

Academic Curriculum Vitae of Prof. Dr. Eng. M. GIUGLIANO

Citizenship, year/place of birth : Italian; 1974, Genoa (Italy)

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Academic Education and Qualifications

- 2023 – 2034** ASN, Full Professorship (05/D1 - PHYSIOLOGY + 09/D2 - BIOENGINEERING)
2017 – 2034 ASN, Full Professorship (09/G2 - BIOENGINEERING)
2017 – 2028 ASN, Associate Prof. (05/D1 - PHYSIOLOGY + 09/D2 - BIOENGINEERING)
2001 Polytechnic of Milan (I), **Doctorate in Bioengineering** (eval: excellent)
1997 Univ. Genoa (I): **Electronic Engineering** (110/110 *cum laude* , 5 years)
1992 Champagnat High School, Genoa (I), **Scientific Diploma** (score: 57/60)

Current Positions

- 2024 –** Dept. NEUBIOMET, UNIMORE (Modena), **Associate Prof. (ING/06 - 09/G2, Bioeng.)**
2022 – Neuroscience Area, SISSA (Trieste), **Associate Prof. (BIO/09 - 05/D1, Physiology)**
2019 – Neuroscience Area, SISSA (Trieste), **Director** of the “ Neuronal Dynamics ” Lab
2020 – 2024 EC-H2020 FET-OPEN “ IN-FET ” project , **Coordinator of the consortium**

Past positions (in Italy and abroad)

- 2019 – 2022** Neuroscience Area, SISSA, **Researcher type B (BIO/09 - 05/D1, Physiology)**
2016 – 2019 Dept. Biomed. Sci., Univ. Antwerp (Belgio), **Hoogleraar (Full Prof.) tenured**
2013 – 2015 Dept. Biomed. Sci., Univ. Antwerp (B), **Hoofddocent (Associate Prof.) tenured**
2011 – 2012 Dept. Biomed. Sci., Univ. Antwerp (B), **Docent (Assistant Prof.) tenured**
2008 – 2010 Dept. Biomed. Sci., Univ. Antwerp (B), **Docent (Assistant Prof.) tenure-track**
2005 – 2008 Brain Mind Institute, EPFL (CH), **Junior group leader (H. Markram 's lab)**
2001 – 2005 Dept. Physiology, Univ. Bern (CH), **HFSP- postdoc (HR. Lüscher 's lab)**
1997 – 2001 Dept. Bioph. & Electr. Eng., Univ. Genova (I), **PhD student (M. Grattarola 's lab)**

Past positions and research experience (in Italy and abroad)

- 2013 – 2016** EC-FP7 FET-OPEN “ BRAINLEAP ” project , **Coordinator of the consortium**
2011 – 2015 EC-FP7 Marie-Curie ITN “ NAMASEN ” , **Coordinator of the consortium**
2012 – 2015 EC-FP7-NMP STREP “ MERIDIAN ” project , **Deputy-Coord. of the consortium**
2017 – 2019 Univ. Antwerp (B), **Molecular, Cell & Network Excitability Director Lab**
2013 – 2016 Flanders Neuroelectronic Inst., Leuven (B), **part-time position (20%)**
2008 – 2019 Univ. Antwerp (B), **Theoretical Neurobiol. & Neuroengineering Lab Director**
2019 Research Foundation Flanders-funded **visiting scientist** (1 month)
2018 SISSA, “collaborazioni di eccellenza”, **visiting professor** (4-month)
2016 QWANE Biosciences, Lausanne (CH), **industrial secondment** (4-month)
2008 – 2018 Brain Mind Institute, EPFL, Lausanne (CH), **external collaborator**

- 2010 – 2018** Dept. of Computer Science, University of Sheffield (UK), **visiting professor**
- 1999** Inst. de Neurosci. Magendie, Bordeaux (F), **visiting PhD (G. Le Masson's lab)**
- 1999** SISSA, Biophysics Sector, Trieste, **visiting PhD (A. Nistri's lab)**
- 1997 – 1998** Inst. Neuroinformatics, ETH Zürich (CH), **visiting PhD (K. Martin's lab)**
- 1995 – 1996** Advanced Biotech. Center, Genoa (I), **intern. student (R. Cancedda 's lab)**

