

CURRICULUM VITAE

Miguel A. L. Nicolelis, MD, PhD

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Education:

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

Honors and Awards:

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

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

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

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

Amol Yadav (2015-)
 Po-He Tseng (2013-)
 R. Sankaranarayani (2012-)
 Eric Thomson (2004-)
 Arjun Ramkrishnan (2012-2015)
 David Guggenmos (2013-2015)
 Miguel Vieira (2009-2015)
 Andrew Tate (2008-2013)
 Zheng Li (2010 - 2012) Junior Faculty Position, Beijing Normal University
 Hao Zhang (2009-2012) Research Scientist, Pfizer, Inc.
 Shashank Tandon (2010-2012) Research Fellow, Dept. of Physiology, University of Utah.
 Janaina Pantoja (2009-2011) Translation Operations Director, American Journal Experts, Durham, NC.
 Georgia Alexander (2006-2011) National Institute of Environmental Health Sciences, RTP, NC
 Nathan Fitzsimmons (2009-2010) Associate/Consultant, McKinsey & Company, Palo Alto, CA
 Jorge Maia (2008-2010) Clinical Research Fellow, Champalimaud Neuroscience Program
 Craig Roberts (2008-2010) Assistant Professor of the Practice, Duke Institute for Brain Sciences
 Romulo Fuentes (2006-2010) Scientific Director, ELS-IINN, Brazil.
 Kafui Dzirasa (2007-2009) Assistant Professor, Dept Psychiatry, Duke University
 Shih-Chieh Lin (2006-2009) Principal Investigator, National Institute on Aging, NIH, Bethesda, Maryland
 Per Petersson (2006-2008) Assistant Professor, University of Lund, Sweden
 Aaron Sandler (2005-2006) Resident, Duke University Medical School, Durham NC
 Ivan Araujo (2004- 2007) Assistant Professor, John B. Pierce Lab, Yale University, New Haven CT
 Tetsuji Ochiai, Ph.D. (2003-2005) Assistant Professor, University of Tokyo, Japan
 Lucas Santos (2003-2006) Wake Forest University
 Antonio Pereira, Ph.D. (2003-2005), Assistant Professor, UFRN, Brazil
 Rui Costa, Ph.D. (2002-2006), Philip Morris, Scientist, NIAAA/NIH
 Parag Patil M.D. (2002-2003) Assistant Professor, Neurosurgery, University of Michigan
 Jose Carmena, Ph.D. (2002-2005), Associate Professor, University of California, Berkeley
 Michael Wiest, Ph.D. (2001-2008) Assistant Professor, Wellesley College
 Damien Gervasoni, Ph.D. (2000-2005) Senior Research Scientist, CNRS, France
 Roy Crist, Ph.D. (2000-2002; 2005-2008)
 Dragan Dimitrov, M.D. (2000-2003) Private Practice, Neurosurgery, Carmel, CA
 Jerald Kralik, Ph.D. (1999-2002) Assistant Professor, Dartmouth University
 Johan Wessberg, M.D., Ph.D. (1999-2000) Professor, University of Gottenburg.
 Assistant Professor, University of Goteborg, Sweden

Dana Cohen, Ph.D. (1999-2004) Professor,, Gonda Brain Research Center, Bar Ilan University, Israel
Pamela Beck, Ph.D. (1998-2002) Postdoctoral Fellow, NIH training award. NRSA NEI
Donald Katz, Ph.D. (1997-2002) Associate Professor, Professor, Brandeis University
Mark Laubach, Ph.D. (1997-2001) Associate Professor, Yale University.
Amy Brisben, Ph.D. (1997-1998) Postdoctoral Fellow, NIH training award
David Krupa, Ph.D. (1996-2004) Postdoctoral Fellow, NRSA NIMH
Barbara Faggini, Ph.D. (1995-1996), Research Scientist, Federal University Sao Paulo

Ph.D. Graduate Students

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

Master's Degree Graduate Students

Will Huffman
Keaton Armentrout
Daniel Candrea
Shuja Rayaz
Andrew Young (2010-2011)

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

Medical Students

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

Undergraduate Students

Michael Lee
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 -)
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.

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

Published and Submitted Papers

1. Filho JW, Schoveri Jr. R, Garcia YM, Machado C, Ferreira ML, Barreira PL, Batista MC, Nicoletis MAL, Carvalho Filho ET. Comparative analysis of methods for evaluation of the renal function in elders. **Geriatria em Sintese** 1: 14-16, 1984 (Portuguese)

2. Saldiva PHN, Massad E, Caldeira MPR, Calheiros DF, Saldiva CD, Nicolelis MAL, Bohm GM. Pulmonary function of rats exposed to ethanol and gasoline fumes. **Brazilian J Med Biol Res** 18: 573-577, 1985.
3. Massad E, Furuie SS, Moura Jr LA, Saldiva PHN, Nicolelis MAL, Bohm GM. The use of a personal computer in the pulmonary function tests of laboratory rats. **Meth Inform Med** 24: 197-199, 1985.
4. Nicolelis MAL, Carvalho CRR. Computer-aided standardization of antimicrobial therapeutics. **Rev Hosp Clin Fac Med Sao Paulo** 40: 227-232, 1985 (Portuguese).
5. Nicolelis MAL, Martins MA, Meireles LP, Birolini D. Computer-aided analysis of patterns of bacterial incidence and sensitivity in a surgical unit. **Rev Assoc Med Brasil** 32: 134-140, 1986 (Portuguese).
6. Nicolelis MAL, Baccala LA, Tinone G, Yu CH. Mathematical approach to bacterial sensitivity rhythm patterns. Proceedings of the MEDINFO Congress, Ifip-Imia, Washington, 480-482, 1986.
7. Nicolelis MAL, Massad E, Utzler R, Engel A, Rodrigues E, Bazzone JRC, Tomida RM. Mathematical model of *Klebsiella pneumoniae*'s resistance to amikacin and gentamicin. **Braz J Med Biol Res** 20: 35-41, 1987.
8. Massad E, Engel A, Nicolelis MAL. A mathematical model for spirometry. **Comput Biomed Res** 20(2): 105-112, 1987.
9. Nicolelis MAL, Sameshima K, Furuie SS, Gutierrez MA. A signal processing system to analyze the neural control on the cardiovascular function. Proceedings of the VII International Congress Medical Informatics Europe, Rome, 1987, Vol 3, 1318-1322.
10. Nicolelis MAL, Baccala LA. Time series analysis of rhythmic bacterial resistance development to antibiotics. **Comput Biomed Res** 21: 137-157, 1988.
11. Lages S, Gutierrez MA, Nicolelis MAL, Furuie SS. A bedside computerized system for monitoring and processing biological signals in an intensive care unit. Proceedings of the XIV Computers in Cardiology Congress, IEEE Computer Society, Leuven, 561-564, 1988.
12. Gutierrez MA, Furuie SS, Nicolelis MAL, Lages S. Developing a multi-purpose microcomputer-based system for biological signal analysis to cardiovascular protocols. Proceedings of the XIV Computers in Cardiology Congress, IEEE Computer Society, 505-508, 1988.
13. Nicolelis MAL, Yu CH. Application of a microcomputer-based system in the analysis of infection data at the emergency units of a large hospital. **Int J Biomed Comput** 22: 183-198, 1988.
14. Nicolelis MAL, Baccala LA. Do bacteria have an intrinsic rhythmic sensitivity pattern? **Critical Care Med** 16(6): 650, 1988.

15. Bohm GM, Massad E, Nicolelis MAL, Sameshima K. Teaching medical informatics at the Faculty of Medicine, University of São Paulo, Brazil. In: Lecture notes in medical informatics, Proceedings of the VIII International Congress on Medical Informatics Europe 88, P.L. Reichertz and D.A.B. Lindberg eds, Springer-Verlag, 35: 316-320, 1988.
16. Nicolelis MAL, Yu CH. Defining criteria for quantitative analysis of the neural network responsible for the cardiovascular function control by means of a microcomputer system. In: Proceedings of the XII Symposium on Computer Applications in Medical Care, R.A. Greenes ed., IEEE Computer Society, Washington, 256-260, 1988.
17. Nicolelis MAL, Younes RN. Dissociation of left and right ventricle heart beats during severe hemorrhagic shock in dogs. **Circ Shock** 28(4): 281-282, 1988.
18. Nicolelis MAL. Development of an integrated microcomputer-based system and its application in the analysis of neural network structural properties and biological signal processing. Ph.D. thesis, Institute of Biomedical Science, University of Sao Paulo, 1988.
19. Montes GS, Nicolelis MAL, Brentani-Samaia HP, Furuie SS. Collagen fibril diameters in mice arteries: A comparison of manual and computer-aided morphometric analyses. **Acta Anatomica** 135: 57-61, 1989.
20. Nicolelis MAL, Tinone G, Sameshima K, Timo-Yaria C, Yu CH, Van de Bild MT. Connection, a microcomputer program for storing and analyzing neural circuits. **Comput Biomed Res** 23: 64-81, 1989.
21. Yu CH, Baccala LA, Nicolelis MAL. Applying graph theory on a neural network responsible for the cardiovascular function control: a correlation between structural properties and physiological functions. In: Proceedings of the VI Conference on Medical Informatics. (B. Barber, D. Cao, D. Qin and G. Wagner, eds) pp 87-91, Singapore, 1989.
22. Baccala LA, Nicolelis MAL. Using computers to survey the epidemiological, environmental and genetic factors involved in the process of bacterial resistance acquisition. XIII Symposium on Computer Application in Medical Care, pp 261-265, 1989.
23. Nicolelis MAL, Yu CH, Baccala LA. Structural characterization of the neural circuit responsible for the cardiovascular function control in high vertebrates. **Comput Biol Med** 20(6): 379-400, 1990.
24. Nicolelis MAL, Baccala LA. Rhythms in the bacterial sensitivity behavior at a large hospital. **J Clin Epidemiol** 44(2): 191-205, 1991.
25. Baccala LA, Nicolelis MAL, Yu CH. Structural analysis of neural circuits using the theory of directed graphs. **Comput Biomed Res** 24: 7-28, 1991.
26. Lin CS, Nicolelis MAL, Schneider JS, Chapin JK. A major direct GABAergic pathway from zona incerta to neocortex. **Science** 248: 1553-1556, 1990.

27. Nicolelis MAL, Lin CS, Chapin, JK. Ontogeny of corticocortical projections of the rat somatosensory cortex. **Somat Mot Res** 8: 193-200, 1991.
28. Nicolelis MAL, Chapin JK, Lin RCS. Thalamic plasticity induced by early whisker removal in rats. **Brain Res** 561: 344-349, 1991.
29. Nicolelis MAL, Chapin JK, Lin RCS. Neonatal whisker removal in rats stabilizes a transient projection from the auditory thalamus to the primary somatosensory cortex. **Brain Res** 567: 133-139, 1991.
30. Nicolelis MAL, Chapin JK, Lin RCS. Somatotopic maps within the zona incerta relay parallel GABAergic somatosensory pathways to the neocortex, superior colliculus, and brainstem. **Brain Res** 577: 134-141, 1992.
31. Nicolelis MAL, Lin RCS, Woodward DJ, Chapin JK. Dynamic and distributed properties of many-neuron ensembles in the ventral posterior medial (VPM) thalamus of awake rats. **Proc Natl Acad Sci** 90: 2212-2216, 1993.
32. Nicolelis MAL, Lin RCS, Woodward DJ, Chapin JK. Induction of immediate spatiotemporal changes in thalamic networks by peripheral block of ascending cutaneous information. **Nature** 361: 533-536, 1993.
33. Nicolelis MAL, Chapin JK. The spatiotemporal structure of somatosensory responses of many-neuron ensembles in the rat ventral posterior medial nucleus of the thalamus. **J Neurosci** 14: 3511-3532, 1994.
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.
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.
49. Krupa DJ, Ghazanfar AA, Nicolelis MAL. Immediate thalamic sensory plasticity depends on corticothalamic feedback. **Proc. Natl. Acad. Sci.** 96: 8200-8205, 1999.
50. Ghazanfar AA, Nicolelis MAL. Spatiotemporal properties of layer V neurons in the rat primary somatosensory cortex. **Cerebral Cortex** 9: 348-361, 1999.
51. Katz, DB, Simon SA, Nicolelis MAL. Simultaneous reorganization in thalamocortical ensembles evolves over several hours after perioral capsaicin injections. **J Neurophysiol** 82: 963-977, 1999.
52. Fanselow E, Nicolelis MAL. Behavioral modulation of tactile responses in the rat somatosensory system. **J Neurosci** 19: 7603-7616, 1999.
53. Chapin JK, Nicolelis MAL. Principal component analysis of neuronal ensemble activity reveals multidimensional somatosensory representations. **J Neurosci Meth** 94: 121-140, 1999.
54. Laubach M, Shuler M, Nicolelis MAL. Independent component analyses for quantifying neuronal ensemble interactions. **J Neurosci Meth** 94: 141-154, 1999.

55. Chapin JK, Moxon KA, Markowitz RS, Nicolelis MAL. Real-time control of a robot arm using simultaneously recorded neurons in the motor cortex. **Nature Neurosci** 2: 664-670, 1999.
56. Katz D, Nicolelis MAL, Simon S. There is more to taste than meets the tongue. **Am J Physiol** 278: G6-G9, 2000.
57. Ghazanfar AA, Stambaugh CR, Nicolelis MAL. Encoding of tactile stimulus location by somatosensory thalamocortical ensembles. **J Neurosci** 20: 3761-3775, 2000.
58. Fanselow EE, Reid AP, Nicolelis MAL. Reduction of pentylenetetrazole-induced seizure activity in awake rats by seizure-triggered trigeminal nerve stimulation. **J Neurosci** 20: 8160-8168, 2000.
59. Krupa DJ, Nicolelis MAL. Network level properties of short-term plasticity in the somatosensory system. **Progress Brain Res** 128: 161-172, 2000.
60. Laubach M, Wessberg J, Nicolelis MAL. Cortical ensemble activity increasingly predicts behavior outcomes during learning of a motor task. **Nature** 405: 567-571, 2000.
61. Wessberg J, Stambaugh CR, Kralik JD, Beck PD, Chapin JK, Kim J, Biggs SJ, Srinivasan MA, Nicolelis MAL. Real-time prediction of hand trajectory by ensembles of cortical neurons in primates. **Nature** 408: 361-365, 2000.
62. Das A, Franca JG, Gattass R, Kaas JH, Nicolelis MA, Timo-Iaria C, Vargas CD, Weinberger NM, Volchan E. The brain decade in debate: VI. Sensory and motor maps: dynamics and plasticity. **Braz J Med Biol Res** 34: 1497-508, 2001.
63. Nicolelis MAL. Actions from thoughts. **Nature** 409: 403-407, 2001.
64. Krupa DJ, Brisben AJ, Nicolelis MAL. A multi-channel whisker stimulator for producing spatiotemporally complex tactile stimuli. **J Neurosci Meth** 104: 199-208, 2001.
65. Ghazanfar AA, Nicolelis MAL. The structure and function of dynamic cortical and thalamic receptive fields. **Cerebral Cortex** 11: 183-193, 2001.
66. Katz D, Simon S, Nicolelis MAL. Dynamic and multimodal responses of gustatory cortical neurons in awake rats. **J Neurosci** 21: 4478-4489, 2001.
67. Nicolelis MAL, Shuler M. Thalamocortical and corticocortical interactions in the somatosensory system. **Prog Brain Res** 130: 89-110, 2001.
68. Shuler M, Krupa DJ, Nicolelis MAL. Bilateral integration of whisker information in the primary somatosensory cortex of rats. **J Neurosci** 21: 5251-5261, 2001.
69. Krupa DJ, Matell MS, Brisben AJ, Oliveira LM, Nicolelis MAL. Behavioral properties of the trigeminal somatosensory system in rats performing whisker-dependent tactile discriminations. **J Neurosci** 21: 5752-5763, 2001.

