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Born 9 August 1960 (in Casablanca, Morocco), French national
Married (to Erin Schuman), 3 children

A. EDUCATION

1989	Computational Neuroscience Course, Woods Hole, MA, USA
1985	Ph.D., Neuroethology, Université Paul Sabatier, Toulouse, France
1985	Doctorate, Veterinary Medicine, Natl. School Vet. Med., Toulouse, France
1979	Classes préparatoires, admission National School of Veterinary Medicine
1978	Baccalaureat "C" (Math & Physics) (mention TB)

B. ACADEMIC POSITIONS

Since 2009	Director, Max Planck Institute for Brain Research, Frankfurt, Germany (Co-Founding Director, w Erin Schuman, of new MPI Brain Research)
1990 - 2011	Professor, California Institute of Technology, Pasadena, CA, USA
2002 - 11	*Lawrence A. Hanson Professor* of Biology and CNS, Caltech, CA, USA
2000 - 02	Professor of Biology and CNS, Caltech, CA, USA
1996 - 00	Associate Professor of Biology and CNS, Caltech, CA, USA
1990 - 95	Assistant Professor of Biology and *Computation and Neural Systems (CNS)*, Caltech, CA, USA
1987 - 90	Royal Society Locke Research Fellow, University of Cambridge, UK
1985 - 87	Postdoctoral Research Assistant, University of Cambridge, UK

C. RESEARCH EXPERIENCE

2009 -	Director, MPI Brain Research
2008	Visiting Faculty (sabbatical), École Normale Supérieure, Paris, France
2005	Visiting Scholar (sabbatical), Clark Center, Stanford University, CA, USA
1990 - 2011	Professor, Caltech, Pasadena, CA, USA
1985 - 90	Postdoctoral Research, University of Cambridge, UK
1983	Visitor, Technische Universität, München, Germany
1983	Visitor, MPI für Verhaltensphysiologie, Seewiesen, Germany
1982 - 85	Pre-doctoral Research, Université Paul Sabatier, Toulouse, France
1982	Visitor, Laboratory for Energy-related Health Research, U.C. Davis, CA, USA

D. HONORS

2019 - 24	ERC Advanced Grant
2017	Member, Academia Europaea
2014	Member, EMBO
2013 - 18	ERC Advanced Grant
2002	Fellow Associate, Neurosciences Institute, La Jolla
2001	Fellow, American Association for the Advancement of Science
2000 - 03	McKnight Neuroscience Investigator Award
1993 - 98	National Science Foundation Presidential Faculty Fellow Award
1993	L.L. and A.W. Ferguson Award for Excellence in Teaching
1992	L.L. and A.W. Ferguson Award for Excellence in Teaching
1991 - 94	McKnight Neuroscience Young Investigator Award
1991 - 93	Alfred P. Sloan Research Fellow Award
1990 - 93	Searle Fellow Award
1987	International Society for Neuroethology Prize
1987 - 90	Royal Society Locke Research Fellow
1987 - 90	Research Fellow, Downing College, Cambridge
1985	Fyssen Foundation Fellowship, Paris, France (declined)
1985	S. & C. del Duca Foundation Fellowship, Paris (declined)
1985	1985 City of Toulouse Prize (Natural and Life Sciences)

E. NAMED/SPECIAL LECTURES

Forbes Lecture, MBL, Woods Hole, MA, USA (2019)
Adrian Lecture, University of Cambridge, UK (2018)
EMBL Distinguished Lectures Series, Heidelberg, Germany (2018)
Lamport Lecture, Univ. Washington, Seattle, WA, USA (2017)
Keynote speaker, GDR Vision 2016, Toulouse, France (2016)
Keynote speaker, CRCNS Conference, Paris, France (2016)
Keynote Speaker, Intl. Conference on Systems Biology, Barcelona, Spain (2016)
Masakazu Konishi Lecture, Woods Hole, MA, USA (2016)
Norman Davidson Lecture, Caltech, Pasadena, CA, USA (2016)
Keynote Speaker, 4th European Zebrafish Meeting, Lisbon, Portugal (2016)
Director's Series Seminar, HHMI JFRC, Ashburn, VA, USA (2015)
Keynote Lecturer, FENS (European Neurosciences) Meeting, Milano, Italy (2014)
R & H Record Award Lecturer, Baylor Coll. Med., Houston, TX, USA (2014)
Ruth K. Broad and Shepard Broad Foundation International Lecturer on Neurobiology and Disease, Duke University, Durham, NC, USA (2013)
NIPS Keynote Lecture, Granada, Spain (2011)
Max Birnstiel Lecture, Vienna, Austria (2011)
ANS Overseas Lecture, Sydney, Australia (2010)
Swammerdam Lecture, Amsterdam, Holland (2009)
Masakazu Konishi Lecture, Woods Hole, MA, USA (2009)
Robert J. Terry Lecture, Washington U. Med. School, St. Louis, MO, USA (2009)
Teuber Lecture, MIT, Cambridge, MA, USA (2008)
Special Lecture, Society for Neuroscience, San Diego, CA, USA (2007)
Ernst Florey Lecture, German Neuroscience Meeting, U. Göttingen, Germany (2007)
Monell/Penn Lecture, University of Pennsylvania, Philadelphia, PA, USA (2006)
D-Biol Lecture, ETH Zürich, Switzerland (2006)
Heller Lecture, Hebrew University, Jerusalem, Israel (2006)
Ernest C. Watson Lecture, Caltech, CA, USA (2005)
David Bodian Lecture, Johns Hopkins University, Baltimore, MD, USA (2005)
Hertie Lecture, European Neuroscience Assoc. Meeting, Lisbon, Portugal (2004)
Perkins Lecture, University of Cambridge, UK (2002)
Dupont Lecture, Arizona Research Labs, U. Arizona, Tucson, AZ, USA (1997)

F. SERVICE

Journal Reviewer: Cell, Current Biology, eLife, Eur J Neuroscience, Frontiers Journals, J Comp Neurol, J Neuroscience, J Neurophysiology, J Comput Neurosci, J Exp Biology, Nature, Nature Neuroscience, Neuron, Neural Computation, PLoS, Science

Editor: J Comput Neurosci; J Physiol (Paris), Current Opinion Neurobiology

Guest Editor: Annual Rev Neuroscience, Current Opinion Neurobiology

Grant Reviewer: NIH, NSF, Wellcome, HSFP, DFG, Foundation *Schlumberger*, ATIPE, ANR, ERC, German-Israeli Foundation for Scientific Research

Meeting Organizer: *FENS* Brain Conference on *Neural Dynamics*, Copenhagen, June 2019 (with Ila Fiete);
Inaugural MPI Brain Research Symposium, 2014 (with Erin Schuman)

US Committees:

2018 -	*SfN Young Investigator Award* Committee
2011 - 2014	*SfN* Girard Prize Committee
2006	Planning Committee, Computational/Systems Neuroscience, NIH
2005	Organizing Committee, Gordon Conference on Circuits and Synapses

Recent Scientific Advisory Boards, Review Boards:

2021	Member, SAB, Weizmann Institute, Neuroscience, Rehovot, Israel
2021	Member, SAB, Champalimaud Institute, Lisbon, Portugal
2019	Chair, NeuroMarseille SAB, Marseille, France
2019	Member, SAB, Champalimaud Institute, Lisbon, Portugal
2018	Chair, NeuroPSI Paris Saclay SAB, Paris, France
2017	HHMI Investigator Review Boards (2), Chevy Chase, MD, USA
2016	Cambridge University Neuroscience Ten-year Review Board, CB, UK
2015	HHMI Janelia Ten-year Review Board, Ashburn, VA, USA
2014	HHMI Investigator Review Board, Chevy Chase MD, USA
2014	Chair, Review Board, AERES UNIC Gif-sur-Yvette, France
2014 -	Graduate Program, Champalimaud Center for the Unknown, Portugal
2013	HHMI Investigator Review Board, Chevy Chase MD, USA
2013 - 2018	Chair, SAB, Neuro-PSI Saclay, France
2014	Chair, Institute Neuroinformatics Review Board, ETH/UZ, Zurich, Switzerland
2013 - 2018	Member, Hiring Committee, ETH Zürich, Switzerland
2012 - 2013	Member, Hiring Committee, Institut Pasteur, Paris, France
2009 - 2014	Member and Chair, École des Neurosciences de Paris, France
2009 - 2013	SAB member, Biozentrum Basel, Switzerland
2009 - 2013	SAB member, NeRF-VIB Leuven, Belgium

External PhD Thesis Committees:

Latest (6-2018) Ms Tanja Wernle, Kavli Institute, NTNU, Trondheim, Norway

Courses Taught:

2019	Neuroinformatics, Baltic/Nordic Course, Frankfurt, Germany
2018 -	FENS CAJAL Computational Neuroscience Course, Lisbon, Portugal
2018	FENS CAJAL Behavioral Neuroscience Course, Lisbon, Portugal
2016	ISN-JNC Flagship School, Alpbach, Austria
2015 - 2017	Course co-director, European (FENS) CAJAL Computational Neuroscience Course, Champalimaud Institute, Lisbon, Portugal
2012	*Drosophila* Neuroscience Course, MPI Chemical Ecology, Jena, Germany

2011	Neuroscience Course, University of Copenhagen, Denmark
2005	Computational Neuroscience Course, Arcachon, France
1998	Cold Spring Harbor Labs NY, Neurobiology Course, NY, USA
1996	US-German School of Neuroethology, Munich, Germany
1996	Woods Hole, Scholar in Residence, Neural Systems and Behavior Course, Woods Hole, MA, USA
1996	Cold Spring Harbor NY, Neurobiology Course, NY, USA
1995	Cold Spring Harbor NY, Drosophila Neurobiology Course, NY, USA

Caltech Academic Affairs Committees:

2006 - 2007	Study-Abroad Committee
2005 - 2009	CNS Graduate Admissions Committee
2005 - 2006	Athletics Committee
2003 - 2009	Undergraduate Curriculum Committee
2001 - 2009	Biology Graduate Admissions Committee
2001 - 2002	Patents Committee
1998 - 2001	CNS Option Representative
1992 - 2009	Faculty Searches (co-chair: Systems Biology, Computational Neurosciences, Cellular Neuroscience, Primate Neuroscience, Psychophysics)
1992-1994	IACUC, Special Investigative Committee, Caltech
1990 - 1998	CNS Graduate Admissions Committee

MPIBR and MPG Academic Affairs:

2020 - 2023	Managing Director MPIBR (Aug 2020 - Jul 2023)
2018 -	MPG Presidential Committee on Animal Research
2016 - 2017	Managing Director MPIBR (Aug 2016 - Jul 2017)
2016 -	IMPRS (Graduate School) Director
2015 -	Special Presidential Committee on MPG History
2010 -	IMPRS Admissions Committee
2009 - 2013	Managing Director MPIBR (Aug 2009 - Jul 2013)
2009 -	Various search and recruitment committees in the US and Europe
2009 -	Various MPG committees (director, group leader searches, etc.)
2009 - 2014	Concept and Design of new MPI Brain Research Building (together w. Erin Schuman, as founding directors)

G. ALUMNI

See: https://neurotree.org/beta/tree.php?pid=178

Former postdocs (with current position and affiliation):

Hiroaki Norimoto: Assistant Professor, Hokkaido University, Sapporo, Hokkaido, Japan
Christian Müller: Retired
Sara Haddad: Postdoctoral Research Fellow, University of Zürich, Switzerland
Sam Reiter: Assistant Professor, OIST, Okinawa, Japan
https://groups.oist.jp/cne/sam-reiter; https://groups.oist.jp/cne
Maria Antonietta Tosches: Assistant Professor, Columbia U., New York, NY, USA
https://www.toscheslab.com/; https://www.biology.columbia.edu/people/tosches
Mark Shein-Idelson: Assistant Professor, Neuroscience, University of Tel Aviv, Israel
https://english.tau.ac.il/profile/sheinmark;
https://www.evolutionaryneuralcodinglab.sites.tau.ac.il/
Marcel Lauterbach: Assistant Professor, University of Homburg, Germany
https://cipmm.uni-saarland.de/index.php/de/molekulare-bildgebung/forschung
Robert Naumann: Assistant Professor, Shenzhen Institutes of Advanced Technology, Chinese
Academy of Sciences, Shenzhen, China; https://www.wangnaumannlab.com/people.html
Tracy Yamawaki: Senior Associate Scientist, Amgen, South SF, CA, USA