Certifications, Education and Research Training

- 2023** SISSA, Practical Course and “tirocinio” (mod. 3.2, 6.2, 8, Ministerial Decree 5/8/21)
- 2023** IZSLER, National legislation + Ethics level 1 (mod. 1-2, Ministerial Decree 5/8/21)
- 2023** IZSLER, Biology & management of rodents/lagomorphs (mod 3.1, 4-5, 6.1,7, MD 5/8/21)
- 2005** Laboratory Animal Science - Fed. Swiss Cant. Veterinary Off. (FELASA-Cat. C)
- 2004** Laboratory Animal Science - Fed. Swiss Cant. Veterinary Off. (FELASA-Cat. B)
- 2022** Special waste management and ADR - basic course (chap. 1.3 ADR 2021)
- 2022** Supervisors' Training Course and Safety at work Course (EU dir. 89/391/EEC)
- 2013** ITACE.be Flemish Univ. Consortium (B) – Academic English certification level C1
- 2005** Hebrew Univ. Jerusalem (Israel), 13th School in Life Sciences on “Dendrites”
- 2002** Naturwissensch. & Medizinisches Inst. (Reutlingen), MicroElectrode-Array course
- 2001** Intl. School on Biophysics of Ion Channels & Channelopathies, Venezia, (SIBPA)
- 2000** Workshop on Neuromorphic Engineering, Telluride (USA)
- 1999** IEEE Eng. in Medicine & Biology Soc., Intl. Summer School, Siena (I)
- 1999** EC Course in Computational Neuroscience, Crete (Greece)
- 1998** Univ. Genova, *State Engineer Examination* (score: 110/110)

Awards and recognitions (in Italy and abroad)

- 2009** Ghent, Belgium, **best poster, industrial sponsor Cochlear (€ 0.5k)**
- 2008** Univ. La Sapienza, Rome, **Science Award to Young Investigators (€ 5k)**
- 2003** Swiss Physiol. Society, **Asher-Hess Young Investigators Award (2nd prize)**
- 2001 – 2004** Human Frontier Science Program (F), **long-term fellowship awardee (3 yr)**
- 1997** Univ. Genova, **Dignity of the press** for the degree thesis
- 2004 Italian Neuroscience Society,** **travel grant**, for the FENS congress
- 1998** Politecnico Milano, national selection for doctoral courses (**1st place**, 114/120)
- 1997** Univ. Genova (I), national selection for doctoral courses (**1st place**, 114/120)

Attracting research funding “external” (7'276.9 K€)

As PI in Trieste (2020-2025)

- 2022 – 2025** MIUR-PNRR Infrastructures, eBRAINS-Italy, PI (600K€)
- 2022 – 2026** EC-HE, EIC-Pathfinder - CROSSBRAIN Project, PI (463K€)
- 2020 – 2023** EC-Flagship, SGA3 - Human Brain Project, PI (66K€)
- 2020 – 2023** EC-H2020, FET - IN-FET Project, **PI and Coordinator** (847K€)

As PI in Antwerpen (2008-2020)

- 2018 – 2020** EC-Flagship, SGA2 - Human Brain Project, P.I. (180 K€)

2017 – 2019	<i>Grant G.0F15.17.N, Research Foundation Flanders (FWO), P.I.</i>	(330 K€)
2016 – 2018	<i>EC-Flagship, SGA1 - Human Brain Project, P.I.</i>	(100 K€)
2015	<i>Congress Organisation grant, Research Foundation Flanders (FWO)</i>	(2.5 K€)
2012 – 2017	<i>Belgian Science Policy Office, P.I.</i>	(500 K€)
2013 – 2016	<i>EC-FP7 ICT FET-OPEN, P.I. and Coordinator</i>	(605 K€)
2012 – 2016	<i>Grant G.0888.12.N, Research Foundation Flanders (FWO), P.I.</i>	(213 K€)
2012 – 2015	<i>EC-FP7 ICT FET-OPEN Strep Grant, P.I.</i>	(420 K€)
2012 – 2015	<i>EC-FP7 NMP Strep Grant, P.I.</i>	(400 K€)
2011 – 2015	<i>EC-FP7 Marie Curie Initial Training Network, P.I. and Coordinator</i>	(447.4 K€)
2011 – 2015	<i>Grant G.0136.11N, Research Foundation Flanders (FWO), co-P.I.</i>	(92 K€)
2010 – 2013	<i>Grant “ACIN”, EC FP-7 “Matera+” / IWT, PI</i>	(224K€)
2010 – 2012	<i>“e-GAP2” grant, UK Royal Society, co-PI</i>	(10K€)
2009 – 2011	<i>Grant G.0836.09, Research Foundation Flanders (FWO)</i>	(225K€)
2009 – 2010	<i>Congress Organization grant, “Centro Stefano Franscini”, co-P.I.</i>	(16K€)
2008 – 2011	<i>Professorship Mandate, Foundation “Franqui Stichting”, P.I.</i>	(134K€)
2008 – 2011	<i>“Stoicescu research grant”, EPFL, co-P.I.</i>	(250K€)