70. Ghazanfar AA, Krupa DJ, Nicolelis MAL. Role of cortical feedback in the receptive field structure and nonlinear response properties of somatosensory thalamic neurons. **Exp Brain Res** 141: 88-100, 2001.
71. Fanselow EE, Sameshima K, Baccala LA, Nicolelis MAL. Thalamic bursting in rats during different awake behavioral states. **Proc. Natl. Acad. Sci.** 98: 15330-15335, 2001.
72. Kralik JD, Dimitrov DF, Krupa DJ, Katz DB, Cohen D, Nicolelis MAL. Techniques for long-term multisite neuronal ensemble recordings in behaving animals. **Methods** 25: 121-150, 2001.
73. Shuler M, Krupa DJ, Nicolelis MAL. Integration of bilateral whisker stimuli in rats: role of the whisker barrel cortices. **Cerebral Cortex** 12: 86-97, 2002.
74. Katz D, Simon SA, Nicolelis MAL. Taste-specific neuronal ensembles in the gustatory cortex of awake rats. **J Neurosci** 22: 1850-1857, 2002.
75. Nicolelis MAL, Fanselow E. Thalamocortical optimization of tactile processing according to behavioral state. **Nature Neurosci** 5: 517-523, 2002.
76. Nicolelis MAL. Depression at thalamocortical synapses: the key for cortical neuronal adaptation? **Neuron** 34: 331-2, 2002.
77. Nicolelis MAL, Chapin JK. Controlling robots with the mind. **Scientific American** 287: 24-31, October 2002.
78. Katz D, Nicolelis MAL, Simon SA. Gustatory processing is dynamic and distributed. **Curr Opinion Neurobiol** 12: 448-454, 2002.
79. Nicolelis MAL. The amazing adventures of robotrat. **Trends Cogn Neurosci** 6: 449-450, 2002.
80. Nicolelis MAL, Ribeiro S. Multi-electrode recordings: the next steps. **Curr Opinion Neurobiol** 12: 602-606, 2002.
81. Nicolelis MAL, Fanselow E. Dynamic shifting in thalamocortical processing during different behavioral states. **Phil Trans R Soc Lond B** 357: 1753-1758, 2002.
82. Obeid I, Morizio JC, Moxon KA, Nicolelis MAL, Wolf PD. Two multichannel integrated circuits for neural recording and signal processing. **IEEE Trans Biomed Egr** 50: 255-258, 2003.
83. Nicolelis MAL. Brain-machine interfaces to restore motor function and probe neural circuits. **Nat Rev Neurosci** 4: 417-422, 2003.
84. Matell MS, Meck WH, Nicolelis MAL. Interval timing and the encoding of signal duration by ensembles of cortical and striatal neurons. **Behavioral Neurosci** 117: 760-773, 2003.

85. Nicolelis MAL, Dimitrov DF, Carmena J, Crist R, Lehew G, Kralik J, Wise S. Chronic, multi-site, multi-electrode recordings in macaque monkeys. **Proc. Natl. Acad. Sci.** 100: 11041-11046, 2003.
86. Wiest M, Nicolelis MAL. Behavioral detection of tactile stimuli during 7-12 Hz cortical oscillations in awake rats. **Nat Neurosci** 6: 913-914, 2003.
87. Carmena JM, Lebedev MA, Crist RE, O'Doherty JE, Santucci DM, Dimitrov DR, Patil PG, Henriquez CS, Nicolelis MAL. Learning to control a brain-machine interface for reaching and grasping by primates. **Public Library of Science** 1: 193-208, 2003.
88. Ribeiro S, Gervasoni D, Soares E, Zhou Y, Lin S-C, Pantoja J, Lavine M, Nicolelis MAL. Long-lasting novelty-induced neuronal reverberation during slow-wave sleep in multiple forebrain areas. **Public Library of Science** 2: 126-137, 2004.
89. Obeid I., Nicolelis MAL, Wolf P. A low power multichannel analog front end for portable neural signal recordings. **J Neurosci Meth** 133: 27-32, 2004
90. Obeid I., Nicolelis MAL, Wolf P. A multichannel telemetry system for single unit neural recordings. **J Neurosci Meth** 133: 33-38, 2004.
91. Cohen D, Nicolelis MAL. Reduction of single neuron firing uncertainty by cortical ensembles during motor skill learning. **J Neurosci** 24: 3574-3582, 2004.
92. Patil PG, Carmena JM, Nicolelis MAL, Turner DA. Ensemble recordings of human subcortical neurons as a source of motor control signals for a brain-machine interface. **J Neurosurgery** 55: 27-35, 2004.
93. Krupa DJ, Wiest, MC, Laubach M, Nicolelis MAL Layer specific somatosensory cortical activation during active tactile discrimination **Science** 304: 1989-1992, 2004.
94. Costa RM, Cohen D, Nicolelis MAL. Differential cortico-striatal plasticity during fast and slow motor skill learning in mice. **Curr Biol** 14: 1124-1134, 2004.
95. Wessberg J, Nicolelis MAL. Optimizing a linear algorithm for real-time robotic control using chronic cortical ensemble recordings in monkeys. **J Cogn Neurosci** 16: 1022-1035, 2004.
96. Bossetti CA, Carmena JM, Nicolelis MAL, Wolf PD. Transmission latencies in a telemetry-linked brain-machine interface. **IEEE Trans Biomed Egr** 51: 919-924, 2004.
97. Sanchez JC, Carmena JM, Lebedev MA, Nicolelis MAL, Harris JG, Principe JC. Ascertaining the importance of neurons to develop better brain-machine interfaces. **IEEE Trans Biomed Egr** 51: 943-953, 2004.
98. Gervasoni D, Shih-Chieh L, Ribeiro S, Soares ES, Pantoja J, Nicolelis MA.L. Global forebrain dynamics predict rat behavioral states and their transitions. **J Neurosci** 24: 11137-11147, 2004.

99. Ribeiro S, Nicolelis MAL. Reverberation, storage and post-synaptic propagation of memories during sleep. **Learn Mem** 11: 686 – 696, 2004.
100. Costa RM, Liu L, Nicolelis MAL, Simon SA. Gustatory effects of capsaicin that are independent of TRPV1 receptors. **Chem Senses** 30: i198-i200, 2005.
101. Lebedev MA, Carmena JM, O’Doherty JE, Zacksenhouse M, Henriquez CS, Principe J, Nicolelis MAL. Cortical ensemble adaptation to represent velocity of an artificial actuator controlled by a brain machine interface. **J Neurosci** 25: 4681-4693, 2005.
102. Wiest MC, Bentley N, Nicolelis MAL. Heterogeneous integration of bilateral whisker signals by neurons in primary somatosensory cortex of awake rats. **J Neurophysiol** 93: 2966-2973, 2005.
103. Nicolelis, MAL. Computing with thalamocortical ensembles during different behavioral states. **J Physiol** 566.1: 37-47, 2005.
104. Santucci DM, Kralik JD, Lebedev MA, Nicolelis MAL. Frontal and parietal cortical ensembles predict muscle activity during reaching movements in primates. **European J Neurosci** 22: 1529-1540, 2005.
105. Carmena JM, Lebedev MA, Henriquez CS, Nicolelis MAL. Stable ensemble performance with single neuron variability during reaching movements in primates. **J Neurosci** 25: 10712-10716, 2005.
106. Sanchez JC, Erdogmus D, Principe JC, Wessberg J, and Nicolelis MAL. Interpreting spatial and temporal neural activity through a recurrent neural network brain machine interface. **IEEE Trans Neural Syst Rehabil Eng** 15: 213-219, 2005.
107. Gutierrez R, Carmena J, Nicolelis, MAL, Simon SA. Orbitofrontal ensemble activity predicts licking and distinguishes among reward. **J Neurophysiol** 95:119-133, 2006.
108. Kim HK, Biggs J, Schloerb DW, Carmena JM, Lebedev MA, Nicolelis MAL, Srinivasan MA. Continuous shared control stabilizes reaching and grasping with brain machine interfaces. **IEEE Trans Biomed Eng** 53: 1164-1173, 2006.
109. Stapleton J, Lavine M, Wolpert R, Nicolelis MAL, Simon SA. Rapid taste responses in the gustatory cortex during licking. **J Neurosci** 26:4126-4138, 2006.
110. Kim SP, Sanchez JC, Rao YN, Erdogmus D, Carmena JM, Lebedev MA, Nicolelis MA, Principe JC. A comparison of optimal MIMO linear and nonlinear models for brain-machine interfaces. **J Neural Eng**. 3:145-161, 2006.
111. Lebedev MA, Nicolelis MAL. Brain machine interfaces: Past, present and future. **Trends Neurosci** 29: 536-546, 2006.
112. de Araujo IE, Gutierrez R, Oliveira-Maia AJ, Pereira Jr A, Nicolelis MAL, Simon SA. Neural ensemble coding of satiety states. **Neuron** 51:483-494, 2006.

113. Lin SC, Gervasoni D, Nicolelis MAL. Fast modulation of prefrontal cortex activity by basal forebrain non-cholinergic neuronal ensembles. **J Neurophysiol** 96: 3209-3219, 2006.
114. Dzirasa K, Ribeiro S, Costa RM, Santos LM, Lin S-C, Grosmark A, Sotnikova TD, Gainetdinov RR, Caron MG, Nicolelis MAL. Dopaminergic control of sleep-wake states. **J Neurosci** 26: 10577-10589, 2006.
115. Costa RM, Lin S-C, Sotnikova TD, Cyr M, Gainetdinov RR, Caron MG, Nicolelis MAL. Rapid alterations in corticostriatal ensemble coordination during acute dopamine-dependent motor dysfunction. **Neuron** 52: 359-369, 2006.
116. Nicolelis MAL, Ribeiro S. Seeking the neural code. **Sci Am** 295: 70-77, 2006.
117. Simon SA, de Araujo IE, Gutierrez R, Nicolelis MAL. The neural mechanisms of gustation. **Nature Rev Neurosci** 7: 890-901, 2006.
118. Costa RM., Gutierrez R., Kloth AD, Coelho M, de Araujo IE, Gainetdinov RR, Caron MG, Nicolelis MAL, Simon SA. Dopamine modulates the updating of tastant values. **Genes, Brain & Behavior** 6: 314-320, 2007.
119. Ribeiro S, Shi X, Engelhard M, Zhou Y, Gervasoni D, Lin S-C, Zhang H, Wada K, Nicolelis MAL. Novel experience induces persistent sleep-dependent plasticity in the cortex but not in the hippocampus. **Frontiers in Neurosci** 1: 43-55, 2007.
120. Stapleton J, Lavine ML, Nicolelis MA, Simon SA. Ensembles of gustatory cortical neurons anticipate and discriminate between tastants in a single lick. **Frontiers in Neurosci** 1: 161-174, 2007.
121. Fitzsimmons N, Drake W, Hanson T, Lebedev M, Nicolelis MAL. Primate reaching cued by multichannel spatiotemporal cortical microstimulation. **J Neurosci** 27: 5593-5602, 2007.
122. Soares ES, Stapleton JR, Rodriguez A, Fitzsimmons N, Oliveira L, Nicolelis MA, Simon SA. Behavioral and neural responses to gustatory stimuli delivered non-contingently through intra-oral cannulas. **Physiol Behav** 92: 629-642, 2007.
123. Zacksenhouse M, Lebedev MA, Carmena JM, O'Doherty JE, Henriquez C, Nicolelis MAL. Cortical modulations increase in early sessions with brain-machine interface. **PLoS ONE** 2:e619, 2007.
124. Pantoja J, Ribeiro S, Wiest M, Soares E, Gervasoni D, Nelson L, Nicolelis MAL. Neuronal activity in the primary somatosensory thalamocortical loop is modulated by reward contingency during tactile discrimination. **J Neurosci** 27: 10608-10620, 2007.
125. Kim HK, Carmena JM, Biggs SJ, Hanson TL, Nicolelis MAL, Srinivasan MA. The muscle activation method: an approach to impedance control of brain-maching interfaces through a musculoskeletal model of the arm. **IEEE Trans Biomed Eng** 54: 1520-1529, 2007.

126. Pereira A, Ribeiro S, Wiest M, Moore LC, Pantoja J, Lin S-C, Nicolelis MAL. Processing of tactile information by the hippocampus. **Proc. Natl. Acad. Sci.** 104: 18286-18291 (Epub) November 2007.
127. Nicolelis MAL. Living with Ghostly Limbs. **Sci Am Mind** 18: 53-59, 2007.
128. Lebedev MA, O'Doherty JE, Nicolelis MAL. Decoding of temporal intervals from cortical ensemble activity. **J Neurophysiol** 99: 166-186, 2008.
129. da Silva LIL, Nicolelis MAL, Haddad F. Brazil's Option for Science Education. **Sci Am** 298: 25, 2008.
130. Nicolelis MAL. Building the Knowledge Archipelago. **Sci Am** 298: www.SciAm.com/ontheweb, 2008.
131. Nicolelis MAL, Chapin JK. Controlling robots with the mind. **Sci Am Reports** 18: 72-79, 2008
132. de Araujo IE, Oliveira-Maia AJ, Sotnikova TD, Gainetdinov RR, Caron MG, Nicolelis MAL, Simon SA. Reward in the absence of taste receptor signaling. **Neuron** 57: 930-941, 2008.
133. Simon SA, de Araujo IE, Stapleton JR, Nicolelis MAL. Multisensory Processing of Gustatory Stimuli. **Chemosensory Perception** 1: 95-102, 2008.
134. Lin S-C, Nicolelis MAL. Neuronal ensemble bursting in the basal frontal forebrain encodes salience irrespective of valence. **Neuron** 59: 138-149, 2008.
135. Oliveira-Maia AJ, Stapleton-Kotloski JR, Lyall V, Phan Tam-Hao T, Mummalaneni S, Melone P, DeSimone JA, Nicolelis MAL, Simon SA. Nicotine activates TRPM5-dependent and independent taste pathways. **Proc. Natl. Acad. Sci.** 106: 1596-1601, 2009.
136. Fuentes R, Petersson P, Siesser WB, Caron MG, Nicolelis MAL. Spinal Cord Stimulation Restores Locomotion in Animal Models of Parkinson's disease. **Science** 323: 1578-82, 2009.
137. Zhang H, Lin S-C, Nicolelis MAL. Acquiring local field potential information from amperometric neurochemical recordings. **J. Neurosci Methods** 179: 191-200, 2009.
138. Fitzsimmons N, Lebedev MA, Peikon I, Nicolelis MAL. Extracting kinematic parameters for monkey bipedal walking from cortical neuronal ensemble activity. **Front. Integr. Neurosci.** 3: 1-19, 2009.
139. Peikon ID, Fitzsimmons NA, Lebedev MA, Nicolelis MAL. Three-dimensional, automated, real-time video system for tracking limb motion in brain-machine interface studies. **J. Neurosci. Methods** 180: 224-233, 2009.
140. Dzirasa K, Santos LM, Ribeiro S, Stapleton J, Gainetdinov RR, Caron MG, Nicolelis MAL. Persistent hyperdopaminergia decreases the peak frequency of hippocampal theta oscillations during quiet waking and REM sleep. **PLoS One** 4:e5238, 2009.

