CURRICULUM VITAE - LUCA MAZZUCATO, Ph.D.

Associate Professor
Departments of Biology, Mathematics, and Physics
Institute of Neuroscience
University of Oregon,
Eugene, OR 97403

Tel. +1 (267) 886-0164
lmazzuca@uoregon.edu

Lab website: www.mazzulab.com
https://github.com/mazzulab

CITIZENSHIP : Italy, United States.
LANGUAGES : English (fluent), Italian (native), Hebrew (basic).

OTHER ACADEMIC POSITIONS

2024/2025 *Visiting Professor*
Physics Department and Neuroscience Center, University of Padua, Italy

2025 *Visiting Scientist*
École Polytechnique Fédérale de Lausanne, Campus Biotech, Geneva, Switzerland

2024 *Visiting Scientist*
Redwood Center for Theoretical Neuroscience, University of California at Berkeley

2023 *Visiting Scholar*
Center for Neural Science, New York University

2023 *Visiting Scientist*
Center for Computational Neuroscience, Flatiron Institute, New York

2017-2018 *Associate Research Scientist*
Center for Theoretical Neuroscience, Columbia University, New York

2013-2017 *Research Assistant Professor*
Department of Neurobiology and Behavior, Stony Brook University

2008-2011 *Research Assistant Professor*
Simons Center for Geometry and Physics, Stony Brook

2009 *Visiting Scientist*
Kavli Institute for Theoretical Physics, University of California, Santa Barbara

2006 *Visiting Researcher*
Racah Institute for Physics, Hebrew University, Jerusalem

TRAINING POSITIONS

2012 *Senior Postdoctoral Associate*
Department of Neurobiology and Behavior, Stony Brook University

2005-2008 *Postdoctoral Associate*
School of Physics and Astronomy, Tel Aviv University.

2002 *Research Assistant*
High Energy Theory Group, Padua University

Funding

2023-2028 NSF-2238247 CAREER NSF (PI).
Neural mechanisms of optimal performance.

2022-2027 R01-MH127375 NIMH (co-PIs: Mazzucato, Kiani).
Causal power of cortical neural ensembles: mechanisms and utility for brain perturbations.

2021-2026 R01-DA055439 NIDA - NSF CRCNS (co-PIs: Mazzucato, Niell).
A mechanistic theory of serotonergic neuromodulation.

2021-2026 R01-NS118461 BRAIN Initiative (co-PIs: McCormick, Niell, Mazzucato, Jaramillo).
Brain states and flexible behavior.

2014-2019 K25-DC013557 NIDCD - Career Development Award (PI).
Spontaneous activity in the gustatory cortex.

2013-2014 Swartz Fellow in Theoretical Neurobiology - Award 66438.

Other Awards

2024 'Shaping a World-class University' Award, University of Padua, Italy.

2020-'23 NSF Accelnet "International network for brain-inspired computation" (co-I).

2019 CAS Program Grant Award, University of Oregon.

2015 CoSyNe Travel Award.

2013 Science playwriting competition, Stony Brook University.

2011 Howard Hughes Medical Institute Teaching Award.

2006 Marie Curie Research Training Network.

Education

2016 *Communicating science*
Alan Alda Center, Stony Brook.

2012 *Biophysics and computation in neurons and networks*
Summer course, Princeton University.

2004,'06,'07 *Prospects in theoretical physics*
Summer course, Institute for Advanced Study, Princeton.

2002-2005 Ph.D., *Elementary particle theory*
International School for Advanced Studies (SISSA/ISAS), Trieste.
Advisor: Adam Schwimmer (Weizmann Institute, Rehovot)

1997-2001 Laurea degree in theoretical physics *summa cum laude* (equiv. to M.Sci.)
Padua University.
Advisors: Mario Tonin and Marco Matone