Stefano Masneri: Investigador, Vicomtech, San Sebastián, Spain
Janie Ondracek: Research Group Leader, TUM, Munich, Germany
https://www.zoologie.wzw.tum.de/arbeitsgruppe-ondracek.html
Julien Fournier: Chargé de Recherche INSERM, Paris Jussieu, France
https://www.ibps.upmc.fr/fr/IBPS/annuaire/10460-Julien-Fournier;
Andreas Kotovicz: Head of IT, MPI for Astronomy, Heidelberg, Germany
Michael Kuba: Research Scientist, Okinawa Research Institute, Japan
Ueli Rutishauser: Professor and Board of Governors Chair in Neurosciences, Cedars Sinai Medical Center, Los Angeles, CA, USA; https://www.cedars-sinai.org/research/labs/rutishauser.html
Mala Murthy: Professor of Neuroscience, Princeton University, NJ, USA
https://murthylab.princeton.edu/
Rachel Wilson: Professor of Neurobiology, Harvard Medical School, Boston, MA, USA
https://wilson.hms.harvard.edu/
Glenn Turner: Group Leader, HHMI Janelia RC, Ashburn, VA, USA
https://www.janelia.org/lab/turner-lab
Stephen Houston: Fellow, HHMI Janelia RC, Ashburn, VA, USA
Ingmar Riedel-Kruse: Associate Professor of MCB, University of Arizona, Tucson, AZ, USA
https://riedel-kruse.arizona.edu/
Fabrizio Gabbiani: Professor of Neuroscience, Baylor Coll. Medicine, Houston, TX, USA; & Professor of Electrical and Computer Engineering, Rice University, Houston, TX, USA
Rainer Friedrich: Professor, FMI, Basel, Switzerland; https://zfin.org/ZDB-LAB-020725-1
Holger Krapp: Professor of Systems Neuroscience, Imperial College, London, UK
Nicho Hatsopoulos: Professor, University of Chicago, IL, USA
https://pondside.uchicago.edu/oba/faculty/Hatsopoulos/lab/
Leslie Kay: Professor, Dept. of Psychology, University of Chicago, IL, USA
http://kaylab.uchicago.edu/kay_bio.html
Laurent Moreaux: Research Scientist, Physics Department, Caltech, Pasadena, CA, USA
Mark Stopfer: Senior Investigator, Sensory Coding and Neural Assemblies, NIH, Bethesda, MD, USA
https://irp.nih.gov/pi/mark-stopfer
Mikko Vähäsöyrinki: Founder and CEO, Sensapex Oy, Oulu, Finland

Former Ph.D. students (with current position and affiliation):

Mike Hemberger: Deep Learning Scientist, nyris GmbH, Berlin, Germany
Lorenz Pammer: Consultant, Boston Consulting Group, Vienna, Austria
Sina Tootoonian: Visiting Scientist, The Francis Crick Institute, London, UK
Alessandro Coatti: Senior Science Policy Officer, Royal Society of Biology, London, UK
Ingmar Schneider: Senior Life Sciences Consultant, Avertim Deutschland GmbH, Bad Homburg, Germany
Andres Laan: Senior Quantitative Researcher, G-Research, London, UK
Viola Priesemann: Max Planck Group Leader, MPI Dynamics and Self-Organization, Goettingen, Germany
Kai Shen: Partner, McKinsey & Company, Shanghai, China
Ron Jortner: Managing Director, Masthead Biosciences, Cambridge, UK
Alex Bäcker: Entrepreneur, CEO Qless Inc., Altadena, CA, USA
Bede Broome: Managing Director, ASSURED Healthcare Partners, N.Y., USA
Stijn Cassenaer: Research Scientist, Caltech, CA, USA
Vivek Jayaraman: Senior Group Leader, HHMI Janelia RC, Ashburn, VA, USA
https://www.janelia.org/lab/jayaraman-lab/members
Kate MacLeod: Research Professor, University of Maryland, MD, USA
Ofer Mazor: Instructor in Neurobiology, Harvard Medical School, Boston, MA, USA
Mohammed Naraghi: CEO, Aenova Holding GmbH, Germany
Maria Papadopoulou: Scientific Research Associate, Caltech, CA, USA
Javier Perez-Orive: Director of Research, Instituto Nacional de Rehabilitación, Mexico City, Mexico
Mike Wehr: Professor of Psychology, University of Oregon, Eugene, OR, USA
https://psychology.uoregon.edu/profile/wehr

H. TEACHING

Caltech:

Bi-150	Introduction to Neuroscience; Senior undergrad. class; 1990 - 2005
Bi-250b	Systems Neuroscience; Graduate class; 2003 - 2009
Bi252	Seminar presentation classes
Bi 162	co-taught with Erin Schuman; Electrophysiology Lab course 2004 - 2009

Phys-1, CNS-100 and other classes: Guest lecturer

MPIBR Frankfurt/IMPRS teaching:

2011 -	IMPRS classes: Cellular, Synaptic, Systems Neuroscience, Ethics
2011 -	Graduate Seminar Class: Systems Neuroscience, co-taught with Prof. Jochen Triesch, FIAS and Physics

Summer/Winter Courses:

2018	FENS CAJAL Computational Neuroscience Course, Lisbon, Portugal
2018	FENS CAJAL Behavioral Neuroscience Course, Lisbon, Portugal
2016	ISN-JNC Flagship School, Alpbach, Austria
2015 - 2017	Course co-director, European (FENS) CAJAL Computational Neuroscience Course, Champalimaud Institute, Lisbon, Portugal
2012	Drosophila Neuroscience Course, MPI Chemical Ecology, Jena, Germany
2011	Neuroscience Course, University of Copenhagen, Denmark
2005	Computational Neuroscience Course, Arcachon, France
1998	Cold Spring Harbor Labs NY, Neurobiology Course, NY, USA
1996	US-German School of Neuroethology, Munich, Germany
1996	Woods Hole, Scholar in Residence, Neural Systems and Behavior Course, Woods Hole, MA, USA
1996	Cold Spring Harbor NY, Neurobiology Course, NY, USA
1995	Cold Spring Harbor NY, Drosophila Neurobiology Course, NY, USA

I. GRANTS (since at MPI Brain Research)

ERC Advanced Investigator Grant “Claustrum, Brainstem and Sleep: Mechanisms and Function”, “SleepCirc”, Grant Agreement No. GA 834446, 01.07.2019 – 30.06.2024

DFG CRC 1080, (coPI) Homeostatic regulation of REM-nonREM transition in sleep, project C04, Jan 2021-Dec 2024

LOEWE CMMS Grant, Mehrskalen-Modellierung, Teilprojekt P7: „Datenanalyse und Modellierung für Wachstum und Musterbildung in Sepien“, 01.01.2020 – 31.12.2023
(in EN: Multi-scale modelling, subproject P7: “Data analysis and modelling for growth and pattern formation in cuttlefish”)

DFG CRC 1080, (coPI) Homeostatic regulation of REM-SWS balance in sleep, project C04, Jan 2017-Dec 2020

ERC Advanced Investigator Grant “Function and computation in three-layer cortex”, “Cortex Simplex” project no. 322705, 01.02.2013 – 31.01.2018

LOEWE Neuronale Koordination Forschungsschwerpunkt Frankfurt (NeFF), (coPI) “Dynamik und Koordination in einem dreischichtigen Kortex”, project no. A6, 01.01.2011 – 31.12.2013
(in EN: LOEWE Neuronal Coordination Research Focus (NeFF), (coPI) “Dynamics and coordination in a three-layered cortex”)

J. EXPERTISE

Cellular, Systems and Computational Neuroscience, Cortical Computation,
Neural Coding, Olfaction, Vision, Cortex Evolution, Visual Texture Processing, Sleep

K. PUBLICATIONS:

1. Laurent G (2020). On the value of model diversity in neuroscience. ***Nat Rev Neurosci*** **21**:395-96.

2. Norimoto H, Fenk LA, Li HH, Tosches MA, Gallego-Flores T, Hain D, Reiter S, Kobayashi R, Macias A, Arends A, Klinkmann M, Laurent G (2020). A claustrum in reptiles and its role in slow-wave sleep. ***Nature*** **578**:413-18.