141. Zacksenhouse M, Nemets S, Lebedev MA, Beiser K, Nicolelis MAL. Robust satisficing Linear Regression: robustness/performance trade-off and consistency criterion. **Mechanical-Systems and Signal Processing (MSSP)** (Special Issue on Inverse Problems) 23: 1954–1964, 2009.
142. Rizk M, Bossetti CA, Jochum TA, Callender SH, Nicolelis MA, Turner DA, Wolf PD. A fully implantable 96-channel neural data acquisition system. **J Neural Eng.** Apr;6(2):026002. Epub 2009 Mar 2, 2009.
143. Nicolelis MAL, Lebedev MA. Principles of Neural Ensemble Physiology Underlying the Operation of Brain-Machine Interfaces. **Nat. Rev. Neurosci.** 10: 530-540, 2009.
144. Dzirasa K, Ramsey AJ, Takahashi DY, Stapleton J, Potes JM, Williams JK, Gainetdinov RR, Sameshima K, Caron MG, Nicolelis MAL. Hyperdopaminergia and NMDA receptor hypofunction disrupt neural phase signaling. **J. Neurosci.** 29: 8215-8224, 2009.
145. Alexander GM, Rogan SC, Abbas AI, Armbruster BN, Pei Y, Allen JA, Nonneman RJ, Hartmann J, Moy SS, Nicolelis MA, McNamara JO, Roth BL. Remote Control of Neuronal Activity in Transgenic Mice Expressing Evolved G Protein-Coupled Receptors. **Neuron** 63: 27–39, 2009.
146. Li Z, O'Doherty JE, Hanson TL, Lebedev MA, Henriquez CS, Nicolelis MAL. Unscented Kalman Filter for Brain-Machine Interfaces. **PLoS One** 4: e6243, 2009.
147. Petermann T, Thiagarajan TC, Lebedev MA, Nicolelis MA, Chialvo DR, Plenz D. Spontaneous cortical activity in awake monkeys composed of neuronal avalanches. **Proc Natl Acad Sci.** 106: 15921-15926, 2009.
148. O'Doherty JE, Lebedev MA, Hanson TL, Fitzsimmons NA, Nicolelis MAL. A brain-machine interface instructed by direct intracortical microstimulation. **Front. Integr. Neurosci.** 3: 1-10, 2009.
149. MacDonald CJ, Meck WH, Simon SA, Nicolelis MAL. Taste-Guided Decisions Differentially Engage Neuronal Ensembles across Gustatory Cortices. **J. Neurosci.** 29:11271-82, 2009.
150. Gutierrez R, Simon SA, Nicolelis MAL. Licking induced neural synchronization improves taste discrimination during learning. **J. Neurosci.** 30:287–303, 2010.
151. Thiagarajan TC, Lebedev MA, Nicolelis MA, Plenz D. Coherence Potentials: Loss-Less, All-or-None Network Events in the Cortex. **PLoS Biology** 8: e1000278, 2010.
152. Wiest MC, Thomson EE, Pantoja J, Nicolelis MAL. Changes in S1 neural responses during tactile discrimination learning. **J. Neurophysiol.** 104:300-312, 2010.
153. Dzirasa K, Phillips HW, Sotnikova TD, Salahpour A, Kumar S, Gainetdinov RR, Caron MG, Nicolelis MAL. Noradrenergic Control of Cortico-Striato-Thalamic and Mesolimbic Cross-Structural Synchrony. **J. Neurosci.** 30:6387 – 6397, 2010.

154. Fuentes R, Petersson P, Nicolelis MAL. Restoration of locomotive function in Parkinson's disease by spinal cord stimulation: mechanistic approach. **European J. Neurosci.** 32:1100–1108, 2010.
155. Simões CS, Vianney P, de Moura MM, Freire MAM, Mello LE, Sameshima K, Araujo JF, Nicolelis MAL, Mello CV, Ribeiro S. Activation of frontal neocortical areas by vocal production in marmosets. **Front. Integr. Neurosci.** 4: 1-12, 2010.
156. Zhang H, Lin S-C, Nicolelis MAL. Spatiotemporal coupling between hippocampal acetylcholine release and theta oscillations in vivo. **J. Neurosci.** 30: 13431-13440, 2010.
157. Dzirasa K, Coque L, Sidor M, Dancy EA, Takahashi J, McClung CA, Nicolelis MAL. Lithium ameliorates nucleus accumbens phase signaling dysfunction in a genetic mouse model of mania. **J. Neurosci.** 30:16314-16323, 2010.
158. Ribeiro T, Copelli M, Chialvo D, Caixeta F, Belchior H, Nicolelis MAL, Ribeiro S. Spike Avalanches Exhibit Universal Dynamics across the Sleep-Wake Cycle. **PLoS ONE** 5:e14129, 2010.
159. Nicolelis MAL. Mind out of Body. **Sci. Am.** 304: 80-83, 2011.
160. Oliveira-Maia A J, Roberts C D, Simon S A, Nicolelis M A L. Gustatory and reward brain circuits in the control of food intake. **Adv. Tech. Stand. Neurosurg.** 36:31-59, 2011.
161. Dzirasa K, Fuentes R, Potes JM, Nicolelis MAL. Chronic in vivo multi-circuit neurophysiological recordings in mice. **J. Neurosc. Methods** 195: 36-46, 2011.
162. Dzirasa K, McGrarity D, Bhattacharya A, Kumar S, Takahashi J, Dunson D, McClung C, Nicolelis M A. Impaired limbic gamma oscillatory synchrony during anxiety related behavior in a genetic mouse model of bipolar mania. **J. Neurosc.** 31:6449-6456, 2011.
163. Nicolelis, MAL. Wired-up brains will offer out of body experience. **New Scientist**, Issue 2813, pp. 26-27, 2011.
164. Lopes-dos-Santos V, Conde-Ocazonez S, Nicolelis MA, Ribeiro ST, Tort AB. Neuronal assembly detection and cell membership specification by principal component analysis. **PLoS One** 6:e20996, 2011.
165. Lebedev MA, Tate AJ, Hanson TL, Li Z, O'Doherty JE, Winans JA, Ifft PJ, Zhuang KZ, Fitzsimmons NA, Schwarz DA, Fuller AM, An JH, Nicolelis MA. Future developments in brain-machine interface research. **Clinics (Sao Paulo)** 66 Suppl 1:25-32, 2011.
166. Lebedev, MA, Nicolelis MAL. Toward a whole body neuroprosthetic. **Prog. Brain Res.** 194: 47-60, 2011.
167. Freire MA, Morya E, Faber J, Santos JR, Guimaraes JS, Lemos NA, Sameshima K, Pereira A, Ribeiro S, Nicolelis MA. Comprehensive analysis of tissue preservation and recording quality from chronic multielectrode implants. **PLoS One** 6:e27554, 2011.

168. O'Doherty JE, Lebedev MA, Ifft PJ, Zhuang KZ, Shokur S, Bleuler H, Nicolelis MAL. Active tactile exploration enabled by a brain-machine-brain interface. **Nature** 479: 228-231, 2011.
169. Li, Z, O'Doherty, JE, Lebedev, MA, Nicolelis, MAL. Adaptive decoding for brain-machine interfaces through Bayesian parameter updates. **Neural Comput.** 23: 1–43, 2011.
170. Oliveira-Maia AJ, Roberts C, Walker QD, Luo B, Kuhn C, Simon SA, Nicolelis MA. Intravascular Food Reward. **PLoS One** 6(9): e24992. doi:10.1371/journal.pone.0024992, 2011.
171. O'Doherty JE, Lebedev MA, Li Z, Nicolelis MAL. Towards a brain-machine interface: active touching using randomly patterned intracortical microstimulation. **IEEE Trans Neur Syst Rehab Eng.** 20: 85-93, 2011.
172. Zhang H, Lin SC, Nicolelis MA. A distinctive subpopulation of medial septal slow-firing neurons promote hippocampal activation and theta oscillations. **J Neurophysiol.** 106: 2749-2763, 2011.
173. Ifft PJ, Lebedev MA, Nicolelis MAL. Cortical Correlates of Fitts' Law. **Front. Integr. Neurosci.** 5: 85, 2011.
174. Oliveira-Maia AJ, de Araujo IE, Monteiro C, Workman V, Galhardo V, Nicolelis MAL. The Insular Cortex Controls Food Preferences Independently of Taste Receptor Signaling. **Front. Integr. Neurosci.** 6: 5, 2012.
175. Hanson T, Omarsson B, O'Doherty J, Peikon I, Lebedev M, Nicolelis M. High-side digitally current controlled biphasic bipolar microstimulator. **IEEE Trans Neural Syst Rehabil Eng.** 20: 331-340, 2012.
176. Hanson TL, Fuller AM, Lebedev MA, Turner DA, Nicolelis MAL. Subcortical Neuronal Ensembles: An Analysis of Motor Task Association, Tremor, Oscillations, and Synchrony in Human Patients. **J. Neurosci.** 32:8620–8632, 2012.
177. Ifft PJ, Labedev MA, Nicolelis MAL. Reprogramming movements: Extraction of motor intentions from cortical ensemble activity when movement goals change. **Front. Neuroeng.** 5:16, 2012.
178. Tandon S, Simon SA, Nicolelis MAL. Appetitive Changes Associated with Salt Deprivation are Paralleled by Widespread Neuronal Adaptations in the Nucleus Accumbens, Lateral Hypothalamus and Central Amygdala. **J. Neurophysiol.** 108: 1089–1105, 2012.
179. Nicolelis MA. Mind in Motion. **Sci. Am.** 307: 58-63, 2012.
180. Medina LE, Lebedev MA, O'Doherty JE, Nicolelis MAL. Stochastic Facilitation of Artificial Tactile Sensation in Primates. **J. Neurosci.** 32: 14271-14275, 2012.
181. Thomson EE, Carra R, Nicolelis MAL. Perceiving Invisible Light through a Somatosensory Cortical Prosthesis. **Nat. Commun.** 10.1038/ncomms2497, 2013.

- 182.** Vieira M, Lebedev MA, Nicolelis MAL. Top-down Modulation in Cortico-Thalamo-Cortical Loops during Active Tactile Discrimination. **J. Neurosci.** 33:4076–4093, 2013.
- 183.** Vieira M, Lebedev MA, Kunicki C, Wang J, Nicolelis MAL. A brain-to-brain interface for real-time sharing of sensorimotor information. **Sci. Rep.** 3:1319, doi:10.1038/srep01319, 2013.
- 184.** Dzirasa K, Kumar S, Sachs B, Caron MG, Nicolelis MAL. Cortical-amygdalar circuit dysfunction in a genetic mouse model of serotonin deficiency. **J. Neurosci.** 33: 4505-4513, 2013.
- 185.** Shokur S, O’Doherty J.E., Winans J.A., Bleuler H., Lebedev M.A., Nicolelis M.A.L. Expanding the primate body schema in sensorimotor cortex by virtual touches of an avatar. **Proc. Natl. Acad. Sci.** 110: 15121-6, doi: 10.1073/pnas.1308459110, 2013.
- 186.** Ifft P, Shokur S, Li Z, Lebedev MA, Nicolelis MAL. A Brain-Machine Interface Enables Bimanual Arm Movements in Monkeys. **Sci. Transl. Med.** 5: 210, DOI:10.1126/scitranslmed.3006159, 2013.
- 187.** Yadav AP, Fuentes R, Zhang H, Vinholo T, Wang C-H, Nicolelis MAL. Chronic Spinal Cord Stimulation Protects against 6-hydroxydopamine Lesions. **Sci. Rep.** 4: 3839. doi: 10.1038/srep03839, 2014.
- 188.** Schwarz D, Lebedev MA, Tate A, Hanson T, Lehew G, Meloy J, Dimitrov D, Nicolelis MAL. Chronic, Wireless Recordings of Large Scale Brain Activity in Freely Moving Rhesus Monkeys. **Nat. Methods.** 11: 670-676. doi:10.1038/nmeth.2936, 2014.
- 189.** Thomson EE, Lou J, Sylvester K, McDonough A, Nicolelis, MAL. Basal forebrain activity during a tactile discrimination task. **J. Neurophysiol.** 112: 1179–1191, 2014.
- 190.** Zacksenhouse M, Lebedev MA, Nicolelis MAL. Signal-Independent Timescale Analysis (SITA) and its Application for Neural Coding during Reaching and Walking. **Front. Comput. Neurosci.** doi: 10.3389/fncom.2014.00091, 2014.
- 191.** Nicolelis, M. Brain-to-Brain Interfaces: When Reality Meets Science Fiction. **Cerebrum**, September 2014.
- 192.** Santana MB, Halje P, Simplicio H, Richter U, Freire M, Petersson P, Fuentes R, Nicolelis MAL. Spinal Cord Stimulation Alleviates Motor Symptoms in a Primate Model of Parkinson's disease. **Neuron** 84: 716–722, 2014.
- 193.** Zhuang KZ, Lebedev MA, O’Doherty JE, Nicolelis MAL. Joint cross-correlation analysis reveals complex, time-dependent functional relationship between cortical neurons and arm electromyograms. . **J. Neurophysiol.** 112: 2865-2887, 2014.
- 194.** Ramakrishnan A, Ifft PJ, Pais-Vieira M, Byun YW, Zhuang KZ, Lebedev MA, Nicolelis MAL. Computing Arm Movements with a Monkey Brainet. **Sci. Rep.** doi:10.1038/srep10767, 2015.