Teaching

Fall 2024	*Instructor*, University of Padua, Italy Dynamical Systems for Behavioral and Neural Data.
Fall 2024	*Instructor*, University of Padua, Italy Physical Models of Living Systems.
Fall 2020,'21, '22, '23	*Instructor*, University of Oregon MATH 410/510 class - Machine Learning and Statistics.
Fall '21, '22, '23	*Instructor*, University of Oregon BIO 607 class - Research Inclusivity in STEM.
Spring 2020,'22	*Instructor*, MATH 607 - Neural networks.
Spring 2019	*Instructor*, University of Oregon BIO 610 class - Introduction to Neural Computation.
Fall 2019-current	*Instructor*, University of Oregon Applied Math PhD Curriculum (co-created).
Fall 2011	*Instructor*, Stony Brook University PHYS 687 class - Computational Neuroscience.
Fall 2009	*Instructor*, Stony Brook University MATH 125 class - Calculus I.

Schools (Instructor)

2024 *Summer Workshop on the Dynamic Brain, Friday Harbor.*
2024 *Computational and Cognitive Neuroscience School, Cold Spring Harbor Asia, Suzhou, China.*
2023 *20th Annual GCC Theoretical and Computational Neuroscience Conference*, Houston.
2021 *Advanced Neural Data Analysis Course*, Julich, Germany.
2020 *Neuromatch Academy.*
2019 *ConTaMiNeuro Summer School in Computational Neuroscience*, Venice, Italy.
2010 *Avogadro meeting on theoretical physiscs*, Galileo Galilei Institute, Florence, Italy.
2009 *Fundamental aspects of superstring theory*, Kavli Institute for Theoretical Physics, University of California, Santa Barbara.
2008 *Avogadro meeting on theoretical physics*, Trieste, Italy.
2007 *Avogadro meeting on theoretical physics*, Alessandria, Italy.
2006 *Avogadro meeting on theoretical physics*, Alessandria, Italy.

Workshops, Conferences organized	**2022**	*Focus Session: Information Processing in Sensory and Motor Systems, APS March Meeting, Chicago.*
	2020	*Simons program on "Neural networks and the data science revolution"*
	2020	*Simons workshop on "The physics of neural circuits and network dynamics"*
	2019	*Bernstein workshop on "Cortical computation via metastable activity"*
	2011	*Simons workshop on "Higher spins and holography"*
	2010	*Simons workshop on "Superstrings on Ramond-Ramond backgrounds"*

Other Activities	**2010-'12**	*Simons Center Neuroscience Program* (creator and co-organizer)
	2010-'12	*Simons Center Outreach Program* (creator and organizer)
	2009-'11	*Simons Manhattan Seminars* (co-organizer)
	2008-'10	*Simons Center Geometry and Physics weekly meetings* (organizer)
	2005-'08	*Theoretical physics journal club, Tel Aviv University* (organizer)

Professional memberships: American Physical Society, Association for Chemical Senses, Society for Neuroscience

Peer-review: *Neuron, Nature Methods, Nature Communications, eLife, Journal of Neuroscience, Current Biology, Scientific Reports, PLOS Computational Biology, NBDT, CoSyNe abstracts reviewer, Journal of Computational Neuroscience, Proceedings of the Royal Society B, Neural Computation, Physical Review Letters, Physical Review E, Physical Review Applied, Physical Review Research, Journal of High Energy Physics, Nuclear Physics B, Physical Review D, Physics Letters B, Letters in Mathematical Physics, Frontiers in mathematical physics, BioSystems.*

Mentees:
Stefano Recanatesi, PhD (postdoc) → Assistant Professor, Technion, Israel
Merav Stern, PhD (postdoc) → Independent Fellow, Rockefeller University
David Wyrick (graduate student)→ Scientist, Allen Institute for Brain Science, Seattle
Nicu Istrate (graduate student) → Data analyst, Databricks
Michael Johnson (research assistant) → Data scientist

Publications

ORIGINAL RESEARCH: JOURNAL ARTICLES: *,†=equal contribution (co-first, co-senior).
[1-16]=authors in alphabetical order.
underlined=trainees from the lab.

SUBMITTED/UNDER REVISION

[39] – E. Tentori, G. Kastellakis, M. Maschietto, A. Leparulo, P. Poirazi, **L. Mazzucato**, M. Allegra, S. Vassanelli, Spontaneous Dynamics Predict the Effects of Targeted Intervention in Hippocampal Neuronal Cultures, bioRxiv (2025).