3. Reiter S and Laurent G (2020). Visual Perception and Cuttlefish Camouflage. ***Curr Opin Neurobiol*** **60**:47-54.

4. Hemberger M, Shein-Idelson M, Pammer L and Laurent G (2019). Reliable sequential activation of neural assemblies by single pyramidal cells in a three-layered cortex. ***Neuron*** **104**:353-69.

5. Tosches MA and Laurent G (2019). Evolution of neuronal identity in the cerebral cortex. ***Curr Opin Neurobiol*** **56**:199-208.

6. Harris KD, Groh JM, DiCarlo J, et al. (2019). Functional properties of circuits, cellular populations, and areas. In: The Neocortex (Eds. Singer W, Sejnowski TJ and Rakic P) Strüngmann Forum Reports, vol. 27, J. Lupp, series editor. Cambridge, MA: MIT Press: pp. 223-65.

7. Reiter S, Huelsdunk P, Woo T, Lauterbach M, Eberle J, Anne Akay L, Longo A, Meier-Credo J, Kretschmer F, Langer J, Kaschube M and Laurent G (2018). Elucidating the control and development of skin patterning in cuttlefish. ***Nature*** **562**:361-66.

8. Tosches MA, Yamawaki TM, Naumann RK, Jacobi AA, Tuschev G and Laurent G (2018). Evolution of pallium, hippocampus and cortical cell types revealed by single-cell transcriptomics in reptiles. ***Science*** **360**:881-88.

9. Fournier J, Mueller CM, Schneider I and Laurent G (2018). Spatial information in a non-retinotopic visual cortex. ***Neuron*** **97**:164-80.

10. Reiter S, Liaw HP, Yamawaki TM, Naumann RK and Laurent G (2017). On the value of reptilian brains to map the evolution of the hippocampal formation. ***Brain Behav Evol*** **90**:41-52.

11. Shein-Idelson M, Pammer L, Hemberger M and Laurent G (2017). Large-scale mapping of cortical synaptic projections with extracellular electrode arrays. ***Nature Methods*** **14**:882-90.

12. Fournier J, Mueller CM, Shein-Idelson M, Hemberger M and Laurent G (2016). Consensus-based sorting of neuronal spike waveforms. ***PLoS ONE*** **11**:e0160494.

13. Shein-Idelson M, Ondracek JM, Liaw H-P, Reiter S and Laurent G (2016). Slow waves, sharp waves, ripples and REM in sleeping dragons. ***Science*** **352**:590-95.

14. Laurent G (2016). Connectomics: a need for comparative studies. ***e-Neuroforum*** **7**:54-55.

15. Hemberger M, Pammer L and Laurent G (2016). Comparative approaches to cortical microcircuits. ***Curr Opin Neurobiol*** **41**:24-30.

16. Laurent G et al., (2016). Cortical evolution: Introduction to the reptilian cortex. In: Micro, Meso- and Macro-Dynamics of the Brain. (Eds. Buzsaki G and Christen Y) *Research and Perspectives in Neuroscience*. Springer Cham (CH): pp. 23-33.

17. Huston SJ, Stopfer M, Cassenar S, Aldworth ZN and Laurent G (2015). Neural encoding of odors during active sampling and in turbulent plumes. ***Neuron*** **88**:403-18.

18. Naumann RK, Ondracek JM, Reiter S, Shein-Idelson M, Tosches MA, Yamawaki TM and Laurent G (2015). The reptilian brain. ***Current Biol*** **25**:R317-21.

19. Fournier J, Müller CM and Laurent G (2015). Looking for the roots of cortical sensory computation in three-layered cortices. ***Curr Opin Neurobiol*** **31**:119-26.

20. Laan A, Gutnick T, Kuba MJ and Laurent G (2014). Behavioral analysis of cuttlefish traveling waves and its implications for neural control. ***Current Biol*** **24**:1737-42.

21. Frégnac Y and Laurent G (2014). Neuroscience: Where is the brain in the Human Brain Project? ***Nature*** **513**:27-29.

22. Shen K, Tootoonian S and Laurent G (2013). Encoding of mixtures in a simple olfactory system. ***Neuron*** **80**:1246-62.

23. Rutishauser U, Kotowicz A and Laurent G (2013). A method for closed-loop presentation of sensory stimuli conditional on the internal brain-state of awake animals. ***J Neurosci Methods*** **215**:139-55.

24. Cassenaer S and Laurent G (2012). Conditional modulation of spike-timing-dependent plasticity for olfactory learning. ***Nature*** **482**:47-52.

25. Narayan A, Laurent G and Sternberg PW (2011). Transfer characteristics of a thermosensory synapse in *Caenorhabditis elegans.* ***Proc Natl Acad Sci USA*** **108**:9667-72.

26. Papadopoulou M, Cassenaer S, Nowotny T and Laurent G (2011). Normalization for sparse encoding of odors by a wide-field interneuron. ***Science*** **332**:721-25.

27. Tootoonian S and Laurent G (2010). Electric times in olfaction. ***Neuron*** **67**:903-5.

28. Geffen MN, Broome BM, Laurent G and Meister M (2009). Neural encoding of rapidly fluctuating odors. ***Neuron*** **61**:570–86.

29. Du J, Riedel-Kruse IH, Nawroth JC, Roukes ML, Laurent G and Masmanidis SC (2009). High-resolution three-dimensional extracellular recording of neuronal activity with microfabricated electrode arrays. ***J Neurophysiol*** **101**:1671–78.

30. Moreaux L and Laurent G (2008). A simple method to reconstruct firing rates from dendritic calcium signals. ***Front Neurosci*** **2**:176-85.

31. Murthy M, Fiete I and Laurent G (2008). Testing odor response stereotypy in the *Drosophila* mushroom body. ***Neuron*** **59**:1009-23.

32. Rabinovich M, Huerta R and Laurent G (2008). Neuroscience. Transient dynamics for neural processing. ***Science*** **321**:48-50.

33. Turner GC, Bazhenov M, and Laurent G (2008). Olfactory representations by *Drosophila* mushroom body neurons. ***J Neurophysiol* 99**:734-46.

34. Laurent G, Borst A (2008). Dendritic short stories from invertebrates: linking biophysics and computation. In: Dendrites (Eds. Stuart G, Spruston N and Hauesser M) 2nd Edition, Oxford University Press.