- 195.** Pais-Vieira M, Chiuffa G, Lebedev MA, Yadav A, Nicolelis MA. Building an organic computing device with multiple interconnected brains. **Sci. Rep.** doi:10.1038/srep11869, 2015.
- 196.** Pais-Vieira M, Kunick C, Tseng P-H, Martin J, Lebedev M, Nicolelis MAL. Cortical and thalamic contributions to response dynamics across layers of the primary somatosensory cortex during tactile discrimination. **J. Neurophys.** 114: 1652–1676, 2015.
- 197.** Thomson EE, Hartmann K, Yun R, Mullen P, Canarick J, Huh A, Nicolelis MA. Embedding a novel representation of infrared light in the adult rat somatosensory cortex through a sensory neuroprosthesis. **J. Neurosci.** 36:2406 –2424, 2016.
- 198.** Rajangam S, Tseng P-H, Yin A, Lehew G, Schwarz D, Lebedev MA, Nicolelis MA. Wireless Cortical Brain-Machine Interface for Whole-Body Navigation in Primates. **Sci. Rep.** doi:10.1038/srep22170, 2016.
- 199.** Yin A, An J, Lehew G, Lebedev MA, Nicolelis MAL. An automatic experimental apparatus to study arm reaching in New World monkeys. **J. Neurosci. Methods** doi:10.1016/j.jneumeth.2016.02.017, 2016.
- 200.** Donati ARC, Shokur S, Morya E, Campos DSF, Moiola RC, Gitti CM, Augusto PB, Tripodi S, Pires CG, Pereira GA, Brasil FL, Gallo S, Lin A, Takigami AK, Aratanha MA, Joshi S, Bleuler H, Cheng G, Rudolph A, Nicolelis MAL. Long-term training with brain-machine interfaces induces partial neurological recovery in paraplegic patients. **Sci. Rep.** doi: 10.1038/srep30383, 2016.
- 201.** Pais-Vieira M, Yadav AP, Moreira D, Guggenmos D, Santos A, Lebedev MA, Nicolelis MA. A Closed Loop Brain-machine Interface for Epilepsy Control Using Dorsal Column Electrical Stimulation. **Sci. Rep.** doi:10.1038/srep32814, 2016.
- 202.** Shokur S, Gallo S, Moiola RC, Donati ARC, Morya E, Bleuler H, Nicolelis MA. Assimilation of virtual legs and perception of floor texture by complete paraplegic patients receiving artificial tactile feedback. **Sci. Rep.** doi:10.1038/srep32293,2016.
- 203.** Nicolelis, MAL. Are we at risk of becoming biological digital machines? **Nature Human Behaviour.** (In press 2016).
- 204.** Lebedev, M. and Nicolelis, M.A.L. Brain-machine interfaces: from basics science to neuroprosthetic devices, and neurorehabilitation. **Physiological Review** (In press 2017).
- 205.** Ramakrishnan A, Byun YW, Rand K, Pedersen C, Lebedev MA, Nicolelis MA. Cortical Neurons Multiplex Reward-Related Signals along with Sensory and Motor Information. (Under Review 2016).

Invited Articles, Book Chapters, and Monographs:

- 1.** Bennett-Clarke CA, Nicolelis, MAL, Jacquin MF. Barrels VI: Proceedings of a satellite symposium of the 1993 society for neuroscience meeting. *Somat Mot Res* 11: 197-204, 1994.

2. Chapin JK, Nicolelis MAL. Beyond single unit recording: characterizing neural information in networks of simultaneously recorded neurons. In: Scale in Conscious Experience. J. King and K. H. Pribram (eds), Lawrence Erlbaum Associates, New Jersey, pp 133-153, 1995.
3. Purves D, Nicolelis MAL. The somatic sensory system. In: Neuroscience. Chapter 7. D. Purves et al (eds), Sinauer Associates, 1996.
4. Purves D, Nicolelis MAL. Pain. In: Neuroscience. Chapter 8. D. Purves et al. (eds), Sinauer Associates, 1996.
5. Nicolelis MAL. Neuronal ensemble recordings in behaving primates. In: Methods for Simultaneous Neuronal Ensemble Recordings. M.A.L. Nicolelis (ed), CRC Press, Boca Raton, Chapter 7, pp. 121-156, 1998.
6. Nicolelis MAL, Stambaugh CR, Brisben A, Laubach M (1999) Methods for simultaneous multisite neural ensemble recording in behaving primates. In: Methods for Simultaneous Neuronal Ensemble Recordings. MAL Nicolelis (ed), CRC Press, Boca Raton, Chapter 7, pp. 121-156.
7. Nicolelis MAL. The role of synchronous neuronal activity in tactile perception. In: Time and the Brain. Conceptual Advances in Brain Research, R Miller, G Palm and G Shaw (eds.), Harwood Academic Publishers, 1998.
8. Ghazanfar AA, Nicolelis MAL. Spatiotemporal continuum across mammalian sensory systems. In: Time and the Brain. Conceptual advances in Brain Research. R. Miller, G. Palm, and Gordon Shaw (eds), Harwood Academic Publishers, pp. 97-130, 2000.
9. Nicolelis MAL The Somatic Sensory System. In: 2nd Edition of Neuroscience, D Purves et al (eds). Sunderland, MA, Sinauer Associates, Chapter 9, 2000.
10. Nicolelis MAL Pain. In: 2nd Edition of Neuroscience, D Purves et al (eds). Sunderland, MA, Sinauer Associates Chapter 10, 2000.
11. Chapin JK, Nicolelis MAL. Brain control of sensorimotor prostheses. In: Neural Prostheses for Restoration of Sensory and Motor Function. J.K. Chapin and K.A. Moxon (eds), CRC Press, Boca Raton, pp. 235-262, 2001.
12. Moxon KA, Morizio J, Chapin JK. Nicolelis MAL, Wolf PD. Designing a brain-machine interface for neuroprosthetic control. In: Neural Prostheses for Restoration of Sensory and Motor Function. J.K. Chapin and K.A. Moxon (eds), CRC Press, Boca Raton, pp. 179-220, 2001.
13. Nicolelis MAL, Fanselow EE. Neuronal Mechanisms for Immediate Plasticity. In: The Mutable Brain. Dynamic and Plastic Features of the Developing and Mature brain. Sensory Plasticity. JH Kaas (ed), Harwood Academic Publishers, pp. 93-122, 2001.

14. Katz DB, Simon SA, Nicolelis MAL. Electrophysiological studies of gustation in awake rats. In: *Methods in Chemosensory*. SA Simon and MAL Nicolelis (eds), CRC Press, Boca Raton pp.339-357, 2002.
15. Nicolelis MAL, Fanselow EE, Shuler M, Henriquez C. A critique of the pure feedforward model of touch. In: *The Somatosensory System: Deciphering the Brain's Own Body Image*. R.J. Nelson (ed), CRC Press, Boca Raton, 2001.
16. Nicolelis MAL, Srinivasan MA. Human-machine interaction: potential impact of nanotechnology in the design of neuroprosthetic devices aimed at restoring or augmenting human performance. In: *Converging Technologies for Improving Human Performance*. MC Roco and WS Bainbridgem (ed) Kluwer Academic Publishers, Boston, pp. 251-255, 2003.
17. Ribeiro S, Gervasoni D, Nicolelis MAL. Neuronal reverberation and the consolidation of new memories across the wake-sleep cycle. In: *Sleep: Circuits and Function*. P. Luppi (ed), CRC Press, Boca Raton, Chapter 12, pp.201, 2004.
18. Turner DA, Dimitrov D, Nicolelis MAL. Pre-ictal seizure detection and demand treatment strategies for epilepsy. In: *Modern Neurosurgery: Clinical Translation of Neuroscience Advances*. D. Turner (ed), CRC Press, Boca Raton, Chapter 6, pp. 105, 2004.
19. Carmena JM, Nicolelis, MAL. Advance in Brain-Machine Interfaces. In: *Motor Cortex in Voluntary Movements*. A Riehle, E.Vaadia (eds), CRC Press, Boca Raton, Chapter 13, pp. 349, 2004.
20. Wiest, MC, Thomson E, Nicolelis MAL. Twenty Five Years of Multi-Electrode Recordings in the Somatosensory System: It is all about Dynamics. In: *The Senses: A Comprehensive Reference*. (eds-Basbaum A et al) Academic Press, San Diego CA, 2007.

Books and Special Journal Issues

1. Bohm GM, Massad E, Nicolelis MAL, Sameshima K (eds) *Medical Informatics*. Atheneu Ed, 1989 (Portuguese).
2. Nicolelis MAL (ed) *Methods for Simultaneous Neuronal Ensemble Recordings*. CRC Press Inc, Boca Raton FL, 1998.
3. Nicolelis MAL, De Schutter E (ed) *Methods for Recording and Analyzing Neuronal Ensemble Activity* (special issue). *J Neurosci Methods* (special issue) 94, 1-154, 1999.
4. Nicolelis MAL (ed) *Advances in Neural Population Coding*. *Progress in Brain Research*. Elsevier, Amsterdam, Holland, vol. 130, 2001.
5. Simon SA, Nicolelis MAL (eds) *Methods in Chemosensory Research*. CRC Press Inc, Boca Raton FL, 2002.

6. Simon SA, Nicolelis MAL (eds) *Frontiers in Neuroengineering Series*. Taylor & Francis Group, Boca Raton FL, 2007.
7. Simon SA, Nicolelis MAL (eds) *Frontiers in Neuroscience Series*. Taylor & Francis Group, Boca Raton FL, 2007.
8. Nicolelis MAL (ed) *Methods for Neural Ensemble Recording*, 2nd edition, Taylor & Francis, Boca Raton FL, 2007.
9. Nicolelis MAL. *Beyond Boundaries: The New Neuroscience of Connecting Brains and Machines and How It Will Change Our Lives*. Times Books/Henry Holt & Co, New York, NY. In Print January 2011.

Abstracts Presented at International Meetings

1. Nicolelis MAL, Baccala LA, Tinone G, Yu CH. Mathematical approach to bacterial sensitivity rhythm patterns. V Medical Informatics Congress (MEDINFO), Washington, USA 1986.
2. Gutierrez MA, Furuie SS, Nicolelis MAL, Lage SG. Developing a multi-purpose microcomputer-based system for biological signal analysis for cardiovascular protocols. XIV Computers in Cardiology, Leuven, Belgium, 1987.
3. Lage SG, Gutierrez MA, Nicolelis MAL, Furuie SS. A bedside computerized system for monitoring and processing biological signals at intensive care units. XIV Computers in Cardiology, Leuven, Belgium, 1987.
4. Nicolelis MAL, Sameshima K, Furuie SS, Gutierrez MA. A signal processing system to analyze the neural control on the cardiovascular function. VII International Congress Medical Informatics Europe, Rome, Italy, 1987.
5. Nicolelis MAL, Yu CH. Application of a microcomputer-based system for the detection of drug-resistance dissemination in a large hospital. International Conference on Informatics for Health, Havana, Cuba, 1988.
6. Yu, CH, Nicolelis MAL. Use of a microcomputer-based database in the management of infection data in a large hospital. International Conference on Informatics for Health, Havana, Cuba, 1988.
7. Yenaga C, Nicolelis MAL, Oliveira LMO, Martins MA. Surveillance of risk factors for patients with nosocomial infection in emergency units. International Conference on Informatics for Health, Havana, Cuba, 1988.
8. Sameshima K, Nicolelis MAL, Gutierrez MA, Furuie SS. A multipurpose signal processing system. International Conference on Informatics for Health, Havana, Cuba, 1988.
9. Tinone G, Nicolelis MAL, Van de Bilt MT, Sameshima K. Studying neural pathways with the Connection system. International Conference on Informatics for Health, Havana, Cuba, 1988.

10. Baccala LA, Nicolelis MAL. Use of microcomputers in the analysis of rhythmic bacterial sensitivity patterns in a large hospital. International Conference on Informatics for Health, Havana, Cuba, 1988.
11. Sameshima K, Nicolelis MAL, de Luccia N, Gutierrez MA. Microcomputer-based software to analyze on-line gait parameters. International Conference on Informatics for Health, Havana, Cuba, 1988.
12. Correa M, Nicolelis MAL. The surgical patient data system. International Conference on Informatics for Health, Havana, Cuba, 1988.
13. Lage S, Gutierrez MA, Nicolelis MAL, Furuie SS. Using a multi-purpose system for bedside patient monitoring at an intensive care unit. International Conference on Informatics for Health, Havana, Cuba, 1988.
14. Nicolelis MAL, Younes RN. Dissociation of left and right ventricle heart beats during severe hemorrhagic shock in dogs. XI Annual Conference on Shock, Fontana, Wisconsin, 1988.
15. 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. XII Symposium on Computer Applications in Medical Care, Washington, 1988.
16. Nicolelis MAL, Yu CH, Baccala LA. Connectionist analysis of the neural pathways involved in the control of the cardiovascular function in cats and rats. Soc Neurosci Abst 15: 592, 1989.
17. Chapin JK, Nicolelis MAL, Yu CH, Sollot S. Characterization of ensemble properties of simultaneously recorded neurons in the somatosensory (SI) Cortex. Soc Neurosci Abst 15:312, 1989.
18. Nicolelis MAL, Lin CS, Chapin JK. Neonatal whisker removal preserves a normally transient projection from the medial geniculate to the somatosensory cortex in rats. American Association of Anatomists. 226(4): 72A, 1990.
19. Lin CS, Nicolelis MAL, Chapin JK. A major direct GABAergic projection from zona incerta to the neocortex in rat. American Association of Anatomists. 226(4): 58A, 1990.
20. Nicolelis MAL, Lin C-S, Chapin JK. Effects of early whisker removal on the development of the projections from zona incerta to the neocortex. Soc Neurosci Abst 16: 1215, 1990.
21. Lin C-S, Nicolelis MAL, Chapin JK, Kaas JH. Functional characteristics of a direct GABAergic pathway from zona incerta to neocortex in rodents and primates. Soc Neurosci Abst 16: 1133, 1990.
22. Utz JP, Nicolelis MAL, Chapin JK. Emergent properties revealed in multi-layer neuronal network models: feedforward vs. feedback inhibition. Soc Neurosci Abst 16: 1082, 1990.
23. Fisher TM, Nicolelis MAL, Chapin JK. Chaotic dimensionality of cortical neuronal discharge patterns is altered by anesthetic state. Soc Neurosci Abst 16: 1082, 1990.

24. Lin RCS, Nicolelis MAL, McLean J, Chapin JK. The topographic organization of the rat zona incerta. Soc Neurosci Abst 17: 1991.
25. Nicolelis MAL, Lin RCS, Chapin JK. Applying multi-single unit recording techniques to the study of plasticity at multiple levels of the rat trigeminal pathway. Soc Neurosci Abst 17: 1991.
26. Fisher T, Gupta A, Nicolelis MAL, Chapin J. Modeling the circuit characteristics which may underlie oscillatory properties of thalamocortical networks. Soc Neurosci Abst 17: 1991.
27. Jaslow R, Nicolelis MAL, Lin RCS, Chapin JK, Waterhouse BD. Projections from the nucleus paragigantocellularis in the ventrolateral medulla to the neocortex: A double-labellin study in the rat. Soc Neurosci Abst 17: 1991.
28. Kirifides ML, Nicolelis MAL, Lin RCS, Waterhouse BD. Topographic organization of projections from the rat dorsal raphe to the principal nucleus of V, VPM thalamus and barrelfield cortex. Soc Neurosci Abst 17: 1991.
29. Nicolelis MAL, Gupta A, Lin RCS, Chapin JK. Multi-single unit recording at multiple levels of the trigeminal pathway in the awake rat. Third IBRO World Congress of Neuroscience 1991.
30. Nicolelis MAL, Lin RCS, Chapin JK. The connectivity and physiology of the rat zona incerta. Third IBRO World Congress of Neuroscience 1991.
31. Baccala LA, Nicolelis MAL, Chapin JK. Multivariate statistical techniques allow characterization of distributed population codes in simultaneously recorded neuronal ensembles. Soc Neurosci Abst 18: 1992.
32. Nicolelis MAL, Lin RCS, Chapin JK. Distributed processing of somatic information by networks of thalamic cells induces time-dependent shifts of their receptive fields. Soc Neurosci Abst 18: 1992.
33. Gupta A, Nicolelis MAL, Chapin JK. Somatosensory stimulation suppress 8-12 Hz oscillations in the ventral posterior complex of awake rats as predicted by a computer model. Soc Neurosci Abst 18: 1992.
34. Fisher TM, Nicolelis MAL, Chapin JK. Sensory and oscillatory properties of simultaneously recorded multi-single units in the thalamic reticular nucleus of the rat. Soc Neurosci Abst 18: 1992.
35. Nicolelis MAL, Lin CS, Chapin JK. Chronic, simultaneous recordings of ensembles of single neurons across all levels of the trigeminal pathway in awake rats. Observing the functional dynamics of a sensory pathway at work. Soc Neurosci Abst 19: 1993.
36. Baccala LA, Nicolelis MAL, Chapin JK. Quantifying the connectivity properties underlying the dynamics of the rodent trigeminal network. Soc Neurosci Abst 19: 1993.