[40] – A. De, R. Kiani, **L. Mazzucato**, Towards model-based design of causal manipulations of brain circuits with high spatiotemporal precision, Current Opinion in Behavioral Science, 2025.

[38] – A. De, R. Kiani, **L. Mazzucato**, Towards model-based design of causal manipulations of brain circuits with high spatiotemporal precision, bioRxiv (2025).

[37] – L. Papadopoulos, S. Jo, K. Zumwalt, S. Jaramillo, M. Wehr, D. C. McCormick, **L. Mazzucato**†, Modulation of metastable ensemble dynamics explains optimal coding at moderate arousal in auditory cortex. bioRxiv, 2024-04.

[36] – D. G. Wyrick, N. Cain, R. S. Larsen, J. Lecoq, ..., H. Choi†, M. Garrett†, **L. Mazzucato**†, Differential encoding of temporal context and expectation under representational drift across hierarchically connected areas. bioRxiv, 2023-06.

[35] – B.C. Souza, J.L. Klee, **L. Mazzucato**†, F. P. Battaglia†, Coexisting persistent and dynamic representations of stimulus, time and trial outcome emerge in the hippocampus-prefrontal circuitry during learning of a temporal association, bioRxiv, 2020.

IN PRESS

[34] – S. J. Stednitz*, A. Lesak*, A. L. Fecker, P. Painter, P. Washbourne, **L. Mazzucato**†, Ethan K Scott†, Coordinated social interaction states revealed by probabilistic modeling of zebrafish behavior. Current Biology (2025.

[33] – E. Williams, A. H. Ryoo, T. Jiralerspong, A. Payeur, M. G. Perich, **L. Mazzucato**†, G. Lajoie†, Expressivity of Neural Networks with Random Weights and Learned Biases. International Conference on Learning Representations (2025).

[32] – D. Hulsey, K. Zumwalt, **L. Mazzucato**†, D. McCormick†, S. Jaramillo†, Decision-making dynamics are predicted by arousal and uninstructed movements. Cell Reports 43 (2), 2024.

[31] – M. Stern*, N. Istrate*, **L. Mazzucato**, A reservoir of timescales emerges in recurrent circuits with heterogeneous neural assemblies, Elife 12, e86552, 2023.

[30] – A. Nejatbakhsh*, F. Fumarola*, S. Esteki, T. Toyoizumi, R. Kiani†, **L. Mazzucato**†, Predicting the effect of micro-stimulation on macaque prefrontal activity based on spontaneous circuit dynamics, *Physical Review Research*, 5 (4), 043211, 2023.

[29] – S. Ogawa*, F. Fumarola*, **L. Mazzucato**, Multitasking via baseline control in recurrent neural networks, *Proceedings of the National Academy of Sciences*, 120 (33) e2304394120, 2023.

[28] – F. Cazettes, **L. Mazzucato**, M. Murakami, J. P. Morais, A. Renart, Z. F. Mainen, A repertoire of foraging decision variables in the mouse brain, *Nature Neuroscience*, 1-10, 2023.

[27] – P.R. Parker*, E.T. Abe*, N.T. Beatie, E.S. Leonard, D.M. Martins, S.L. Sharp, D.G. Wyrick, **L. Mazzucato** and C.M. Niell, Distance estimation from monocular cues in an ethological visuomotor task, *eLife*, 2022.

[26] – S. Recanatesi*, U. Pereira*, M. Murakami, Z. Mainen†, **L. Mazzucato**†, Metastable attractors explain the variable timing of stable behavioral action sequences, *Neuron* 110 (1), 139-153. 2022. Press: *Around the O*: 'Researchers predict rat behaviors from brain activity.'

[25] – A. Pakman, A. Nejatbakhsh, D. Gilboa, A. Makkeh, **L. Mazzucato**, M. Wibral, E. Schneidman, Estimating the Unique Information of Continuous Variables, *Advances in Neural Information Processing Systems 2021 (NeurIPS)*.