35. Moreaux L and Laurent G (2007). Estimating firing rates from calcium signals in locust projection neurons in vivo. ***Front Neural Circuits* 1, 2**:1-13.

36. Jayaraman V and Laurent G (2007). Evaluating a genetically encoded optical sensor of neural activity using electrophysiology in intact adult fruit flies. ***Front Neural Circuits* 1, 3**:1-9.

37. Cassenaer S and Laurent G (2007). Hebbian STDP in mushroom bodies facilitates the synchronous flow of olfactory information in locusts. ***Nature* 448**:709-13.

38. Assisi C, Stopfer M, Laurent G and Bazhenov M (2007). Adaptive regulation of sparseness by feedforward inhibition. ***Nat Neurosci* 10**:1176-84.

39. Jortner RA, Farivar SS and Laurent G (2007). A simple connectivity scheme for sparse coding in an olfactory system. ***J Neurosci* 27**:1659-69.

40. Broome BM, Jayaraman V and Laurent G (2006). Encoding and decoding of overlapping odor sequences. ***Neuron* 51**:467-82.

41. Laurent G (2006). Olfactory microcircuits: dynamics and computation beyond the receptor neurons. In: Microcircuits (Eds. Grillner S and Graybiel AM) MIT Press: pp. 191-215.

42. Gabbiani F, Cohen I and Laurent G (2005). Time-dependent activation of feed-forward inhibition in a looming-sensitive neuron. ***J Neurophysiol* 94**:2150-61.

43. Mazor O and Laurent G (2005). Transient dynamics versus fixed points in odor representations by locust antennal lobe projection neurons. ***Neuron* 48**:661-73.

44. Wilson RI and Laurent G (2005). Role of GABAergic inhibition in shaping odor-evoked spatiotemporal patterns in the Drosophila antennal lobe. ***J Neurosci* 25**:9069-79.

45. Bazhenov M, Stopfer M, Sejnowski TJ and Laurent G (2005). Fast odor learning improves reliability of odor responses in the locust antennal lobe. ***Neuron* 46**:483-92.

46. Laurent G (2005). Shall we even understand the fly's brain? In: 23 Problems in Systems Neuroscience. (Eds. Van Hemmen JL and Sejnowski TJ) Oxford University Press.

47. Wilson RI, Turner GC and Laurent G (2004). Transformation of olfactory representations in the Drosophila antennal lobe. ***Science* 303**:366-70.

48. Friedrich RW, Habermann CJ and Laurent G (2004). Multiplexing using synchrony in the zebrafish olfactory bulb. ***Nat Neurosci* 7**:862-71.

49. Gabbiani F, Krapp HG, Hatsopoulos N, Mo CH, Koch C and Laurent G (2004). Multiplication and stimulus invariance in a looming-sensitive neuron. ***J Physiol Paris* 98**:19-34.

50. Perez-Orive J, Bazhenov M and Laurent G (2004). Intrinsic and circuit properties favor coincidence detection for decoding oscillatory input. ***J Neurosci* 24**:6037-47.

51. Friedrich RW and Laurent G (2004). Dynamics of olfactory bulb input and output activity during odor stimulation in zebrafish. ***J Neurophysiol*** **91**:2658-69.

52. Stopfer M, Jayaraman V and Laurent G (2003). Intensity versus identity coding in an olfactory system. ***Neuron*** **39**:991-1004.

53. Tracey WD, Wilson RI, Laurent G, and Benzer S (2003). *painless*, a *Drosophila* gene essential for nociception. ***Cell*** **113**:261-73.

54. Gabbiani F, Krapp HG, Koch C and Laurent G (2002). Multiplicative computation in a visual neuron sensitive to looming. ***Nature*** **420**:320-24.

55. Pouzat C, Mazor O and Laurent G (2002). Using noise signature to optimize spike-sorting and to assess neuronal classification quality. ***J Neurosci Methods*** **122**:43-57.

56. Perez-Orive J, Mazor O, Turner GC, Cassenaer S, Wilson RI and Laurent G (2002). Oscillations and sparsening of odor representations in the mushroom body. ***Science*** **297**:359-65.

57. Laurent G (2002). Olfactory network dynamics and the coding of multidimensional signals. ***Nat Rev Neurosci*** **3**:884-95.

58. Nusser Z, Kay LM, Laurent G, Homanics GE and Mody I (2001). Disruption of GABA(A) receptors on GABAergic interneurons leads to increased oscillatory power in the olfactory bulb network. ***J Neurophysiol*** **86**:2823-33.

59. Friedrich RW and Laurent G (2001). Dynamic optimization of odor representations by slow temporal patterning of mitral cell activity. ***Science*** **291**:889-94.

60. Rabinovich M, Volkovskii A, Lecanda P, Huerta R, Abarbanel HD and Laurent G (2001). Dynamical encoding by networks of competing neuron groups: winnerless competition. ***Phys Rev Lett*** **87**:068102.

61. Bazhenov M, Stopfer M, Rabinovich M, Huerta R, Abarbanel HD, Sejnowski TJ and Laurent G (2001). Model of transient oscillatory synchronization in the locust antennal lobe. ***Neuron*** **30**:553-67.

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intersegmental interneurones in the locust. ***J Comp Physiol A*** **160**:341-53.

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126. Laurent G and Richard D (1986). The organization and role during locomotion of the proximal musculature of the cricket foreleg. I Anatomy and innervation. ***J Exp Biol*** **123**:255-83.

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L. INVITED TALKS (1): *MEETINGS, WORKSHOPS AND SYMPOSIA*

2020 Keynote speaker, ILANIT-FISEB Conference, Eilat, Israel
2019 Ascona Meeting on Neural Circuits, Ascona, Switzerland
2019 Computational Neuroscience and Methods Meeting, Capbreton, France
2019 Bernstein Meeting (talk and workshop), Berlin, Germany
2019 EMBO Workshop **Beyond Standard**, Berlin, Germany
2019 Brain Conference, Neural Dynamics, Copenhagen, DK
2018 Neural Net GDR Conference, ENS, Paris, France
2018 Journée Francois Jacob, Collège de France, Paris, France
2018 Neuroscience Symposium, Kavli Institute, NTNU Trondheim, Norway
2018 Genomics & Systems Biology Conference, NYU in Abu Dhabi, UAE
2018 Collective Behavior Meeting, Janelia HHMI, USA
2018 Neural Dynamics Symposium, Stanford University, USA
2017 Neuroscience of Behavior Meeting, Weizmann Institute, Rehovot, Israel
2017 15th Meeting of the Austrian Neuroscience Association, Vienna, Austria
2017 Kavli Salon, Budapest, Hungary
2017 BSCB/BSDB Genetics Society Joint Meeting 2017, Warwick University, UK
2016 Keynote speaker, GDR Vision 2016, Toulouse, France
2016 Keynote speaker, CRCNS Conference, Paris, France
2016 Keynote Speaker, Intl. Conference on Systems Biology, Barcelona, Spain
2016 Masakazu Konishi Lecturer, Woods Hole, MA, USA
2016 113th International Titisee Conference, Building tools for quantifying brain and behavior, Titisee, Germany
2016 Norman Davidson Lecturer, Caltech, Pasadena, CA, USA
2016 Keynote Speaker, 4th European Zebrafish Meeting, Lisbon, Portugal
2016 Bernstein Center Freiburg, Brain Manifesto 2.0, Beuggen, Germany
2015 Director's Series Seminar, HHMI JFRC, Chevy Chase, MD, USA
2015 Max Planck International Neuroscience Symposium, Synapses and Circuits, Buenos Aeres, Argentina
2015 NYU Canonical Neural Computation Conference, Florence, Italy
2015 Gordon Conference, Circuit Modulation, Hong-Kong, Hong-Kong