37. Lin RCS, Nicolelis MAL, Diamond ME, Chapin JK. Developmental plasticity in the rodent VPM thalamus resembles long-term thalamic reorganization observed in adult primates. Soc Neurosci Abst 19: 1993.
38. Nicolelis MAL, Lin RCS, Chapin J.K. Neonatal impairment of active whisker movements disrupts the spatiotemporal organization of receptive fields in the rat somatosensory thalamus. Soc Neurosci Abst 20: 1994
39. Chapin JK, Nicolelis MAL. Decoding sensorimotor population codes using discriminant and canonical correlation analysis. Soc Neurosci Abst 20: 1994.
40. Kennedy MC, Smith SS, Nicolelis MAL, Chapin JK. Estradiol alters sensory processing in whisker responsive cells of principal trigeminal (PrV) and rostral dorsal accessory olivary (rDAO) nuclei of the rat. Soc Neurosci Abst 20: 1994.
41. Nicolelis MAL, Carswell B, Oliveira LMO, Ghazanfar AA, Votaw S, Chapin JK, Lin RCC, Nelson RJ, Kaas JH. Chronic and simultaneous recordings of neuronal ensembles across multiple cortical areas in behaving primates. NINDS Neuroprosthesis Meeting, 1995.
42. Ghazanfar AA, Faggin B, Nicolelis MAL. Distributed processing of tactile information by multiple cortical areas in the rat. Soc Neurosci Abst 21: 122, 1995.
43. Baccala LA, Chapin JK, Nicolelis MAL. Neonatal whisker removal alters encoding of tactile information in the rat VPM thalamus. Soc Neurosci Abst 21: 1995.
44. Casal S, Carswell B, Oliveira LM, Nicolelis MAL. Beyond the barrels: the anatomical and functional organization of corticofugal projections in the rat somatosensory system. Soc Neurosci Abst 21: 1995.
45. Faggin B, Nguyen KT, Nicolelis MAL. Immediate and simultaneous reorganization in the brainstem, thalamus, and cortex induced by peripheral deprivation. Soc Neurosci Abst 22: 1996.
46. Ghazanfar AA, Oliveira LMO, Votaw VS, Nicolelis MAL. Spatiotemporal representation of multi-whisker stimuli in the thalamocortical loop. Soc Neurosci Abst 22: 1996.
47. Nicolelis MAL et al. Long-term simultaneous recordings of neuronal ensembles across multiple cortical areas in behaving primates. Soc Neurosci Abst 22: 2023, 1996.
48. Chapin JK, Moxon K, Nicolelis MAL. Neural population activity in sensorimotor cortex can control an external "arm" movement system. Soc Neurosci Abst 23: 1400, 1997.
49. Fanselow E E, Nicolelis MAL. Behavioral modification of tactile responses in the rat thalamocortical loop. Soc Neurosci Abst 23: 1798, 1997.
50. Ghazanfar AA, Katz DJ, Nicolelis MAL. Tactile processing by thalamic neural ensembles: the role of cortical feedback. Soc Neurosci Abst 23: 1797, 1997.

51. Oliveira LMO, Shuler MG, Casal SG, Nicolelis MAL. Effects of neonatal unilateral facial nerve cut on tactile responses in adult rat SI cortex. Soc Neurosci Abst 23: 1798, 1997.
52. Krupa DJ, Ghazanfar AA, Nicolelis MAL. Role of SI Cortex in receptive field reorganization in VPM thalamus following peripheral deafferentation. Society for Neuroscience, New Orleans, LA, Soc Neurosci Abst 23: 1798, 1997.
53. Nicolelis MAL, Oliveira LMO, Ghazanfar AA, Shuler MG, Chapin J.K, Nelson RJ, Kaas JH. Neural ensemble encoding of tactile information by multiple cortical areas in primates. Soc Neurosci Abst 23: 1010, 1997
54. Beck PDF, Nicolelis MAL. Corticothalamic projections of somatosensory and motor cortical areas in rats. Soc Neurosci Abst 24: 131, 1998.
55. Brisben AJH, Srinivasan MA, Nicolelis MAL. Investigating neural ensemble processing of kinematics in owl monkeys performing sensorimotor tasks. Society for Neuroscience, Vol. 1, Soc Neurosci Abst 24: 132, 1998.
56. Chapin JK, Moxon KA, Nicolelis MAL. Robotic control from realtime transformation of multi-neuronal population vectors. Soc Neurosci Abst 24: 658, 1998.
57. Faselow EE, Katz DB, Nicolelis MAL. Behavioral modulation of responses to whisker stimulation in the awake, restrained rat. Soc Neurosci Abst 24: 131, 1998.
58. Ghazanfar AA, Stambaugh CR, Nicolelis MAL. Coding of tactile information by cortical and thalamic ensembles. Soc Neurosci Abst 24: 132, 1998.
59. Katz DB, Simon SA, Nicolelis MAL. Chronic, multisite, many single-unit recordings from the gustatory system during tastant self-administration by restrained rats. , Society for Neuroscience, Vol. 1, Soc Neurosci Abst 24: 132, 1998.
60. Krupa DJ, Brisben AJ, Katz DB, Nicolelis MAL. Role of SI cortex in thalamic processing of complex somatosensory stimuli. Soc Neurosci Abst 24: 132, 1998.
61. Laubach M, Nicolelis MAL. Interactions between sensorimotor cortical and thalamic neuronal ensembles are altered during the acquisition of a reaction-time task. Soc Neurosci Abst 24: 132, 1998.
62. Nicolelis MAL, Stambaugh CR, Laubach M, Chapin J, Kaas JH. Simultaneous encoding of tactile information by neural ensembles located in different primate cortical areas. Soc Neurosci Abst 24: 132, 1998.
63. Shuler MG, Nicolelis MAL. Ipsilaterally evoked responses in the rat barrel cortex are removed by muscimol inactivation of the opposite hemisphere. Soc Neurosci Abst 24: 131, 1998.

64. Stambaugh CR, Nicolelis MAL. Using multilayer artificial neural networks to classify spatiotemporal patterns of neural ensemble firing in primates and rodents. Soc Neurosci Abst 24: 131, 1998.
65. Jain N, Qi H-X, Strata F, Shuler M, Nicolelis MAL, Kaas J. Correlated action potentials between large numbers of single neurons and neuron clusters recorded simultaneously with chronically implanted microwires in somatosensory cortex of monkey. Soc Neurosci Abst 24: 134, 1999.
66. Farnag E, Stambaugh CR, Henriquez C, Laubach M, Oliveira L, Nicolelis MAL. Integrated analysis platform for neural ensemble data analysis. Soc Neurosci Abst 25: 151, 1999.
67. Shuler M, Stambaugh CR, Nicolelis MAL. Neuronal ensemble synchrony analysis (NESA): a new method of analyzing population recordings based on synchrony of firing times. Soc Neurosci Abst 25: 151, 1999.
68. Krupa D, Matell M, Brisben A, Oliveira L, Laubach M, Nicolelis MAL. Ensemble neuronal activity in freely behaving rats performing a learned whisker dependent discrimination task. Soc Neurosci Abst 25: 152, 1999.
69. Fanselow EE, Reid A, Nicolelis MAL. Trigeminal nerve stimulation as a method for reduction of PTZ-induced seizure activity in rats. Soc Neurosci Abst 25: 1115, 1999.
70. Matell M, Meck W, Nicolelis MAL. Potential coding of temporal intervals by striatal neurons. Soc Neurosci Abst 25: 1385, 1999.
71. Nicolelis MAL, Laubach M, Stambaugh CR, Beck PD. Spatiotemporal interactions between primate motor and premotor cortex during performance of an arm-movement task. Soc Neurosci Abst 25:1661, 1999.
72. Laubach M, Stambaugh CR, Beck PD, Nicolelis MAL. Emergent properties of neuronal ensembles in motor and premotor cortices of rats and monkeys: effects of motor learning. Soc Neurosci Abst 25:1662, 1999.
73. Stambaugh CR, Beck PD, Laubach M, Nicolelis MAL. Differential alterations in primate motor and premotor cortices during the learning of a visuomotor task. Soc Neurosci Abst 25: 1662, 1999.
74. Beck PD, Laubach M, Stambaugh CR, Nicolelis MAL. Changes in activity of neural ensembles in primate motor and premotor cortex during the initial acquisition of a visuomotor task. Soc Neurosci Abst 25: 1662, 1999.
75. Ghazanfar AA, Stambaugh CR, Nicolelis MAL. Putative coding strategies of somatosensory cortical and thalamic ensembles in the rat. Soc Neurosci Abst 25: 1686, 1999.
76. Katz D, Simon S, Nicolelis MAL. Neural ensemble activity in the rat gustatory cortex during learning of a taste preference task. Soc Neurosci Abst 25: 2184, 1999.

77. Cohen D, Matell M, Meck W, Nicolelis MAL. Role of the medial dorsal prefrontal cortex in a time perception task. Soc Neurosci Abst 26: 977, 2000.
78. Shuler M, Krupa D, Nicolelis, MAL. Discrimination of bilateral whisker stimuli in the freely behaving rat. Soc Neurosci Abst 26: 980, 2000.
79. Wessberg J, Beck PD, Stambaugh C, Kralik M, Laubach M, Chapin J, Nicolelis MAL. Prediction of hand position by neuronal ensembles in primate motor, premotor, and parietal cortex during an arm-movement task. Soc Neurosci Abst 26: 1227, 2000.
80. Kralik J, Wessberg J, Beck, P, Stambaugh C, Laubach M, Nicolelis MAL. Chronic cortical ensemble recordings from primate cortex during performance of a free arm reaching task. Soc Neurosci Abst 26: 1227, 2000.
81. Laubach M, Wessberg J, Kralik J, Beck P, Nicolelis MAL. Functional interactions between primary motor, dorsal premotor and posterior parietal cortices during arm movements. Soc Neurosci Abst 26: 1227, 2000.
82. Nicolelis MAL, Obeid I, Morizio J, Wolf P. Towards wireless multi-electrode recordings in freely behaving animals. Soc Neurosci Abst 26: 1228, 2000.
83. Faselow EE, Nicolelis MAL. A method for exploring the role of corticofugal projections in modulating behaviorally mediated sensory gating of somatosensory. Soc Neurosci Abst 26: 1465, 2000.
84. Krupa D, Nicolelis MAL. Integrative properties of the trigeminal system in rats performing tactile discriminations. Soc Neurosci Abst 26: 1465, 2000.
85. Katz DB, Simon SA, Nicolelis MAL. Population coding in the rat gustatory cortex. Soc Neurosci Abst 26: 1974, 2000.
86. Shuler MG, Bentley NB, Laubach M, Nicolelis MAL. The effects of redundancy and synergy on multi-neuronal representational capacity. Soc Neurosci Abst 27: 49.17, 2001.
87. Laubach M, Wessberg J, Nicolelis MAL. Ensembles of neurons in the rat sensorimotor cortex simultaneously encode information about multiple behavioral parameters. Soc Neurosci Abst 27: 63.7, 2001.
88. Beck, PD, Laubach M, Kralik J, Wessberg J, Nicolelis MAL. Changes in patterns of neuronal ensemble activity in posterior parietal cortex during motor learning. Soc Neurosci Abst 27: 63.8, 2001.
89. Wessberg J, Crist RE, Nicolelis, MAL. Algorithms for sensory feedback and real-time control of a robotic device based on cortical ensemble recordings from primate cortex. Soc Neurosci Abst 27: 63.9, 2001.

- 90.** Nicolelis MAL, Wessberg J, Kralik J, Beck PD. Time-dependent variability in single unit contributions to real-time arm positions predictions from neuronal ensemble recordings in the primate cortex. Soc Neurosci Abst 27: 63.10, 2001.
- 91.** Kralik J, Laubach M, Beck PD, Wessberg J, Daymont M, Phelps E, Nicolelis MAL. Arm movement direction is coded in the interactions between neurons in multiple cortical areas of the monkey. Soc Neurosci Abst 27: 63.11, 2001.
- 92.** Dimitrov DF, Kralik J, Mohr SW, Margraf RR, Nicolelis MAL. Neurosurgical advances in the implantation of chronic multielectrode arrays in the new world primate cortex. Soc Neurosci Abst 27: 63.12, 2001.
- 93.** Katz DB, Simon SA, Nicolelis MAL. Interactive processing of tastants in gustatory cortex (GC) of awake rats. Soc Neurosci Abst 27: 288.3, 2001.
- 94.** Oliveira LM, Katz DB, Nicolelis MAL. Temporal aspects of gustatory coding obtained from cortical ensembles in awake rats. Soc Neurosci Abst 27: 288.4, 2001.
- 95.** Crist RE, Ribeiro S, Gervasoni D, Shuler MG, Nicolelis MAL. Experience-dependent ZIF-268 up regulation within the whisker barrel field during REM sleep. Soc Neurosci Abst 27: 394.10, 2001.
- 96.** Fanselow EE, Sameshima K, Baccala LA, Nicolelis MAL. Integration of bilateral tactile stimuli in the rat trigeminal somatosensory system. Soc Neurosci Abst 27: 395.14, 2001.
- 97.** Cohen D, Nicolelis MAL. Chronic recording of neuronal activity in rat motor cortex during learning of a motor task. Soc Neurosci Abst 27: 931.10, 2001.
- 98.** Gervasoni D, Ribeiro S, Pantoja J, Crist RE, Krupa D, Nicolelis MAL. Brain activity as a function of learning: gene expression and ensemble recordings during acquisition of a tactile discrimination task. Soc Neurosci Abst 28: 257.2, 2002.
- 99.** Wiest MC, Bentley NM, Nicolelis MAL. Multiple individual whisker stimulation in behaving rats. Soc Neurosci Abst 28: 257.3, 2002.
- 100.** Krupa D, Laubach M, Nicolelis MAL. Somatosensory processing in different layers in rat barrel cortex. Soc Neurosci Abst 28: 257.4, 2002.
- 101.** Pantoja J, Ribeiro S, Krupa D, Gervasoni D, Volchan E, Nicolelis MAL. Thalamocortical activity during performance of a whisker-based tactile discrimination task in rats. Soc Neurosci Abst 28: 25.5, 2002.
- 102.** Ribeiro S, Gervasoni D, Crist RE, Soares E, Carmena J, Zhou, J, Pantoja J, Krupa D, Nicolelis MAL. Effects of experience on brain activity during wakefulness and sleep in rats. Soc Neurosci Abst 28: 321.6, 2002.