[24] – D. Wyrick and **L. Mazzucato**, State-dependent control of cortical processing speed via gain modulation. *J. Neurosci.* 41 (18), 3988-4005, 2021.

[23] – J. B. Priestley*, M. Ahmed*, A. Castro, F. Stefanini, E. Balough, E. Lavoie, **L. Mazzucato**, S. Fusi, A. Losonczy, Hippocampal network reorganization underlies the formation of a temporal association memory. *Neuron*, 2020.
Press: *Neuron Preview*: 'Tracing a Path for Memory in the Hippocampus'

[22] – **L. Mazzucato**, G. La Camera, A. Fontanini, Expectation-induced modulation of metastable activity underlies faster coding of sensory stimuli, *Nat. Neuro.* 22, 787-796 (2019).
Press: *Quanta magazine:* 'Brains Speed Up Perception by Guessing What?s Next.'
MedicalXpress: 'Scientists create a model for the neural basis of expectation.'
Futurity: 'Is this how expecting a taste affects the brain?'

[21] – J. B. Priestley*, M. Ahmed*, A. Castro, F. Stefanini, E. Balough, E. Lavoie, **L. Mazzucato**, S. Fusi, A. Losonczy, Changes in Effective Hippocampal Network Coupling Mediate Learning and Memory of Associations Between Temporally Discontiguous Stimuli. Biological Psychiatry 83 (9), S115, 2018.

[20] – L. Le Donne, **L. Mazzucato**, R. Urbanczik, W. Senn, G. La Camera, Spike–based reinforcement learning for temporal stimulus segmentation and decision making, *CSW Workshop, NeurIPS 2016.*

[19] – **L. Mazzucato**, A. Fontanini, G. La Camera, Stimuli reduce the dimensionality of cortical activity, *Front. in Syst. Neuro.* 2016; 10:11.

[18] – **L. Mazzucato**, A. Fontanini, G. La Camera, Dynamics of multistable states during ongoing and evoked cortical activity, *J Neurosci.* 2015 Nov 27; 33(48):18966-78.

[17] – A. Jezzini*, **L. Mazzucato***, G. La Camera, A. Fontanini, Processing of hedonic and chemosensory features of taste in medial prefrontal and insular networks, *J Neurosci.* 2013 Nov 27;33(48):18966-78.

[16] – **L. Mazzucato** and B. C. Vallilo, The Konishi multiplet at strong coupling, *J. High Energy Phys.* 1012 (2011) 029.

[15] – M. R. Douglas, **L. Mazzucato** and S. Razamat, Holographic dual of free field theory, *Phys. Rev. D* 83 (2011) 071701.

[14] – N. Berkovits and **L. Mazzucato**, Taming the b-antighost with Ramond- Ramond flux, *J High Energy Phys.* 1011 (2010) 019.

[13] – B. Keren-Zur, **L. Mazzucato** and Y. Oz, Dark matter and pseudo-flat directions in weakly coupled SUSY breaking sectors, *J High Energy Phys.* 0909 (2009) 041.

[12] – **L. Mazzucato** and B. C. Vallilo, On the non-renormalization of the AdS radius, *J High Energy Phys.* 0909 (2009) 056.

[11] – **L. Mazzucato**, Y. Oz and S. Theisen, Non-relativistic branes, *J High Energy Phys.* 0904 (2009) 073.

[10] – B. Keren-Zur, **L. Mazzucato** and Y. Oz, Direct mediation and a visible metastable supersymmetry breaking sector, *J High Energy Phys.* 0810 (2008) 099.

[9] – **L. Mazzucato**, Y. Oz and S. Yankielowicz, Supersymmetry breaking vacua from M-theory fivebranes, *J High Energy Phys.* 0711 (2007) 094.

[8] – I. Adam, A. Dekel, **L. Mazzucato** and Y. Oz, Integrability of type II superstrings on Ramond-Ramond backgrounds in various dimensions, *J High Energy Phys.* 0706 (2007) 085.

[7] – I. Adam, P.A. Grassi, **L. Mazzucato**, Y. Oz and S. Yankielowicz, Non-critical pure spinor superstrings, *J High Energy Phys.* 0703 (2007) 091.

