy Postdoctoral Award
Assistant Professor, University of Goteborg, Sweden

Dana Cohen, Ph.D. (1999-2004) Human Frontier Foundation Postdoctoral Fellowship, Postdoctoral Fellow, The 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) Postdoctoral Fellow, NIH training award, NRSA NINDS, Assistant Professor, Brandeis University
Mark Laubach, Ph.D. (1997-2001) Postdoctoral Fellow, NIH training award, NRSA NINDS, Assistant 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), Assistant Professor Federal University Sao Paulo

Ph.D. Graduate Students

Vivek Subramanian (2012-)
Amol Yadav (2010-)
Marek Laska (2010-)
David Schwarz (2009-)
Peter Ifft (2009-)
Katie Zhuang (2009-)
Je Hi An (2008-)
Ramanujan Raghavan (2011-2012)
Leonel Medina (2010-2012)
Andrew Fuller (2010-2012)
Jesse Winans (2008-2012)
Timothy Hanson (2004-2012) Associate Development Engineer, University of California, San Francisco, W. M. Keck Foundation Center for Integrative Neuroscience
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) Associate/Consultant, McKinsey & Company, Palo Alto, CA
Kafui Dzirasa (2004-2007) Assistant Professor, Department of Psychiatry and Behavioral Sciences, 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, Department of Neurobiology & Anatomy, Wake Forest University School of Medicine, Winston-Salem NC
Aaron Sandler (2001-2005) Anesthesiology Resident, Duke University Medical School, Durham NC
Nicholas Bentley (2000-2002) Wake Forest University Graduate School, Neurosciences
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 Degree Graduate Students

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

Medical Students

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

Undergraduate Students

Olga Mutter (2011 -)	Ade Adekunle (2008)
Andrew Weitz (2011 -)	Juan Potes (2007-)
Thomas Hasse (2011)	Jenna Maloka (2007-2009)
Anthony Lin (2011)	Max Hodak (2007- 2009)
Edward Kim (2011)	Katherine Chang (2007-2008)
Anne McDonough (2011)	Rajasree Roy (2007-2008)
Vivek Subramanian (2010 - 2012)	Jamila Williams (2007-2008)
Jason Lou (2009-)	Wai-Man Chan (2007-2008)
Sidney Primas 2009-)	Erin Conway (2007)
Vyshak Shandra /2009-)	Joanna Bersin (2007)
Laamia Islam (2009-)	Turan Kayagil (2006-2008)
Tammy Lin (2009)	Benjamin Grant (2006-2009)
Rhea Kaw (2009)	John Choi (2006-2009)
Jay Lehew (2009)	Ian Peikon (2006-2009)
Thais Vinholo (2009)	Leonardo Moore (2006-2007)
Danielle Sedlak (2009)	Geoffrey Southmaid (2005-2007)
Joseph Hall (2009)	Wailan Yip (2005-2007)
Kenneth Shen (2009)	Joanna Forbes (2005-2007)
Mary Caitlin Cook (2008-)	Andres Grosmark (2005-2007)
Jin Young Kim (2008-)	Hyun Kim (2004)
Kirti Johal (2008-)	Jonathan Ross (2003-2005)
Anna Nikolich (2008-)	Matthew Englehard (2003-2005)
Kevin Nathan (2008-)	Xinwu Shi (2004-2005)
Karen Schroeder (2008-)	Albert Chu (2002-2003)
Philip Coter (2008-2009)	Madeline Sackler (2002-2003)
David McMullen (2008-2009)	Kristin Shanklin (2002-2002)
Andrew Hawkey (2008-2009)	Elizabeth Brantley (2001-2002)
Melanie Subramanian (2008-2009)	Monica Coelho (2001-2003)
Nicholas Soo (2008-2009)	Sourav Sengupta (2001-2002)
Hyung Ju Jeon (2008)	Wendy Illick (2001-2002)
Thomas Cestare (2008)	Greg Daut (2001-2002)
Eric Fitzsimmons (2008)	Kurt Rote (2001-2002)
Harold Wesley Phillips (2008)	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

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, 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. **PNAS** 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. **PNAS** 94: 9428-9433, 1997.
46. Nicolelis MAL, Fanselow E, Ghazanfar AA. Hebb's dream: the resurgence of cell assemblies. **Neuron** 19: 219-221, 1997.
47. Nicolelis MAL, Krupa DJ, Katz D. Potential circuit mechanisms underlying concurrent thalamic and cortical plasticity. **Rev Neurosci** 9: 213-224, 1998.
48. Nicolelis MAL, Ghazanfar AA, Stambaugh CH, Oliveira LMO, Laubach M, Chapin JK, Nelson R, Kaas JH. Simultaneous encoding of tactile information by three primate cortical areas. **Nature Neurosci** 1: 621-630, 1998.
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Invited Articles, Book Chapters, and Monographs:

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- 242.** An JH, O'Doherty JE, Lebedev MA, Nicolelis MAL. Active exploration of invisible targets assisted by an artificial touch sensation based on intracortical microstimulation. Soc Neurosci Abst, Neuroscience 2011.
- 243.** Fuller AM, Hanson TL, Lebedev MA, Nicolelis MAL. Multichannel multiplexing of stimulation and recording in brain-machine-brain interfaces. Soc Neurosci Abst, Neuroscience 2011.
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- 245.** Ifft P, Lebedev MA, Nicolelis MAL. Neural Correlates of Fitts Law. Soc Neurosci Abst, Neuroscience 2011.
- 246.** Li Z, Tate AJ, Lebedev MA, Nicolelis MAL. Software-based scalable multichannel spike acquisition. Soc Neurosci Abst, Neuroscience 2011.
- 247.** O'Doherty JE, Li Z, Lebedev MA, Nicolelis MAL. Towards a brain-machine-brain interface with virtual active touch using randomly patterned intracortical microstimulation. Soc Neurosci Abst, Neuroscience 2011.
- 248.** Zhuang KZ, O'Doherty JE, Lebedev MA, Nicolelis MAL. Joint cross-correlation analysis reveals dynamic relationship between cortical activity and EMG. Soc Neurosci Abst, Neuroscience 2011.
- 249.** Thomson EE, Lou J, McDonough A, Nicolelis, MAL. Basal forebrain activity during a tactile discrimination task. Soc Neurosci Abst, Neuroscience 2011.

250. Raghavan RT, Lebedev MA, O'Doherty JE, Nicoletis MAL. Emergent preparatory neural activity underlying learning in premotor and primary motor cortex. Soc Neurosci Abst, Neuroscience 2011.

Selected Invited Presentations:

- 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 Tubingen, 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
- 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, Tubingen, Germany

2002 Collaborative Research Center, University of Tubingen, 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 Tubingen, Tubingen, 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