- 103.** Crist R, Carmena J, Wessberg J, Nicolelis MAL. Sensory feedback for real-time control of a robotic device based on cortical ensemble recordings from the cortex of rhesus macaques. Soc Neurosci Abst: 357.10, 2002.
- 104.** Kralik J, Phelps E, Sengupta S, Illick W, Santucci D, Laubach M, Nicolelis MAL. Information about arm movement direction, load, visual feedback and the goal of the reach are widely distributed in multiple cortical areas in the primate. Soc Neurosci Abst 28: 357.11, 2002.
- 105.** Santucci D, Kralik J, Nicolelis, MAL. Prediction of multi-muscle EMG activity from neural activity in primate motor, premotor and posterior parietal cortices. Soc Neurosci Abst 28: 357.12, 2002.
- 106.** Cohen D, Nicolelis MAL. Neural activity recording in rat motor cortex during the learning of a motor discrimination task. Soc Neurosci Abst 28: 357.13, 2002.
- 107.** Obeid, I, Nicolelis MAL, Wolf PD. A multichannel neural telemetry system. Soc Neurosci Abst 28: 405.17, 2002.
- 108.** Lehew, GC, Krupa DJ, Oliveira LM, Morizio JC, Wolf PD, Obeid I, Nicolelis MAL. A compact high density multi-electrode array for long-term chronic recordings of large ensembles of single unit neuronal activity. Soc Neurosci Abst 28: 450.5, 2002.
- 109.** Cohen D, Nicolelis MAL. Formation of movement representation in rat primary motor cortex during procedural learning. *6th Learning and Memory Meeting Abstracts*, Cold Spring Harbor Laboratory, NY, USA, 2003.
- 110.** Costa RM, Cohen D, Nicolelis MAL. Chronic differential recording of neuronal activity in awake mice. *6th Learning and Memory Meeting Abstracts*, Cold Spring Harbor Laboratory, NY, USA, 2003.
- 111.** Oliveira L, Wiest MC, Krupa DJ, Nicolelis MAL. Integration of bilateral whisker stimuli in primary somatosensory cortex of awake rats. Soc Neurosci Abst 29: 59.13, 2003.
- 112.** Krupa DJ, Wiest WC, Nicolelis MAL. Mechanisms of tactile processing different layers of rat barrel cortex are dependent on behavioral state. Soc Neurosci Abst 29: 59.14, 2003.
- 113.** Wiest MC, Nicolelis MAL. Behavioral detection of tactile stimuli during 7-12 Hz cortical oscillations in awake rats. Soc Neurosci Abst 29: 59. 15, 2003.
- 114.** Nicolelis MAL, Dimitrov, D, Carmena J, Crist RE, Lehew G, Kralik JD, Wise SP. Chronic multi-site, multi-electrode recording in macaque monkeys. Soc Neurosci Abst 29: 279.20, 2003.
- 115.** Carmena, J, Lebedev M, O'Doherty J, Henriquez C, Nicolelis MAL. Fronto-parietal reorganization underlies incorporation of robot dynamics by the primate cortex during operation of a reaching and grasping brain-machine interface. Soc Neurosci Abst 29: 279.21, 2003.
- 116.** Lebedev M, Carmena J, Nicolelis MAL. Directional tuning of frontal and parietal neurons during operation of brain-machine interface. Soc Neurosci Abst 29: 279, 22, 2003.

- 117.** Santucci D, Kralik J, Carmena J, Lebedev Nicoelis MAL. EMG prediction from multisite, multielectrode recordings in new world monkeys and Rhesus macaques. Soc Neurosci Abst 29: 279.23, 2003.
- 118.** Sandler A, Kralik J, Shanklin K, Phelps E, Nicoelis MAL. Neuronal correlates of primate somatosensorimotor learning. Soc Neurosci Abst 29: 279.24, 2003.
- 119.** Soares E, Stapleton J, Oliveira L, Nicoelis MAL, Simon SA. Trigeminal input can rapidly alter gustatory responses to taste. Soc Neurosci Abst 29: 594.5, 2003.
- 120.** Cohen D, Costa R, Nicoelis MAL Modulation of neural activity in the mouse striatum during rotarod practice. Soc Neurosci Abst 29: 621.1, 2003.
- 121.** Costa R, Cohen D, Nicoelis MAL (2003) Neuronal Ensemble Recordings in mouse models of Huntington's disease. Soc Neurosci Abst 29: 621.2, 2003.
- 122.** Gervasoni D, Ribeiro S, Lin S-C, Soares E, Pantoja J, Nicoelis MAL. Brain states transitions require distinct neuronal recruitment within forebrain neural ensembles. Soc Neurosci Abst 29: 834.8, 2003.
- 123.** Ribeiro S, Gervasoni D, Soares E, Zhou Y, Lin S-C, Pantoja J, Nicoelis, MAL. Experience-dependent neuronal network reverberation and the role of sleep in memory consolidation. Soc Neurosci Abst 29: 834.9, 2003.
- 124.** Lin S, Gervasoni D, Ribeiro S, Nicoelis MAL. A novel framework to describe wake-sleep states and their transitions based on local field potential (LFP) oscillatory features. Soc Neurosci Abst 29: 834.10, 2003.
- 125.** Pantoja J, Ribeiro S, Gervasoni D, Wiest W, Nicoelis MAL. Effects of reward expectation on the neuronal activity of primary sensory cortex and thalamus during a tactile discrimination task. Soc Neurosci Abst 29: 939.17, 2003.
- 126.** Coelho M, Gutierrez RM, Costa R, Gainetdinov R, Caron M, Simon S, Nicoelis MAL. Alterations in voluntary licking behavior in hyperdopaminergic mice. Soc Neurosci Abst 30: 179.11, 2004.
- 127.** Wiest M, Soares E, Simon S, Nicoelis MAL. Stimulus-related desynchronization of bilateral 7-12 oscillations in gustatory cortex of awake rats. Soc Neurosci Abst 30: 179.12, 2004.
- 128.** Gutierrez R, Carmena J, Nicoelis MAL, Simon S. Orbitofrontal neuronal activity can predict the initiation of a goal-directed behavior involving licking for a reward. Soc Neurosci Abst. 30: 179.13, 2004.
- 129.** MacDonald C, Meck W, Nicoelis MAL, Simon S. Neurons in orbitofrontal cortex encode for multiple features in a taste discrimination task. Soc Neurosci Abst 30: 179.14, 2004.

- 130.** Cohen D, Costa R, Nicolelis MAL. Differential plasticity in the mouse striatum and motor cortex during fast and slow motor skill learning. Soc Neurosci Abst 30: 183.11, 2004.
- 131.** Zacksenhouse M, Lebedev M, O'Doherty J, Carmena J, Henriquez C, Nicolelis MAL. Cortical neurons tuning to multiple spatiotemporal patterns of movement. Soc Neurosci Abst 30: 190.11, 2004.
- 132.** Wolf P, Callender S., Rizk M, Nicolelis MAL. A 32 channel digitizing headstage for neural recording in behaving animals. Soc Neurosci Abst 30: 241.4, 2004.
- 133.** Patil P, Carmena J, Nicolelis MAL, Turner D. Ensemble recordings of human subcortical neurons as a source of motor control signals for a brain-machine interface. Soc Neurosci Abst 30: 263.10, 2004
- 134.** Lin S, Gervasoni D, Ribeiro S, Nicolelis MAL. Basal forebrain control of cortical activation. Soc Neurosci Abst 30: 324.7, 2004.
- 135.** Gervasoni D, Lin S, Ribeiro S, Nicolelis MAL. State-dependent neuronal recruitment within forebrain neural ensembles during the wake-sleep cycle. Soc Neurosci Abst 30: 324.8, 2004.
- 136.** Pereira A, Ribeiro S, Lin S, Fanselow E, Nicolelis MAL. State-dependent tactile responses in the hippocampus of wake and behaving rats. Soc Neurosci Abst 30: 324.9, 2004.
- 137.** Ribeiro S, Pereira A, Gao Z, Lin S, Gervasoni D, Marriott P, Lavine M, Nicolelis MAL. REM sleep is a noisy mode of offline neuronal processing. Soc Neurosci Abst 30: 324.10, 2004.
- 138.** Engelhard M, Ribeiro S, Shi X, Zhou Y, Lin S, Gervasoni D, Nicolelis MAL. Brief novel sensory experience induces long-lasting changes in cortical neuronal firing rates during slow-wave sleep. Soc Neurosci Abst 30: 324.11, 2004.
- 139.** Shi X, Ribeiro S, Engelhard M, Zhou Y, Lin S, Gervasoni D, Nicolelis MAL. Experience-dependent zif-268 expression in the sensory cortex across slow-wave, intermediate, and rapid-eye-movement sleep. Soc Neurosci Abst 30: 324.12, 2004.
- 140.** Pantoja J, Ribeiro S, Wiest M, Soares E, Gervasoni D, Nicolelis MAL. Reward modulates post-stimulus reverberation in the primary sensory thalamo-cortical loop. Soc Neurosci Abst 30: 324.13, 2004.
- 141.** Zhang H, Ribeiro S, Lin S, Gervasoni D, Nicolelis MAL. Influence of local administration of scopolamine on hippocampal local field potentials and neuronal activity in freely behaving rats. Soc Neurosci Abst 30: 324.14, 2004.
- 142.** Santos L, Carmena J, Oliveira L, Ribeiro S, Nicolelis MAL. Neuronal ensemble activity in the primary motor cortex (M1) predicts multiple muscular movements in the rat. Soc Neurosci Abst 30: 324.15, 2004.

- 143.** Stapleton J, Nicolelis MAL, Simon S. Rapid gustatory and somatosensory neural responses in rats engaged in a brief access taste task. *Soc Neurosci Abst* 30: 413.19, 2004.
- 144.** Won D, O'Doherty J, Carmena J, Phelps E, Nicolelis MAL, Henriquez C, Wolf P. A comparison of linear predictor performance using unsorted and sorted neural spike activity. *Soc Neurosci Abst* 30: 421.18, 2004.
- 145.** Costa R, Sotnikova T, Gainetdinov R, Cyr M, Caron M, Nicolelis MAL. *In vivo* assessment of corticostriatal neuronal activity during dopamine-related hyperactivity and akinesia in DAT-KO mice. *Soc Neurosci Abst* 30: 561.14, 2004.
- 146.** Krupa D, Nicolelis MAL. Psychophysical analysis of unilateral and bilateral whisker stimulation in rat trigeminal somatosensory system. *Soc Neurosci Abst* 30: 641.13, 2004.
- 147.** Lebedev M, O'Doherty J, Zacksenhouse M, Carmena J, Henriquez C, Nicolelis MAL. Directional tuning in neuronal ensembles. *Soc Neurosci Abst* 30: 884.5, 2004.
- 148.** O'Doherty J, Hugh G, Zacksenhouse M, Lebedev M, Carmena J, Henriquez C, Nicolelis MAL. Simulation of a brain-machine interface in a model sensorimotor system. *Soc Neurosci Abst* 30: 884.6, 2004.
- 149.** Sandler A, Kralik J, Dewey K, Nicolelis MAL. Primate somatosensorimotor learning: examining cue-related, association-related and motor-related responses in several cortical areas. *Soc Neurosci Abst* 30: 884.7, 2004.
- 150.** Carmena J, Lebedev M, Phelps E, Dewey K, Nicolelis MAL. Neuronal variability across cortical ensembles in macaque monkeys during performance of motor task. *Soc Neurosci Abst* 30: 884.8, 2004.
- 151.** Kim H, Biggs J, Schloerb D, Carmena J, Lebedev M, Nicolelis MAL, Srinivasan M. Continuous shared control of an assistive robot with primate brain neural signals. *Soc Neurosci Abst* 30: 884.9, 2004.
- 152.** Fitzsimmons NA, Lebedev MA, Phelps EE, Nicolelis MAL. History of brain-machine interfaces. *Soc Neurosci Abst* 31: 18.21, 2005.
- 153.** de Araujo IE, Ribeiro S, Lin S, Pereira A, Nicolelis MAL, Simon SA. Sleep-dependent reverberation of gustatory memories following conditioned taste aversion. *Soc Neurosci Abst* 31: 69.13, 2005.
- 154.** Lev I, Costa RM, Nicolelis MAL, Cohen D. Neural interactions in the mouse striatum and motor cortex during motor skill learning. *Soc Neurosci Abst* 31: 400.9, 2005.
- 155.** Zacksenhouse M, Lebedev MA, Carmena JM, O'Doherty JE, Henriquez C, Nicolelis MAL. Trends in firing rate statistics mirroring changes in task performance during training with brain machine interfaces. *Soc Neurosci Abst* 31: 402.4, 2005.

- 156.** O'Doherty JE, Lebedev MA, Henriquez C, Nicolelis MAL. Ensemble representation of time: Interhemispheric communication involved? Soc Neurosci Abst 31: 402.5, 2005.
- 157.** Hanson TL, Carmena JM, Phelps EE, Nicolelis MAL. A suite of hardware and software for clinical brain-machine interfaces. Soc Neurosci Abst 31: 402.6, 2005.
- 158.** Hanson TL, Carmena JM, Sandler AJ, Nicolelis MAL. Microstimulation as a cue for a discrimination task. Soc Neurosci Abst 31: 402.7, 2005.
- 159.** Sandler AJ, Dewey KS, Nicolelis MAL. Long-term neuronal recordings from nonhuman primates. Soc Neurosci Abst 31: 402.8, 2005.
- 160.** Lebedev MA, Wise SP, Nicolelis MAL. Obtaining accurate read-outs of behavioral variables from large neuronal ensembles. Soc Neurosci Abst 31: 402.9, 2005.
- 161.** Carmena JM, Hanson TL, Kim HK, Nicolelis MAL. Predicting arm dynamics from cortical ensemble activity in primates via a musculoskeletal model. Soc Neurosci Abst 31: 402.10, 2005.
- 162.** Gervasoni D, Lin S, Ribeiro S, Nicolelis MAL. Mapping sleep-wake states with the dynamics of large-scale neural ensembles in mice. Soc Neurosci Abst 31: 538.11, 2005.
- 163.** Lin S, Gervasoni D, Ribeiro S, Nicolelis MAL. Behavioral state dependent modulation of cortical activity by cholinergic and non-cholinergic basal forebrain ensembles. Soc Neurosci Abst 31: 538.12, 2005.
- 164.** Pereira A, Wiest MC, Thomson EE, de Araujo I, Nicolelis MAL. Neuronal ensemble correlates of texture discrimination in the behaving rat's somatosensory system. Soc Neurosci Abst 31: 538.13, 2005.
- 165.** Gutierrez R, Nicolelis MAL, Simon SA. Characterization of the gustatory cortex on a go, no-go taste discrimination task. Soc Neurosci Abst 31: 538.14, 2005.
- 166.** Zhang H, Ribeiro S, Lin S, Gervasoni D, Nicolelis MAL. Cholinergic and adrenergic modulation of neural activity after novel sensory experience. Soc Neurosci Abst 31: 538.15, 2005.
- 167.** Ribeiro S, Engelhard M, Zhou Y, Gervasoni D, Zhang H, Lin S, Nicolelis MAL. Early hippocampal, late cortical memory processing. Soc Neurosci Abst 31: 538.16, 2005.
- 168.** Santos LM, Lebedev MA, Nicolelis MAL. Rat behavioral states revealed by neuronal ensemble and EMG recordings from multiple brain areas and muscles. Soc Neurosci Abst 31: 538.17, 2005.
- 169.** Shi X, O'Doherty JE, de Araujo I, Lin S, Hanson T, Lebedev MA, Ribeiro S, Nicolelis MAL. Neuronal correlations and mnemonic reverberation in Rhesus monkeys during sleep. Soc Neurosci Abst 31: 538.18, 2005.