[6] – **L. Mazzucato**, Remarks on the analytic structure of supersymmetric effective actions, *J High Energy Phys.* 0512 (2005) 026.

[5] – **L. Mazzucato**, Chiral rings, anomalies and electric-magnetic duality, *J High Energy Phys.* 0411, 020 (2004).

[4] – G. Bertoldi, S. Bolognesi, M. Matone, **L. Mazzucato** and Y. Nakayama, The Liouville geometry of N = 2 instantons and the moduli of punctured spheres, *J High Energy Phys.* 0405, 075 (2004).

[3] – M. Matone and **L. Mazzucato**, On the chiral ring of N=1 supersymmetric gauge theories, *J High Energy Phys.* 0310, 011 (2003).

[2] – M. Matone and **L. Mazzucato**, Branched matrix models and the scales of supersymmetric gauge theories, *J High Energy Phys.* 0307, 015 (2003).

[1] – M. Matone, **L. Mazzucato**, I. Oda, D. Sorokin and M. Tonin, The superembedding origin of the Berkovits pure spinor covariant quantization of superstrings, *Nucl. Phys. B* 639, 182-202 (2002).

Reviews & Perspectives

[3] – **L. Mazzucato**, Neural mechanisms underlying the temporal organization of naturalistic animal behavior, *eLife*, 11:e76577. 2022.

[2] – G. La Camera, A. Fontanini, **L. Mazzucato**, Cortical computations via metastable activity, *Curr. Op. in Neuro.* 2019 (58) 37-45; 10:11.

[1] – **L. Mazzucato**, Superstrings in AdS, *Phys. Rept.* 521 (2012) 1-68.

Software packages

[5] – D. Wyrick, **L. Mazzucato**, ANDA Summer School course. Exploration of metastable neural dynamics, statistical analyses to discover it from data, and attractor network models. (2021). https://github.com/mazzulab/ANDA_HMM_Course

[4] – D. Wyrick, **L. Mazzucato**, Cortical processing speed. A collection of matlab and python software to reproduce the results in Ref. [24]. (2021). https://github.com/mazzulab/cortical_processing_speed

[3] – **L. Mazzucato**, Matlab code to perform simulations and analysis of spiking network with external perturbations. (2020). https://github.com/mazzulab/perturb_spiking_net

[2] – **L. Mazzucato**, ContaMiNeuro Summer School course. Matlab code to explore metastable neural dynamics with statistical analyses and network simulations. (2019). https://github.com/mazzulab/contamineuro_2019_spiking_net

[1] – **L. Mazzucato**, Matlab code to reproduce results in Ref. [22]. (2019). https://github.com/mazzulab/expectation-spiking-net

Conference Proceedings

L. Mazzucato, A. Fontanini, G. La Camera, Spiking Model of Expectation in Taste Processing, *Chemical Senses*, Vol. 43. No. 4. Great Clarendon St, Oxford OX2 6DP, England: Oxford Univ Press, 2015.

L. Mazzucato, A. Fontanini, G. La Camera, Dynamics of ongoing and evoked neural activity in the gustatory cortex, *Chemical Senses*, Vol. 40. No. 7. Great Clarendon St, Oxford OX2 6DP, England: Oxford Univ Press, 2015.

L. Mazzucato, B. C. Vallilo, Anomalous Dimensions at Strong Coupling, *Eleventh Workshop on Non-Perturbative QCD*, Institut Astrophysique de Paris, June 6-10, 2011.

B. Keren-Zur, **L. Mazzucato**, Y. Oz, Direct mediation and a visible metastable supersymmetry breaking sector, *Particles and nuclei.* Proceedings, 18th Int. Conf., PANIC08, Eilat, Israel, November 9-14, 2008 - Nucl.Phys. A827 (2009) pp.1c-694c. doi: 10.1016/j.nuclphysa.2009.05.006.