2015 IPSEN Meeting *Circuit Dynamics*, Paris, France
2015 *Sunposium*, Max Planck Florida Institute, Jupiter, FL, USA
2014 Keynote Lecturer, FENS (European Neurosciences) Meeting, Milano, Italy
2014 AREADNE Meeting on Systems Neuroscience, Santorini, Greece
2013 Ascona Circuits Meeting, Ascona, Switzerland
2013 Cognitive Neuromorphic Engineering Workshop, Capo Caccia, Italy
2013 Kavli Ceremony, Berlin, Germany
2012 FLiACT Workshop on Electrophysiology, Jena, Germany
2012 Sensory Coding Meeting, University of Göttingen, Germany
2012 Students Conference, U. of Würzburg, Grad. School of Life Sciences, Würzburg, Germany
2012 Sensory Coding and Natural Environment Meeting, IST Austria, Klosterneuburg, Austria
2012 University of Tokyo, Neural Circuits Symposium, Tokyo, Japan
2012 International Neuroscience Winter Conference, Sölden, Austria
2012 Computational Neuroscience Meeting, Leysin, Switzerland
2012 Biophysical Chemistry, Molecular Biology and Cybernetics of Cell Function, Klosters, Switzerland
2011 Neural Circuit Function and Development, Ascona, Switzerland
2011 CEA-LETI, Grenoble, France
2011 Keynote Lecture, NIPS, Granada, Spain
2011 Computational Neuroscience, Barcelona, Spain
2011 Annual Meeting Max Planck Society, Berlin, Germany
2010 FACETS/College de France, Paris, France
2010 Meeting at Hungary Academy of Science, Pecs, Hungary
2010 First Francis Crick Symposium, CSH Asia, Suzhou, China
2010 Meeting at Neuroscience Institute, La Jolla, CA, USA
2010 Seminar at Bernstein Center, LMU, Munich, Germany
2010 AREADNE Meeting, Santorini, Greece
2010 Francis Crick Cold Spring Harbor Symposium, Suzhou, China
2010 Neuroscience Institute Meeting, La Jolla, CA, USA
2010 ANS Meeting, Sydney, Australia
2009 Biozentrum Symposium, Basel, Switzerland
2009 Strüngmann Forum, FIAS, Frankfurt, Germany
2009 Bernstein Centers Meeting, Frankfurt, Germany
2008 Hippocampus Meeting, Svalbard, Spitsbergen, Norway
2008 AREADNE Meeting, Santorini, Greece
2008 Genes and Brain Meeting, Paris, France
2008 European Systems Consortium, Gif-sur-Yvette, France
2007 Ladislav Tauc Conference in Neurobiology, Gif-sur-Yvette, France
2007 Integrative Approaches to Brain Complexity, Wellcome Trust, Hinxton, UK
2007 Special Lecture, 2007 Soc. for Neuroscience Meeting, San Diego, CA, USA
2007 Circuits and Plasticity Gordon Conference, Newport, RI, USA
2007 Learning and Memory Meeting, UCLA, Los Angeles CA, USA
2007 Santa Fe/Los Alamos Center for Computational Neuroscience, Santa Fe, NM, USA
2007 NRP Meeting, Neuroscience Institute, La Jolla, CA, USA
2007 NSF-NIH Neuroscience Meeting, University of Maryland, MD, USA
2007 Florey Lecture, Goettingen Neurobiology Meeting, Göttingen, Germany
2006 Monell/ARO Meeting, Monell Inst., University of Pennsylvania, Philadelphia, PA, USA
2006 AREADNE Meeting, Santorini, Greece
2005 Neurons and Sensory Systems, Neuron Symposium, Washington, DC, USA
2005 The Assembly and Function of Neuronal Circuits, Ascona, Switzerland
2005 Synaptic Communication in Neuronal Networks (Monod Conf.), Roscoff, France
2005 UCLA, Computational Neuroscience Meeting, Los Angeles, CA, USA
2005 UCLA, Learning & Memory Meeting, Los Angeles, CA, USA
2005 CoSyNe Meeting, Utah, UT, USA
2005 Seventy-second Stated Meeting of NRP Associates, The Neurosciences Institute, La Jolla, CA, USA
2004 McGovern Institute, MIT, Cambridge, MA, USA
2004 Aspen Physics Institute, Aspen, CO, USA
2004 Hertie Lecturer, European Neuroscience Meeting, Lisbon, Portugal
2004 Dahlem Conference, Berlin, Germany