- 170.** Costa RM, Lin S, Sotnikova TD, Gainetdinov RR, Caron M, Nicolelis MAL. Corticostriatal neuronal ensemble dysfunction during dopamine-related hyperkinesia and akinesia. Soc Neurosci Abst 31: 538.19, 2005.
- 171.** Baccala LA, Santos LM, Takahashi DY, Sameshima K, Nicolelis MAL. Network connection among eight brain areas and simultaneous EMG activity recording in Long-Evans rats. Soc Neurosci Abst 31: 538.20, 2005.
- 172.** Simon SA, de Araujo I, Pereira A, Ribeiro S, Nicolelis MAL. A systems-level representation of appetite. Slide - Soc Neurosci Abst 31: 812.12, 2005.
- 173.** Thomson EE, Wiest MC, Pereira A, Nicolelis MAL. A behavioral paradigm for the study of category discrimination in the rat whisker system. Soc Neurosci Abst 31: 883.6, 2005.
- 174.** Wiest MC, Pereira A, Thomson E, Nicolelis MAL. Using reversible inactivation of individual S1 hemispheres to study bilateral integration in freely moving rats performing a tactile discrimination task. Soc Neurosci Abst 31: 883.7, 2005.
- 175.** Pantoja J, Ribeiro S, Wiest M, Soares E, Gervasoni D, Nicolelis MAL. Primary somatosensory thalamic responses during the active discrimination of tactile stimuli in rats. Soc Neurosci Abst 31: 883.8, 2005.
- 176.** de Araujo IE, Oliveira-Maia AJ, Moore L, Nicolelis MAL, Simon SA. Insulin administration modulates taste- and satiety-sensitive neurons in a rat model of type 2 diabetes. Soc Neurosci Abst 32: 238.21, 2006.
- 177.** Oliveira-Maia AJ, de Araujo IE, Riofrio A, Nicolelis MAL, Simon SA. Cortical responses to the post-ingestive effects of sucrose in knockout mice lacking sweet taste transduction. Soc Neurosci Abst 32: 238.22, 2006.
- 178.** Stapleton JR, Nicolelis MAL, Simon SA. Gustatory cortical and behavioral discrimination between nicotine and quinine on the basis of multimodal input. Soc Neurosci Abst 32: 238.24, 2006.
- 179.** Petermann T, Lebedev MA, Nicolelis MAL, Plenz D. Neuronal avalanches in vivo. Soc Neurosci Abst 32: 539.1, 2006.
- 180.** Gutierrez RM, Lin S-C, Nicolelis MAL, Simon SA. Neuronal activity in orbitofrontal cortex, amygdala, nucleus accumbens and gustatory cortex during approach and consummatory behavior. Soc Neurosci Abst 32: 670.13, 2006.
- 181.** Santos LM, Nicolelis MAL, Lebedev M. Neuronal ensembles in multiple cortical and subcortical areas predict locomotion patterns in rats. Soc Neurosci Abst 32: 648.17, 2006.
- 182.** Correia-Pinto JB, Sameshima K, Ojopi EB, Rolim SAM, Nicolelis MAL, Ribeiro S. Immediate early gene regulation in the brain during post-novelty REM sleep. Soc Neurosci Abst 32: 751.17, 2006.

- 183.** Takahashi DY, Baccala LA, Lebedev MA, Sameshima K, Nicolelis MAL. Connectivity between cortical motor areas in rhesus macaque analyzed using Granger causality. Soc Neurosci Abst 32: 806.9, 2006.
- 184.** Lin S, Gervasoni D, Nicolelis MAL. Fast modulation of prefrontal cortex activity by basal forebrain non-cholinergic neuronal ensembles. Soc Neurosci Abst 32: 812.11, 2006.
- 185.** Zhang, H, Ribeiro S, Lin S, Nicolelis MAL. Cholinergic modulation of cortical and hippocampal arc expression induced by novel sensory experience. Soc Neurosci Abst 32: 812.12, 2006.
- 186.** Li Z, O'Doherty JE, Hanson TL, Lebedev MA, Henriquez CS, Nicolelis MAL. N-th order Kalman filter improves the performance of a brain-machine interface for reaching. Soc Neurosci Abst 33 624.15, 2007.
- 187.** Thomson EE, Lehew G, Nicolelis MAL. Multielectrode design for simultaneously recording from rat primary and secondary somatosensory cortices. Soc Neurosci Abst 33, 2007.
- 188.** Wiest M, Thomson E, Nicolelis MAL. Tactile discrimination learning changes the S1 representation of aperture width. Soc Neurosci Abst 33: 402.16, 2007.
- 189.** Peikon ID, Fitzsimmons NA, Lebedev MA, Nicolelis MAL. Real-time three-dimensional video tracking system for kinematic analysis of animal behavior. Soc Neurosci Abst 33: 624.18, 2007.
- 190.** Grant BD, Li Z, Hanson TL, O'Doherty JE, Levedev MA, Nicolelis MAL. Automatic spike sorting of multiunit data for brain-machine interface applications. Soc Neurosci Abst 33: 129.10, 2007.
- 191.** O'Doherty JE, Hanson TL, Lehew G, Dimitrov DF, Lebedev MA, Nicolelis MAL. Brain-Machine Interface with Somatosensory Feedback. Soc Neurosci Abst 33: 624.16, 2007.
- 192.** Lebedev MA, Fitzsimmons NA, Drake W, Lehew G, Dimitrov DF, Nicolelis MAL. Decoding Bipedal Locomotion Patterns From Cortical Ensemble Activity in Rhesus Monkeys. Soc Neurosci Abst 33: 517.23, 2007.
- 193.** Fitzsimmons NA, Drake WG, Hanson TL, Peikon ID, Lebedev MA, Nicolelis MAL. Decoding Microstimulation Parameters and Motor Intention From Neuronal Ensemble Activity. Soc Neurosci Abst 33: 728.5, 2007.
- 194.** Oliveira-Maia AJ, Stapleton JR, Lyall V, Phan T-H, De Simone JA, Nicolelis MAL, Simon SA. Multimodal representation of a bitter tasting stimulus in the gustatory cortex. Soc Neurosci Abst 33: 713.1, 2007.
- 195.** Lin S-C, Nicolelis MAL. Motivational saliency encoded by synchronous bursting of basal forebrain non-cholinergic neurons. Soc Neurosci Abst 33: 424.8, 2007.

- 196.** Fuentes R, Takahashi DY, Nicolelis MAL. Primary motor cortex and dorsolateral striatum exhibit a decrease in global coherence, but not in partial directed coherence, during dopamine depletion. Soc Neurosci Abst 33: 622.24, 2007.
- 197.** Zacksenhouse, M., M.A. Lebedev, and M.A.L. Nicolelis, Bin-width selected for Brain-Machine Interfaces optimizes rate decoding, Oral Presentation, CNS08, Portland, Oregon, USA, July 2008.
- 198.** Zacksenhouse, M., M.A. Lebedev, K. Beiser, and M.A.L. Nicolelis. Potential Origin of Enhanced Neural Activity during BMI Experiments, Poster, AREADNE08, Santorini, Greece, June 2008.
- 199.** Oliveira-Maia, A.J., Phan, T.T., Melone, P., Mummalaneni, S., Nicolelis, M.A.L., Simon, S.A., DeSimone, J.A., Lyall, V. 'Nicotinic acetylcholine receptors (nAChRs): Novel bitter taste receptors for nicotine'. International Symposium on Olfaction and Taste, San Francisco, California, USA, July 2008.
- 200.** Oliveira-Maia, A.J., de Araújo, I.E., Sotnikova, T.D., Gainetdinov, R.R., Caron, M.G., Nicolelis, M.L., Simon, S.A. 'Food reward in the absence of taste receptor signaling'. 6th FENS Forum of European Neuroscience, Geneva, Switzerland, July 2008.
- 201.** Coelho, M.R., Oliveira-Maia, A.J., Gainetdinov, R.R., Caron, M.G., Nicolelis, M.L., 'Increased dopamine tone impairs action selection'. 6th FENS Forum of European Neuroscience, Geneva, Switzerland, July 2008.
- 202.** O'Doherty, J. E., M. A. Lebedev, M. A.L. Nicolelis. Closed-Loop Brain-Controlled Reaching Guided by Cortical Microstimulation. Soc Neurosci Abst 34: 673.5, 2008.
- 203.** Hodak, M.J., J. E. O'Doherty, M. A. Lebedev, M. A.L. Nicolelis. Transformational mapping in a brain-machine interface for reaching. Soc Neurosci Abst 34: 673.2, 2008.
- 204.** Grant, B.D., Z. Li, T. L. Hanson, J. E. O'Doherty, M. A. Lebedev, M. A.L. Nicolelis. Multipurpose, expandable suite for brain-machine interfaces. Soc Neurosci Abst 34: 673.6, 2008.
- 205.** Hanson, T. L., D. Clayton, M.A. Lebedev, D. Turner, M. A.L. Nicolelis. Multineuron Recordings in Human Subcortical Regions in Relationship to Hand Motor Task: Tuning and Motor Responses. Soc Neurosci Abst 34: 639.15, 2008.
- 206.** Peikon, I. D., N. A. Fitzsimmons, M. A. Lebedev, M. A.L. Nicolelis. Unconstrained video-tracking for brain-machine interfaces. Soc Neurosci Abst 34: 673.1, 2008.
- 207.** Li, Z., J. E. O'Doherty, T. L. Hanson, M. A. Lebedev, C. S. Henriquez, M. A.L. Nicolelis. Unscented Kalman filter for brain-machine interfaces. Soc Neurosci Abst 34: 673.4, 2008.
- 208.** Fitzsimmons, N. A., M. A. Lebedev, I. D. Peikon, M. A.L. Nicolelis. Cortical neuronal ensembles accurately predict leg kinematic parameters and EMG patterns during bipedal locomotion in monkeys. Soc Neurosci Abst 34: 673.3, 2008.

- 209.** Fuentes, R., P. Petersson, M. A. L. Nicolelis. Electrical stimulation of dorsal column restores locomotion in rodent models of Parkinson's disease. Soc Neurosci Abst 34: 472.14, 2008.
- 210.** Zhang, H., S.-C. Lin, M. A. L. Nicolelis. Acquiring local field potential information from amperometric neurochemical recordings. Soc Neurosci Abst 34: 100.5, 2008.
- 211.** Pantoja, J., S. Ribeiro, M. A. L. Nicolelis. Simultaneous neuronal recordings of the paralemniscal and lemniscal pathways. Soc Neurosci Abst 34: 858.21, 2008.
- 212.** Lin, S.-C., M.A.L. Nicolelis. Attentional Modulation of Cortical ERPs Gated by Basal Forebrain Ensemble Bursting. Soc Neurosci Abst 34: 875.17, 2008.
- 213.** Gutierrez, R., J. Stapleton, S.A. Simon, M. Nicolelis. Rapid Taste Responses on Prefrontal Cortices. Soc Neurosci Abst 34: 64.4, 2008.
- 214.** Dzirasa, K., A.J. Ramsey, J. Williams, R.R. Gainetdinov, M.G. Caron, M.A.L. Nicolelis. NMDA Receptor Signaling is Critical for Cortical and Hippocampal Network Synchronization. Soc Neurosci Abst 34: 191.24, 2008.
- 215.** Petersson, P., R. Fuentes, M.A.L. Nicolelis. Dorsal Column Stimulation Restores a Brain State Permissive of Locomotion. Soc Neurosci Abst 34: 472.15, 2008.
- 216.** Freire, M.A., K. Sameshima, J.S. Guimaraes, N.A.M. Lemos, A. Pereira, Jr., S. Ribeiro, M.A.L. Nicolelis. Comprehensive Characterization of Molecular and Cellular Changes after Chronic Multielectrode Implants in Rats. Soc Neurosci Abst 34: 101.12, 2008.
- 217.** Thiagarajan, T., M. Lebedev, M. Nicolelis, D. Plenz. Coherence Potentials: A Network Level Action Potential-Like Phenomenon in the Cortex. Soc Neurosci Abst 34: 136.14, 2008.
- 218.** Correia-Pinto, J.B., E.B. Ojopi, S. Ribeiro, M.A.L. Nicolelis, K. Sameshima. Egr1 and Arc Modulation during Post-Novelty Sleep. Soc Neurosci Abst 34: 689.11, 2008.
- 219.** Faber, J., M.A.L. Nicolelis, S. Ribeiro. Temporal Asymmetry of Experience-Dependent Neuronal Reverberation during Slow-Wave Sleep. Soc Neurosci Abst 34: 784.21, 2008.
- 220.** Oliveira-Maia, A.J., de Araújo, I.E., Monteiro, C., Workman, V., Galhardo, V., Simon, S.A. and Nicolelis, M.A.L. 'Taste-independent reward-related representation in the insular cortex'. Society for Neuroeconomics 2008 Annual Conference, Park City, Utah, USA, September 2008.
- 221.** Pantoja, J., Ribeiro, S., Vasconcelos, N., Cook, C., Nicolelis, M.A.L. Neuronal Activity in the thalamocortical loop during the execution of a tactile discrimination task. Soc Neurosci Abst 35: 173.1, 2009.
- 222.** Lin, S.-C., Nicolelis, M.A.L. Attention enhances prefrontal cortex ERP mediated by non-cholinergic basal forebrain neurons. Soc Neurosci Abst 35: 805.5, 2009.