Seminars

Conferences - Invited talks

2025 *Bernstein Conference, Frankfurt, Germany, upcoming* (keynote speaker).
2025 *Collective Dynamics and Information Processing in Neural Systems, Venice, Italy, upcoming.*
2024 *Workshops at Bernstein Conference, Frankfurt, Germany.*
2023 *Computational Neuroethology Workshop*, Jackson, WY.
2023 *NeuroNex Workshop, Houston.*
2023 *Oregon Society for Neuroscience.*
2023 *Non-Human Primate Research Consortium (NHPNC) Workshop, Flatiron Institute.*
2022 *International Conference on Mathematical Neuroscience.*
2022 *CoSyNe Workshops, Montreal, Canada.*
2022 *Winter Conference on Brain Research* (declined).
2022 *Aspen Center for Physics, Aspen.*
2021 *Computational Neuroethology Workshop*, Panel discussion, Jackson, WY.
2021 *Bernstein Conference Workshop*, Berlin, Germany.
2020 *Physics of Neural Circuits Workshop*, Simons Center for Geometry and Physics, Stony Brook.
2019 *Bernstein Conference Workshop*, Berlin, Germany.
2019 *ConTaMiNeuro Summer School in Computational Neuroscience*, Venice, Italy (keynote speaker).
2019 *CoSyNe Workshops*, Cascais, Portugal.

Conferences - Contributed talks

2022 *CoSyNe, Lisbon, Portugal* (Dr. Merav Stern, first author).
2022 *CoSyNe, Lisbon, Portugal* (Dr. Lia Papadopoulos, first author).
2018 *27th Computational Neuroscience Meeting (CNS) Workshops*, Seattle.
2017 *International Conference on Mathematical Neuroscience*, Boulder.
2017 *Symposium in Neuroscience*, Stony Brook University, New York.
2017 *Sense2Synapse*, The Rockefeller University, New York.
2015 *Spotlight*, Alan Alda Center for Communicating Science, Stony Brook.
2014 *Winter School on Quantitative Biology*, International Center for Theoretical Physics, Trieste, Italy.
2011 *11th Workshop on non-perturbative quantum chromodynamics*, Institut d'Astrophysique de Paris.
2006 *Pure spinors in superstring theory*, Institute for Theoretical Physics, Sao Paulo, Brazil.
2006 *Eurostrings 2006*, DAMTP, University of Cambridge, UK.
2005 *Nonperturbative gauge dynamics workshop*, Trieste, Italy.
2004 *Gauge theories, gravity and strings*, Capri, Italy.
2003 *Theoretical physics conference*, Cortona, Italy.
2002 *Theoretical physics conference*, Cortona, Italy.

Selected invited seminars

2025 Brain and Mind Institute, EPFL, Lausanne, Switzerland.
2024 Institute for Data Science and Analytics, Universita' Bocconi, Milan, Italy.
2024 Redwood Center for Theoretical Neuroscience, University of California at Berkeley.
2023 Department of Physics, New York University, New York.
2023 University of Strasbourg, France.
2023 Simons Center for Geometry and Physics, Stony Brook.
2023 Princeton Neuroscience Institute, Princeton University.
2023 Center for Theoretical Neuroscience, Columbia University, New York.
2023 HHMI Janelia Research Campus, Ashburn.
2023 Allen Institute for Brain Science, Seattle.
2023 Center for Computational Neuroscience, University of Washington, Seattle.
2023 Center for Computational Neuroscience, Flatiron Institute, New York.
2023 Langone Medical Center, New York University, New York.