As a junior PI in Losanna/Bern (2001-2008)

2006 – 2009	<i>Grant “NEURONAN”, EC FP-6, co-PI</i>	(460K€)
2005 – 2008	<i>Research Grant, Swiss National Science Foundation, co-PI</i>	(500K€)
2001 – 2004	<i>Long-term Fellowship award, Human Frontier Science Program</i>	(300K\$)

Attracting research funding “internal”

(812.4 K€)

As PI in Antwerpen (2008-2020) and in Genoa (2000-2001)

2015	<i>Congress Organisation grant, Univ. Antwerp</i>	(1.0K€)
2013	<i>Development Support Grant, Univ. Antwerp, co-P.I.</i>	(50K€)
2012	<i>PhD salary grant, Univ. Antwerp, P.I.</i>	(40K€)
2011	<i>Development Support Grant, Univ. Antwerp, P.I.</i>	(40K€)
2010	<i>Congress Organization grant, Univ. Antwerp, P.I.</i>	(1.4K€)
2009 – 2013	<i>New Research Initiatives grant (BOF/NOI), Univ. Antwerp, P.I.</i>	(130K€)
2008 – 2011	<i>Competitive Start-up grant, Univ. Antwerp, P.I.</i>	(98K€)
2000 – 2001	<i>Research grant for “Young Researchers”, Univ. Genova, PI</i>	(2K€)

Supervision of (PhD and Masters) theses and students

In progress (3)

2022 –	Definition/supervision of Oleksandr Ievlenski's PhD thesis (SISSA)
2022 – 2023	Definition/supervision of Jacopo Giorgi's PhD thesis (SISSA)
2019 – 2023	Definition/supervision of Ali Hosseini's PhD thesis (SISSA)
2019 – 2023	Definition/supervision of Matteo Manzati's PhD thesis (SISSA)

Successfully completed (11)

According to EU Regulation 679/2016, consent to use data provided here is NOT granted for marketing and for commercial profiling.

- 2018 – 2023** Definition/supervision of Andrea Stacchetti's PhD thesis (SISSA)
- 2018 – 2023** Definition/supervision of the PhD thesis, Dr. Elena Gjorgievska (SISSA)
- 2016 – 2020** Definition/supervision of the PhD thesis, Dr. Cristoph Verbist (Univ. Antwerpen)
- 2014 – 2020** Definition/sup . of the PhD thesis, Dr. Sebastiaan Vandevijver (Univ. Antwerpen)
- 2012 – 2016** Definition/ co-supervision of PhD thesis, Dr. F. Vahidpour (Univ. Hasselt)
- 2010 – 2014** Definition/supervision of the PhD thesis, Dr. Istvan Biro (Univ. Antwerpen)
- 2010 – 2015** Definition/supervision of the PhD thesis, Dr. Joao Couto (Univ. Antwerpen)
- 2012 – 2016** Definition/supervision of the PhD thesis, Dr. Rocco Pulizzi (University of Antwerp)
- 2005 – 2010** Definition/ co-supervision of the PhD thesis, Dr. Luca Gambazzi (EPFL)
- 2003 – 2007** Definition/ co-supervision of the PhD thesis, Dr. Maura Arsiero (Univ. of Bern)
- 2003 – 2007** Definition/ co-supervision of the PhD thesis, Dr. Harold Köndgen (Univ. of Bern)