- 223.** Fitzsimmons, N., An, J.H., Lebedev, M.A., Nicolelis, M.A.L. Towards a Bi-Directional Brain-Machine Interface: Simultaneous Microstimulation and Recording in Owl Monkeys. Soc Neurosci Abst 35: 181.9, 2009.
- 224.** Zhang, H., Lin, S.-C., Nicolelis, M.A.L. Acetylcholine release coupled to theta oscillations on fine spatiotemporal scales in vivo. Soc Neurosci Abst 35: 193.29, 2009.
- 225.** Tate, A.J., Lebedev, M.A., Nicolelis, M.A.L. Neural activity associated with changes in posture in Rhesus Macaques. Soc Neurosci Abst 35: 181.7, 2009.
- 226.** Li, Z., O'Doherty, J.E., Lebedev, M.A., Nicolelis, M.A.L. Simultaneous BMI decoding and tuning model update using Bayesian regression. Soc Neurosci Abst 35: 181.8, 2009.
- 227.** Dzirasa, K., Phillips, H., Sotnikova, T. D., Salahpour, A., Gainetdinov, R. R., Caron, M. G., Nicolelis, M. A. L. Dynamic brain map reveals nigrostriatal and mesolimbic signaling dysfunction in mice acutely depleted of norepinephrine. Soc Neurosci Abst 35: 788.13, 2009.
- 228.** O'Doherty, J.E., Ifft, P.J., Zhuang, K., Lebedev M.A., Nicolelis, M.A.L. A Bidirectional Brain-Machine Interface Using Simultaneous Recording and Intracortical Microstimulation Feedback. Neural Interfaces Conference, Long Beach, CA, 2010.
- 229.** O'Doherty, J.E., Ifft, P.J., Zhuang, K., Lebedev M.A., Nicolelis, M.A.L. A Bidirectional Brain-Machine Interface with Motor Recordings and Sensory Microstimulation Feedback. Biomedical Engineering Society Annual Meeting, Austin, TX, 2010.
- 230.** Zhang, H., Lin, S.-C., Nicolelis, M.A.L. Putative medial septal cholinergic neurons promote hippocampal activation and theta oscillations Soc Neurosci Abst 36: 44.7, 2010.
- 231.** Oliveira-Maia, A.J., Roberts, C. D., Walker, Q. D., Kuhn, C., Simon, S. A., Nicolelis, M. A. L. Intravascular food reward. Soc Neurosci Abst 36: 129.1, 2010.
- 232.** Thomson, E. E., Meloy, J., Nicolelis, M.A.L. Whisker-based aperture width discrimination in the mouse. Soc Neurosci Abst 36: 285.17, 2010.
- 233.** Winans, J. A., Tate, A. J., Lebedev, M. A., Nicolelis, M. A. L. Extraction of leg kinematics from the sensorimotor cortex representation of the whole body. Soc Neurosci Abst 36: 294.7, 2010.
- 234.** Han, Z., Li, Z., O'Doherty, J. , Lebedev, M. , Nicolelis, M. Decoding self-timed motor behavior with hidden Markov models. Soc Neurosci Abst 36: 383.9, 2010.
- 235.** Li, Z., O'Doherty, J. E., Lebedev, M.A., Nicolelis M.A.L. Closed-loop adaptive decoding using bayesian regression self-training. Soc Neurosci Abst 36: 383.10, 2010.
- 236.** Zhuang, K. Z., O'Doherty, J. E., Lebedev, M. A., Nicolelis, M. A. L. Extraction of EMGs from cortical ensemble activity during a motor timing task. Soc Neurosci Abst 36: 383.11, 2010.

- 237.** Shokur, S., O'Doherty, J. E., Lebedev, M. A., Bleuler, H., Nicolelis, M. A. L. Integration of a virtual reality based arm in primary somatosensory cortex. Soc Neurosci Abst 36: 383.12, 2010.
- 238.** Sidor, M. M., Dzirasa, K. D., Coque, L., Nicolelis, M. A. L., McClung, C. A. Manic-like behavior in Clock-delta19 mice is associated with molecular, cellular and physiological dysfunction in the nucleus accumbens. Soc Neurosci Abst 36: 571.7, 2010.
- 239.** Walker, Q. D., Oliveira-Maia, A. J., Roberts, C. D., Luo, B. T., Simon, S. A., Nicolelis, M. A. L., Kuhn, C. M. Dopamine transients are observed in nucleus accumbens shell of anesthetized rats and are increased by hyperglycemia and cocaine. Soc Neurosci Abst 36: 887.19, 2010.
- 240.** O'Doherty, J. E., Ifft, P. J., Zhuang, K. Z., Lebedev, M. A., Nicolelis, M. A. L. Brain-machine-brain interface using simultaneous recording and intracortical microstimulation feedback. Soc Neurosci Abst 36: 899.15, 2010.
- 241.** Shokur S., Ifft P, Lebedev M, Bleuler H, Nicolelis MAL. Social Interaction Probed by Reaching to Face Images: Rhesus Monkeys Consider a Textured Monkey Avatar as a Conspecific. Soc Neurosci Abst, Neuroscience 2011.
- 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.
- 244.** Hanson TL, Lebedev MA, Nicolelis MAL. Wireless Multichannel System for Recording Neuronal Ensemble Activity from Primate Brain. Soc Neurosci Abst, Neuroscience 2011.
- 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, 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.
- 257.** Oliveira-Maia AJ, Favre MR, Vinholo TF, Siesser WB, Zhang X, Gainetdinov RR, Caron MG, Nicolelis MAL. Serotonin in the Frontal Cortex modulates sucrose preference. Soc Neurosci Abst 38: 607.06/FFF9, 2012.
- 258.** Yadav AP, Fuentes R, Zhang H, Vinholo T, Wang C-H, Nicolelis MAL. Long-term spinal cord stimulation improves motor function, accelerates weight recovery and protects against dopaminergic neurodegeneration in a rodent model of Parkinson's Disease. Soc Neurosci Abst 38: 651.04/G24, 2012.
- 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.
- 261.** Freire MA, Morya E, Faber J, Santos J, Lemos NAM, Sameshima K, Nicolelis MAL. Recording quality, distribution and morphometric analysis of interneurons following chronic multielectrode implants. Soc Neurosci Abst 38: 893.04/OO11, 2012.
- 262.** R. Savoldi, R. Fuentes, M. A. L. Nicolelis, E. Morya. The scientist of the future program: integrating neuroscience and education. Neuroscience 2013: 24.18SU/NN5.

- 263.** P. F. Cavalcanti, P. M. I. Schneider, T. Faggion Vinholo, R. Savoldi, A. C. B. Kunicki, E. Morya, R. Fuentes, M. A. L. Nicolelis, M. A. Freire. Teaching brain morphology by immunohistochemical staining methods for high school students Neuroscience 2013: 24.20SU/NN7.
- 264.** A. C. Kunicki, R. Fuentes, M. Nicolelis, E. Morya. Neuronal activity patterns of medial prefrontal cortex in active tactile discrimination task. Neuroscience 2013: 70.07/NN7.
- 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. Simplício, 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.
- 273.** M. A. Freire, E. Morya, J. Faber, J. R. Santos, N. A. M. Lemos, M. A. L. Nicolelis. Distribution and morphology of calcium-binding neurons following chronic multielectrode implants. Neuroscience 2013: 241.02/N3.
- 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. Simplicio, 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. Simplicio, 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. Moiola, 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. Moiola, 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. Simplicio, 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.
- 286.** A. C. Kunicki, R. C. Moiola, C. S. Deolindo, E. Morya, M. A. L. Nicolelis. Neuronal activity patterns of posterior parietal cortical activity during active tactile discrimination task. *Neuroscience* 2014. 440.15/II29.
- 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. Moiola, 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. Moiola, 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. Moiola, 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. Moiola, 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. Moiola, 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. Nicolelis. mechanisms from motor symptoms of the Alpha-synuclein Parkinson Disease rat model. *Neuroscience* 2014. 794.26/K8.
- 299.** A. Ramakrishnan, K. Rand, M. Lebedev, M.A.L. Nicolelis. Representation of reward in sensorimotor cortical areas. 25th Annual Meeting of the Society for the Neural Control of Movement, Charleston, SC, 2015.

- 300.** E. E. Thomson, K. Hartmann, M. A. L. Nicolelis. Constructing a distributed infrared sensory modality in the adult rat. Neuroscience 2015, Chicago, IL.
- 301.** M. Lee, J. Hong, S. Rajangam, M. Lebedev, M. A. Nicolelis. Wireless brain-machine interface operated by freely behaving monkeys. Neuroscience 2015, Chicago, IL.
- 302.** S. Rajangam, P-H Tseng, A. Yin, M. Lebedev, M. A. Nicolelis. A brainet for wholebody navigation. Neuroscience 2015, Chicago, IL.
- 303.** P. Thompson, M. Lebedev, M. A. Nicolelis. Cortical Representation of Bimanual Movements: Patterns of Interference. Neuroscience 2015, Chicago, IL.

Selected Invited Presentations:

- 2016 Invited Speaker, Dept. of Electrical Engineering and Computer Science Seminar, Case Western University, Cleveland, OH
- 2016 Invited Speaker, The Hartwell Foundation Annual Meeting, Cleveland, Ohio
- 2016 Invited Speaker, 3rd Annual Neurotechnology Center Kavli Futures Meeting, Columbia University, New York, NY
- 2016 Keynote Speaker, Academy of Spinal Cord Injury Professionals, Nashville, TN
- 2016 Featured Speaker, World Science Festival, New York, NY
- 2016 Plenary Lecture, Association for Behavior Analysis International Meeting, Chicago, IL
- 2016 Presentation, 9th World Congress for Neurorehabilitation, Philadelphia, PA
- 2016 Invited Speaker, MedStar National Rehabilitation Network Grand Rounds, Washington, DC
- 2016 Invited Speaker, Interdisciplinary Program in Neuroscience, Georgetown University, Washington DC
- 2016 Panelist, A Scientific Planning Workshop for Coordinating Brain Research Around the Globe, Johns Hopkins University, Baltimore, MD
- 2016 Keynote Speaker, BRASCON, Harvard University, Cambridge, MA
- 2016 Invited Speaker, Brain Awareness Series, Northeastern University, Boston, MA
- 2016 Featured Speaker, Center for Brain Health Lecture Series, University of Texas, Dallas Texas
- 2016 Invited Speaker, Distinguished Scholar Series, University of Miami Graduate School, Miami, Florida
- 2016 Keynote Speaker, Winter Conference on Brain Research, Breckinridge, Colorado
- 2016 Featured Speaker, 5th Congress of the Future, invited by Chilean President Michelle Bachelet, Santiago, Chile

- 2015 Featured Speaker, Mammalian Circuits Underlying Somatosensation Research Symposium, Janelia Research Campus, Ashburn, VA
- 2015 Keynote Speaker, I Encontro Ciência Sem Fronteiras - Brazilian Expert Network (CSF/BEN), Brazilian Embassy, Washington, DC
- 2015 Invited Speaker, Dept. of Stem Cell and Regenerative Biology, Harvard University, Cambridge, MA
- 2015 Featured Speaker, ASPIRE Seminar, Colorado State University, Fort Collins, CO
- 2015 Invited Speaker, Spinal Cord Injury Division, Department of Physical and Rehabilitative Medicine, Craig Hospital/Colorado State University, Fort Collins, CO
- 2015 Invited Speaker, Department of Stem Cell and Regenerative Biology at Harvard University, Cambridge, MA
- 2015 Invited Speaker, Graduate Program in Areas of Basic and Applied Biology (GABBA), Porto, Portugal
- 2015 Featured Speaker, International Max Planck Research School (IMPRS), Leipzig, Germany
- 2015 Featured Speaker, Neurizons 2015, Gottingen, Germany
- 2015 Featured Speaker, Conscious Curiosity: Searching for the Next Breakthrough, Seoul Digital Forum, Seoul, South Korea
- 2015 Invited Speaker, NASA Goddard Scientific Colloquium, NASA Goddard Space Flight Center, Greenbelt, MD
- 2015 Keynote Speaker, Brazilian Undergraduate Student Conference, Columbia University, New York, New York
- 2015 Invited Speaker, “Micro-, meso-, and macro-dynamics of the brain”, 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, SINAIInnovation, Mount Sinai School of Medicine, New York, New York
- 2014 Plenary Speaker, IEEE EMBS BRAIN Grand Challenges Conference, Washington DC
- 2014 Invited Speaker, Neuroscience Program, Yale University, Hartford, Connecticut
- 2014 Featured Speaker, Mind Science Foundation, San Antonio, Texas
- 2014 Grand Rounds, University of Texas Health Science Center, San Antonio, Texas
- 2014 Featured Speaker, SAP CEO Summit, New York, New York
- 2014 Featured Speaker, TED Global 2014, Rio de Janeiro, Brazil
- 2014 Invited Speaker, Board of Visitors Meeting, Pratt School of Engineering, Duke University

- 2014 Keynote Speaker, Texas Brain and Spine Institute Annual Neuroscience Symposium, Texas A&M University, College Station, Texas
- 2014 US Department of State Keynote Speaker, National Institute of Higher Education, Research, Science and Technology (NIHERST) Youth Science Forum, Trinidad and Tobago
- 2013 Keynote Speaker, The Brain Forum 2013, Jeddah, Saudi Arabia
- 2013 Invited Speaker, 2013 Nov2K Science Symposium, Karolinska Institute, Sweden
- 2013 Guest Speaker, National Academy of Engineering's Grand Challenge Scholars Program, Pratt School of Engineering, Duke University
- 2013 Invited Speaker, Thayer School of Engineering Distinguished Lecture Series, Dartmouth College, Hanover, New Hampshire
- 2013 Guest Lecturer, Regeneration and Repair in the Mammalian Brain Course, Harvard University, Cambridge, Massachusetts
- 2013 Invited Speaker, NYU School of Medicine Honors Lecture Series, New York, New York
- 2013 Invited Speaker, Frankfurt International Book Fair, Frankfurt, Germany
- 2013 Icahn School of Medicine at Mount Sinai, Department of Psychiatry Grand Rounds, New York, New York
- 2013 Plenary Lecture, NEURO 2013: Joint meeting of the 36th Annual Meeting of the Japan Neuroscience Society, the 56th Annual Meeting of the Japanese Society for Neurochemistry, and the 23rd Annual Conference of the Japanese Neural Network Society, Kyoto, Japan
- 2013 Plenary Lecture, CORTEX International Meeting 2013, Lyon, France
- 2013 Guest Speaker, Distinguished Complex Systems Seminar Series, Dept. of Physics & Astronomy, Northwestern University, Evanston, IL
- 2013 Keynote Speaker, Inaugural Symposium of the Biomedical Neuroscience Institute (BNI), Santiago, Chile
- 2013 Featured Speaker, Brenda Milner Speaker Series, University of Lethbridge, Lethbridge, Canada
- 2013 Guest Speaker, Mahoney Institute for Neurological Sciences (MINS) at the University of Pennsylvania, Philadelphia, PA
- 2013 Seminar Speaker, Cold Spring Harbor Laboratory Seminar Series, Cold Spring Harbor, NY
- 2013 Keynote Speaker, Frontiers in Neuroscience Research Meeting, Medical University of South Carolina, Charleston, South Carolina
- 2013 Featured Speaker, Dallas County Community College District Foundation, STEM Institute, Dallas Texas
- 2013 Plenary Lecture, 10th Göttingen Meeting of the German Neuroscience Society, Gottingen, 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