2022 Department of Statistics, Oregon State University, Corvallis.
2022 Institute des Hautes Etudes Scientifiques, Paris, France.
2022 University of British Columbia, Vancouver, Canada.
2021 Bernstein Center for Computational Neuroscience, Berlin, Germany.
2021 Donders Centre for Neuroscience, Radboud Universiteit Nijmegen, The Netherlands [declined].
2021 Computational Neuroscience Center, University of Washington.
2021 Biological Sciences Department, Illinois Institute of Technology.
2021 Applied Math Department, Harvard University.
2021 Swartz Seminar Series, Center for Neural Sciences, NYU.
2020 World Wide Theoretical Neuroscience (virtual, www.wwtns.online).
2020 SISSA/ISAS, Trieste, Italy.
2020 Max Planck Institute for Brain Research, Frankfurt, Germany.
2020 Graduate Center, City University of New York, New York.
2019 Chemistry Department, University of Oregon, Eugene.
2019 Physics Department, University of Oregon, Eugene.
2019 Champalimaud Center for the Unknown, Lisbon, Portugal.
2018 Center for Theoretical Neuroscience, Columbia University.
2018 Department of Neuroscience, University of Padova, Italy.
2018 Computational Neuroscience Center, University of Washington, Seattle.
2017 Biorobotics Institute, Scuola Superiore Sant'Anna, Pisa.
2017 Icahn School of Medicine, Mount Sinai Hospital, New York.
2017 Center for Computational Biology, Flatiron Institute, New York.
2017 *American Physical Society March Meeting*, New Orleans.
2017 Université Paris Decartes, Paris.
2017 Institute of Neuroscience, University of Oregon.
2017 *NIH K-award Workshop*, School of Medicine, Stony Brook University.
2016 *American Physical Society March Meeting*, Baltimore.
2016 *Colloquium*, Brookhaven National Lab.
2015 Initiative for the Theoretical Sciences, CUNY Graduate Center.
2015 Simons Center for Quantitative Biology, Cold Spring Harbor Lab.
2011 Physics Department, Brown University.
2011 Perimeter Institute, Waterloo, Canada.
2010 SLAC National Accelerator Lab, Stanford University.
2010 SISSA, Trieste, Italy.
2010 Padua University, Italy.
2009 School of Physics and Astronomy, Tel Aviv University, Israel.
2008 Joint High Energy Theory seminar, Newe-Shalom, Israel.
2007 Yang Institute for Theoretical Physics, Stony Brook University.
2007 Department of Physics and Astronomy, University of Pennsylvania.
2007 Physics Department, California Institute of Technology.
2007 Berkeley Center for Theoretical Physics, University of California, Berkeley.
2007 Physics Department, Harvard University.
2007 Physics Department, Princeton University.
2007 Center for Cosmology and Particle Physics, New York University.
2006 School of Physics and Astronomy, Tel Aviv University, Israel.
2006 SISSA, Trieste, Italy.
2006 Physics Department, Milan University-Bicocca, Italy.
2005 Joint High Energy Theory seminar, Newe-Shalom, Israel.
2004 Institute for Theoretical Physics, Amsterdam University, The Netherlands.
2004 Physics Department, Pisa University, Italy.
2004 International Center for Theoretical Physics, Trieste, Italy.

Outreach & In the news

2024 *The Transmitter* interview: 'To keep or not to keep: Neurophysiology's data dilemma.'
2024 'Math and the Brain' Lecture Series, Public Lecture, University of Padua, Italy.
2024 'Hopfield and Boltzmann', Public lecture, University of Padua, Italy.
2023 'Legal psilocybin mushrooms in Oregon: a prologue,' graphic novel, Oregon Health Authority, .
2022 'What happens in your brain when you are in the zone,' Oregon Museum of Science and Industry, Portland.
2022 'Researchers predict rat behaviors from brain activity' in Around the O.
2021 'Drawn to Science' on the *Oregon Quarterly Magazine* and on Around the O.
2020 *A trip into serotonin*, A. McNamee & L. Mazzucato, graphic novel, link to website.
2020 *Searching for the origin of time in the brain*, SciencePub, Portland. Youtube.
2019 *Scientific American*: 'Magnet and Neuron Model Also Predicts Arctic Sea Ice Melt.' Link to website.
2019 *Quanta magazine*: 'Brains Speed Up Perception by Guessing What's Next.' Link to website.
2019 *MedicalXpress*: 'Scientists create a model for the neural basis of expectation.'
2019 *Futurity*: 'Is this how expecting a taste affects the brain?'
2013 *Thinking about food*, Spotlight at Alan Alda Center for Communicating Science, Stony Brook. Youtube.
2010- Correspondent for *Oggiscienza.it*, popular science online magazine.
2010- Member of the Italian National Journalist Guild (Ordine dei giornalisti).