Master/bachelor theses (~30)

- 2018 –** Univ. Trieste, definition/supervision of master's thesis (1-2/year)
- 2010 – 2019** Univ. Antwerpen, definition/supervision of master & bachelor theses (1-2/year)
- 2005 – 2008** EPFL, definition/co-supervision of 7 master's theses
- 1998 – 2003** Univ. Genova, definition/co-supervision of 5 theses & 20+ monographic projects

109 oral presentations and invited seminars (2000-2023)

- 2024** Neuronic Conference, València (ES)
- 2023** CIMaINa - Dept. of Physics, University of Milan (I)
- 2023** European Solid-state Devices and Circuits Conference, Lisbon (P)
- 2023** Human Slices Workshop, Charité-Universitätsmedizin, Freie Univ. Berlin (D)
- 2023** Brain-Inspired Computing, Univ. Modena (I)
- 2023** Center for Complexity & Biosystems, Dept. Physics, Univ. Milan (online)
- 2022** Neurosurgery, Head-Neck and NeuroScience Dept., Univ. Hospital Udine (I)
- 2021** Brain-Inspired Computing: From Neuroscience to AI, Univ. Modena (I)
- 2021** NeuroWire Virtual Club (neurowire.ca) at Laval University, Canada (online)
- 2021** Neural circuit complexity. Lake Como School of Advanced Studies (I)
- 2019** Dipartimento di Bioingegneria, Politecnico di Milano (I)
- 2019** Consiglio Nazionale delle Ricerche, Palermo (I)
- 2019** Department of Computer Science, The University of Sheffield (UK)
- 2019** Spring School Faculty, European Institute for Theoretical Neuroscience, Paris (F)
- 2019** International School of Advanced Studies, SISSA (Italia)
- 2019** Workshop, European Institute for Theoretical Neuroscience, Paris (France)
- 2018** School of Science and Technology, University of Nottingham Trent (UK)
- 2018** Workshop, European Institute for Theoretical Neuroscience, Paris (France)
- 2018** Workshop, University of Verona (Italia)
- 2018** OCNC: OIST Computational Neuroscience Course, OIST, Okinawa (Japan)
- 2018** Workshop, ICM Institut du Cerveau et de la Moelle épinière, Paris (F)
- 2018** “Neurotechnologies and computational methods” school, Univ. Genova (I)
- 2018** Workshop, I3S Instituto de Investigação e Inovação em Saúde, Porto (Portugal)