2004 CoSyNe Meeting, Cold Spring Harbor Labs, CSH, NY, USA
2003 National Academies, Keck Futures Initiative, NAS, Irvine, CA, USA
2003 Monte Verità Neuroscience Meeting, Ascona, Switzerland
2003 Computational Neuroscience Workshop, Santa Fe, NM, USA
2003 NRP Meeting, Neuroscience Institute, La Jolla, CA, USA
2002 European Neuroscience Meeting, Paris, France
2002 NEC Lectures in Biophysics, NEC & Princeton University, Princeton, NJ, USA
2002 Bioforum *Deciphering the Brain* Public Lecture, Caltech, Pasadena, CA, USA
2002 Learning and Memory Meeting, UCLA, Los Angeles, CA, USA
2002 Institut Henri Poincaré, Paris, France
2001 Independent Component Analysis Meeting, Del Mar, CA, USA
2001 Society for Neuroscience 2001 Meeting, San Diego, CA, USA
2001 Gordon Conference (Chemical Senses), Newport, RI, USA
2001 Keystone Symposium (Synapses), Taos, NM, USA
2001 Winter Brain Research Conferences, Antigua, West Indies
2000 Stimulus Statistics Meeting, Cold Spring Harbor Labs, NY, USA
2000 Gordon Conference (Synaptic Function), NH, USA
2000 McKnight Foundation Meeting, Aspen, CO, USA
2000 Keck Foundation Symposium, Caltech, Pasadena, CA, USA
2000 Biophysics Society Meeting Symposium, New Orleans, LA, USA
1999 Monte Verità Meeting on Neurons and Circuits, Ascona, Switzerland
1999 IBRO, Jerusalem, Israel (sent postdoctoral fellow Dr. Mark Stopfer)
1999 Sloan Centers for Theoretical Neuroscience Meeting, La Jolla CA, USA
1999 Salk Institute-Caltech Joint Meeting, La Jolla, CA, USA
1999 Learning and Memory Gordon Conference, Newport RI, USA
1999 French Neuroscience Society Meeting, Marseille, France
1999 Temporal Coding Workshop, Bremen, Germany
1998 European Olfaction Meeting, Siena, Italy
1998 Jacques Monod Conference, Roscoff, France
1998 Olfaction and Ecology Meeting, Oxford, UK
1998 Olfaction Meeting, CNRS, Paris, France
1998 AChems Meeting, Sarasota, FL, USA
1998 Role of Time in Neural Processing, Titisee, Germany
1997 Neurobiology Meeting, CNRS, Arcachon, France
1997 ESITO Meeting, Sardinia, Italy
1997 Learning and Memory Meeting, Angers, France
1997 Time in Neuroethology Meeting, Charlottesville, VA, USA
1997 Santa Fe Institute, Sloan Ctrs. for Theoretical Neuro. Workshop, NM, USA
1997 Snowbird Computational Neuroscience Workshop, UT, USA
1996 Development and Evolution of Brain Centers for Learning Meeting, IL, USA
1996 Olfaction Meeting, Max Planck Society, Frankfurt, Germany
1996 Gordon Conference, Chemical Senses, Newport, RI, USA
1995 Vincent Dethier Memorial Symposium, Amherst, MA, USA
1995 Neuroethology Congress, Olfaction Symposium, Cambridge, UK
1995 Olfaction Meeting, Lund, Sweden
1995 Santa Fe Institute, Sloan Ctrs. for Theoretical Neuro. Workshop, NM, USA
1995 Neural Coding Meeting, Prague, Czech Republic
1995 N.A.S.-Humboldt Foundation, *Frontiers in Science* Meeting, Dresden, Germany
1994 Computational Neuroscience Workshop, Woods Hole, MA, USA
1994 Hebb Symposium on Neurons and Biological Dynamics, Toronto, Canada
1993 Computations and Neural Systems '93 Meeting, Washington DC, USA
1993 Santa Fe Institute Workshop on Dynamical Systems, Santa Fe, NM, USA
1993 ONR Single Neuron Computation Meeting, Baltimore, MD, USA
1993 Single Neuron Computation Meeting, Tübingen, Germany
1992 Integrative Neuroscience Meeting, MPI Biol. Cybernetics, Tübingen, Germany
1992 Neurobiology Meeting, Göttingen, Germany
1991 ONR Neuroethology and Robotics Meeting, Woods Hole, MA, USA
1989 UK Association of Physiologists Meeting, Bristol, UK
1989 CNRS Meeting on Sensorimotor Integration, Arcachon, France
1989 Snowbird Meeting on Neural Networks, Snowbird, UT, USA

1988 Neuroethology Congress, Satellite Meeting, Tutzing, Germany

M. INVITED TALKS (2): *SEMINARS and LECTURES*

2022 Rockefeller University, NY, NY, USA
2021 Brown University, RI, USA
2021 Biozentrum, Basel, CH
2021 University of Michigan, MI, USA
2021 Weizmann Institute, Rehovot, Israel
2019 Salk Institute, La Jolly, USA
2019 Forbes Lecture, MBL Woods Hole, MA, USA
2019 Francis Crick Institute, London, UK
2019 Max Delbrück Center, Berlin, Germany
2019 EMBL Rome and Sapienza U. Rome, Italy
2019 Princeton University, Neuroscience, Princeton NJ, USA
2019 Columbia University, Dept. Biology, NY, NY, USA
2018 Champalimaud CU, Lisbon, Portugal
2018 SISSA, Trieste, Italy
2018 Adrian Lecture, University of Cambridge, UK
2018 Systems Seminars Series, UCL London
2018 University of Freiburg, Neuroscience Series, Freiburg, Germany
2018 Friedrich Miescher Institute Basel, Switzerland
2018 Zuckermann Center, Columbia University, NYC, USA
2018 EMBL Distinguished Lectures Series, Heidelberg, Germany
2017 Lamport Lecture, University of Washington, Seattle WA, USA
2017 NIH Neuroscience Seminar Series, Bethesda, Maryland, USA
2015 Students Invited Speakers Series, LMU Munich, Germany
2015 Seminar, University of Alicante, Spain
2015 Seminar, Directors' Series, JFRC, VA, USA
2015 Seminar, UCL, London, UK
2014 École Normale Supérieure, IBENS, Paris, France
2014 Centre for Brain and Behavior, Oxford University, UK
2014 Brain Research Institute, University of Zürich, Switzerland
2014 Erasmus Medical Center, University of Rotterdam, Holland
2014 New York University, Dept. Neuroscience, New York, NY, USA
2014 Baylor College of Medicine, Houston TX, USA
2014 Hanse Lecture, Bremen, Germany
2013 Duke University, Neuroscience, Durham NC, USA
2012 MPI Chemical Ecology, Jena, Germany
2012 École Polytechnique, Paris, France
2012 RIKEN Brain Science Institute Summer School, Tokyo, Japan
2012 Max Planck Institute for Dynamics and Self-Organization, Göttingen, Germany
2012 University of Edinburgh, Dept. Neuroscience, Scotland, UK
2012 Newcastle University, Dept. Neuroscience, Newcastle, UK
2012 Weizmann Institute of Science, Rehovot, Israel
2012 Harvard University, Cambridge MA, USA
2012 Janelia Farms, HHMI, VA, USA
2011 University of Copenhagen, Denmark
2011 Champalimaud Institute for the Unknown, Lisbon, Portugal
2011 University of Heidelberg, Germany
2011 University of Tübingen, Germany
2011 Max Birnstiel Lecture, Vienna, Austria
2010 J.W. Goethe University, Biology Department, Frankfurt, Germany
2010 J.W. Goethe University, Mathematics Department, Frankfurt, Germany
2010 Friedrich Miescher Institut, Basel, Switzerland
2010 Munich University, Bernstein Computational Center, Munich, Germany
2009 Konishi Lecturer, MBL, Woods Hole, MA, USA
2009 Swammerdam Lecture, Amsterdam, Holland
2009 UCSF, San Francisco CA, USA
2008 Teuber Lecture, MIT, Biology Department, Cambridge, MA, USA
2008 CNRS, Neurobiology, Marseille, France