- 2018** Lecture on “Physics of the Brain”, University of Ghent (Be)
- 2018** Research Club, UZA, University Hospital of Antwerp (Be)
- 2017** Department of Life Sciences, University of Trieste (Italia)
- 2017** International Conference on Artificial Neural Networks, Alghero (Italia), keynote
- 2017** Italian National Conference on the Physics of Matter, ICTP & SISSA, Trieste (I)
- 2017** Workshop “Theory in the Human Brain Project”, OCSN Conference, Antwerp (B)
- 2017** Neuron Technology Summer School, SISSA, Trieste (Italia)
- 2017** WiBrain Conference, ICM Institute for Brain and Spinal Cord, Paris (France)
- 2017** The Cognitive Neuromorphic Engineering Workshop, Capocaccia (Italia)
- 2017** Epilepsy Genetic Network Meeting, Edegem (Belgio)
- 2016** Italian Institute of Technology, Genoa (Italia)
- 2016** NeuroMath: Theoretical & Computational Neuroscience, Cortona (Italia)
- 2016** Interuniversity Initiative on Optogenetics, KULeuven, Leuven (Belgio)
- 2016** Laboratory of Computational Neuroscience, BMI, EPFL Lausanne (Svizzera)
- 2016** Opto- & other genetic approaches in systems neuroscience, Nijmegen (NL)
- 2016** University of Padua (Italia), Neurotechniques School
- 2015** 2nd Belgian Neuroinformatics Congress, Leuven (B)
- 2015** *In vitro MEA Recording Techniques* Symposium, satellite to SfN, Chicago (US)
- 2015** Neurosurgery. Clinical research at the University Hospital Antwerp (B).
- 2015** 37th Annual Conference of the IEEE Eng. in Medicine & Biology Soc., Milan (I)
- 2015** “Spike initiation: models and experiments” CNS2015 Workshop, Prague (CZ)
- 2015** B-Debate: “A Dialogue with the Cerebral Cortex: Function & Interfacing” (Spain)
- 2015** University of Padua (Italia), Neurotechniques School
- 2015** Donders Centre for Neuroscience, Nijmegen (The Netherlands)
- 2015** BENEFRI Neuroscience Workshop, Univ. Bern (Svizzera)
- 2015** NETT Winter School on Neural Engineering, Imperial College London (UK)
- 2015** University of Padua (Italia), Neurotechniques School
- 2014** BRAIN-FETs: Clustering Workshop on Future Emerging Neurotech (IIT, Genova)
- 2014** Neuroinformatics 2014 Workshop, Leiden (The Netherlands)
- 2014** Laboratory of Computational Neuroscience, BMI, EPFL Lausanne (Svizzera)
- 2014** NERF Neurotechnology Symposium, Leuven (Belgio)
- 2013** Dept. Bioengineering, Imperial College London (UK)
- 2013** Congress of the Italian Society for Neuroscience (Italia)
- 2013** NAMASEN Marie Curie Training Network Workshop, University of Sheffield (UK)
- 2013** Russian Acad. Sci. - Inst. of Physics: Topical problems of Biophotonics (Russia)
- 2013** “Network Neurosciences: structure and dynamics” CNS2013 Workshop (France)
- 2013** NETT Marie Curie Training Network Workshop, University of Nottingham (UK)
- 2013** “Guru Lecture series” in Neuroscience, The University of Sheffield (UK)
- 2013** Department of Computer Science, The University of Sheffield (UK)
- 2013** Institute of Neuroinformatics Colloquium, ETHZ/University of Zürich (Svizzera)
- 2012** 60 Years of the Hodgkin-Huxley Model, Trinity College, Cambridge UK, speaker
- 2012** European School of Neuroengineering “Massimo Grattarola”, Genova (I), faculty
- 2012** Belgian Physical Society Congress, Brussels (Belgio)
- 2012** VIB - KULeuven, Leuven (Belgio)
- 2011** Univ. Bruxelles, Leuven (Belgio)

- 2011 IMEC, invited speaker, Leuven (Belgio)
- 2011 Polish Neuroscience Society, Lodz, (Poland)
- 2011 Max Planck Institute for Biol. Cybernetics, Tübingen (Germany)
- 2011 CNRS-Laboratory of Neurophysics and Physiology in Paris (France)
- 2011 University of Sheffield (UK), Dept. Computer Science
- 2011 University of Padua (Italia), Neurotechniques School
- 2011 The Israeli Institute of Technology (Technion), Haifa (Israel)
- 2010 Session Opening Lecture, NanoMed 2010, Berlin (Germany)
- 2010 Keynote speaker, Intel European Res. & Innovation Conference, Dublin (Ireland)
- 2010 European Brain Research Institute, Rome (Italia)
- 2010 Anniversary lecture - 20 years IMO-IMOMECE , Univ. Hasselt (Belgio)
- 2010 University of Mons, Materia Nova, Mons (Belgio)
- 2009 7th fall course on Comp. Neurosci. ,Max-Planck-Institut, Göttingen (D)
- 2009 EuroNanoForum 2009, Prague (Czech Republic)
- 2009 Neuroelectronic Hybrids, Inst. for Advanced Studies, Hebrew Univ. Jerusalem (IL)
- 2009 Univ. of Liege, Centre de Recherches du Cyclotron, Liege (Belgio)
- 2009 Univ. of Leuven, Dept. of Neuroscience, Leuven (Belgio)
- 2009 Johnson & Johnson (Janssen Pharmaceutica), CNS Discovery
- 2008 Department of Physics, University of Antwerp, Antwerp (Belgio)
- 2008 INCF National Node Workshop (Varenna, Italia)
- 2008 Workshop on Bioelectronics, IMEC, Leuven (Belgio)
- 2008 Computation in Cortical Circuits, Monte Verita', Ascona (Svizzera)
- 2008 Italian Institute of Technology, Genoa (Italia)
- 2008 Max-Planck-Institut, Göttingen (Germany)
- 2008 "FlandersBio: Neuro Café", Mechelen (Belgio), keynote
- 2008 Brain Research Institute, University of Zürich (Switzerland)
- 2008 Faculty of Medicine and Biology, University of Lausanne (Svizzera)
- 2007 Institute of Neuroinformatics Colloquium, ETHZ/University of Zürich (Svizzera)
- 2007 Institute of Molecular Biology and Biotechnology, Heraklion (Crete)
- 2006 European Brain Research Institute, Rome (Italia)
- 2006 Okinawa Computational Neuroscience Course, Okinawa (Japan), invited tutor
- 2006 European School of Neuro-IT and Neuroengineering Genova (Italia)
- 2005 Congress of the Italian Society for Neurosciences Ischia (Italia)
- 2005 QinetiQ UK Workshop "Demo & analysis of learning neuronal networks"
- 2005 Complex Systems Unit, Istituto Superiore di Sanità, Rome (I)
- 2004 Laboratory of Computational Neuroscience, BMI, EPFL Lausanne (Svizzera)
- 2004 Institut für Biologie III, Albert-Ludwigs Universität, Freiburg (Germany)
- 2003 Neural Microcircuitry Laboratory, BMI, EPFL Lausanne (Svizzera)
- 2001 – 2002 NeuroEngineering Workshop & Advanced School, Univ. Genova (Italia)
- 2001 Symposium at the Congress of Italian Society for Neurosciences, Turin (Italy)
- 2000 Dept. Communication, Computer and System Sciences, Univ. of Genoa (Italy)