2008 CNRS/Université Paris V, Neuroscience, Paris, France
2008 CRG, Barcelona, Spain
2008 University of Cambridge, Zoology and Physiology Depts., Cambridge, UK
2008 Max Planck Institute of Neurobiology, Martinsried, Germany
2008 Max Planck Institute of Biophysics, Frankfurt, Germany
2008 École Normale Supérieure, Physics Department (parts i-iii), Paris, France
2007 JFRC Seminar, JFRC/HHMI, VA, USA
2007 Neuroscience Program, Harvard Medical School, Boston, MA, USA
2007 Neuroscience Department, Yale University, New Haven, CT, USA
2007 Neuroscience Lecture, UT South Western Medical Center, UTSWU, Dallas, TX, USA
2007 Center for Studies in Physics and Biology Seminar, Rockefeller U., NYC, USA
2007 Biology Department, Caltech, Pasadena, CA, USA
2006 Neuroscience Graduate Seminars Series, UC San Diego, La Jolla, CA, USA
2006 Department of Neurobiology, University of Chicago, Chicago, IL, USA
2006 Pasteur Institute, Paris, France
2006 Department of Neuroscience, NYU, New York, NY, USA
2006 Penn/Monell Joint Lecture, Monell Inst., U. of Pennsylvania, Philadelphia, PA, USA
2006 Heller Lecture, Hebrew University, Jerusalem, Israel
2006 Janelia Farms Research Center, HHMI, VA, USA
2006 D-Biol Special Lecture, ETH, Biology Department, Zürich, Switzerland
2006 CNBC Retreat Speaker, Carnegie Mellon University, Pittsburgh, PA, USA
2006 Harvard Bauer Center, Cambridge, MA, USA
2005 Clark Center and Dept. of Biology, Stanford University, Palo Alto, CA, USA
2005 Department of Neuroscience, UCLA, CA, USA
2005 HWNI Student Seminar Series, UC Berkeley, CA, USA
2005 Computational Neuroscience, Arcachon, France
2005 Ernest C. Watson Lecture, Caltech, Pasadena, CA, USA
2005 The David Bodian Seminar in Neuroscience, Johns Hopkins U., MD, USA
2005 University of Maryland, Baltimore MD, USA
2005 Neuroscience Colloquium Series, Rutgers University, NJ, USA
2004 MIT McGovern Institute Retreat, MA, USA
2004 UC Davis, CA, USA
2004 UC Riverside, CA, USA
2003 Vollum Institute, Portland, OR, USA
2003 Caltech Physics Colloquium, Pasadena, CA, USA
2002 Harvard University, Bio Labs, Cambridge, MA, USA
2002 École Supérieure de Physique et Chimie (ESPCI), Paris, France
2002 Perkins Lecturer, Cambridge University, UK
2002 UCSF, Department of Anatomy, San Francisco, CA, USA
2002 Washington University, St Louis, MO, USA
2002 UC Irvine, Neurobiology Department, Irvine, CA, USA
2001 UCSD, Department of Biology, La Jolla, CA, USA
2001 Duke University Medical School, Durham, NC, USA
2001 Brandeis University, Waltham, MA, USA
2000 USC, Neuroscience Department, Los Angeles, CA, USA
2000 Naples Zoological Station, Naples, Italy
2000 Stanford University, Neuroscience Department, Palo Alto, CA, USA
2000 City of Hope Medical Center, Duarte, CA, USA
1999 National Institutes of Health, Bethesda, MD, USA
1999 University of California at San Diego, La Jolla, CA, USA
1999 University of California at Berkeley, Berkeley CA, USA
1999 Mount Sinaï Medical Center, New York, NY, USA
1999 University of Pennsylvania, Dept. of Neuroscience, Philadelphia, PA, USA
1999 Rutgers University, Newark NJ, USA
1999 Southwestern University Medical Center, Mol. Cell Biol. Dept., Dallas, TX, USA
1998 University of California, Physiol. Department, Los Angeles, CA, USA
1998 University of California, Mol. Cell Biol. Dept., Berkeley, CA, USA
1998 University of Iowa, Dept. of Biology, Iowa City, IA, USA
1998 Institute for Nonlinear Science, Physics Dept., UCSD, La Jolla, CA, USA
1998 Max Planck Institutes for Biol. Cybernetics and Devel. Biology, Tübingen, Germany

1998 Max Planck Institute for Brain Research, Frankfurt, Germany
1998 Caltech, Theory Seminar Series, Pasadena, CA, USA
1997 Harvard Medical School, Boston, MA, USA
1997 UC Davis, CA, USA
1997 Helmholtz Club, Irvine, CA, USA
1997 Dupont Lecturer, ARL, Tucson, AZ, USA
1997 Columbia University Medical School, New York, NY, USA
1997 UC Irvine, Department of Psychobiology, Irvine, CA, USA
1996 Yale University, Dept. Cell and Molecular Physiology, New Haven, CT, USA
1996 UCSF, Sloan Center for Theoretical Neuroscience, San Francisco, CA, USA
1995 Cornell University, Neuroscience Department, Ithaca, NY, USA
1995 UCSD, Institute for Computational Neuroscience, San Diego, CA, USA
1995 University of Washington, Pharmacology Dept., Seattle, WA, USA
1995 Brandeis University, Biology Dept., Waltham, MA, USA
1994 University of Würzburg, Genetics Department, Würzburg, Germany
1994 Freie Universität Berlin, Neurobiology Department, Berlin, Germany
1994 California Institute of Technology, CNS Program, Pasadena, CA, USA
1994 Helmholtz Club, Irvine, CA, USA
1994 UCB, Dept. Cell and Mol. Biology, Berkeley, CA, USA
1993 California Institute of Technology, CNS Seminar, Pasadena, CA, USA
1992 ARL, University of Arizona, Neurobiology Division, Tucson, AZ, USA
1992 University of Southern California, Neuroscience Dept., Los Angeles, CA, USA
1992 University of Oregon, Neuroscience Department, Eugene, OR, USA
1991 UCR, Entomolgy Department, Riverside, CA, USA
1990 UCSD, Biology Department, San Diego, CA, USA
1990 Brandeis University, Biology Department, Waltham, MA, USA
1990 University of Massachussetts, Neuro. and Behavior Dept., Amherst, MA, USA
1989 University of Konstanz, Biology Department, Germany
1989 Max Planck Institute for Behavioral Physiology, Seewiesen, Germany
1989 University of Tübingen, Department of Biocybernetics, Tübingen, Germany
1989 CNRS, Neuroscience Division, Marseille, France
1989 University of Cambridge, Zoology Department, Cambridge, UK
1988 University of Newcastle, Neurobiology Department, Newcastle, UK