Other institutional, editorial, scientific positions...

Institutional activities

- 2023** FVG Life Sciences Cluster , Scientific Technical Committee, member
- 2023** SISSA, task force " re-digitization" of educational infrastructures, member
- 2021 – 2023** SISSA, Library Council, Area representative
- 2021 – 2023** SISSA, Student-Professors Committee, Area representative
- 2021 – 2023** SISSA, Interdisciplinary Laboratory, SISSA, on Neuroethics topics, member
- 2020** SISSA, Post-pandemic Catalyst Group on academic teaching, member
- 2017 – 2019** Institute Born Bunge, Antwerpen (Belgium), member of the “steering committee”
- 2008 – 2013** Intl. Neuroinformatics Coordinating Facility (INCF), Director of Belgian Node.
- 2018 – 2020** Univ. Sapienza (I), Doctorate Course in Neuroscience, “foreign” member
- 2010 – 2014** University of Antwerpen (Belgium) , Center for Health Technologies, member

Editorial activities

- 2019 –** Co-Chief Editor of “*Frontiers in Neuroscience - Neural Technology*” (open access)
- 2020 –** Associate Editor for “*Frontiers in Cellular Neuroscience*” (open access)
- 2016 –** Associate Editor for “*Frontiers in Neuroscience - Neural Tech.*” (open access)
- 2011 –** Associate Editor for “*PLoS ONE*” (open access)
- 2012 – 2022** Associate Editor for “*PeerJ*” (open access)
- 2008 – 2016** Associate Editor for “*Frontiers in Neuroengineering*” (open access)
- 2022** Guest Editor for a special issue “*Frontiers in Neural Technologies*” (open access)
- 2018** Guest Editor for “*PLoS Computational Biology*” (open access)
- 2016** Guest Editor for a special issue “*Frontiers in Neuroscience*” (open access)
- 2000 –** Ad hoc reviewer for: *Nature Nanotech.*, *Nature Comm.*, *PNAS*, *eLife*, *PLoS Comp Biol*, *PLoS ONE*, *Cerebral Cortex*, *Eur. J. of Neuroscience*, *J. of Neurophysiology*, *Neural Computation*, *J. Computational Neuroscience*, *International J. of Neural Systems*, *Medical and Biological Engineering & Computing*, *IEEE Trans. on Neural Networks*, *IEEE Trans. on Biomed Eng*, *Frontiers in Neuroinformatics*, *Frontiers in Neuroengineering*, *Frontiers Cell. Neuroscience*.

Evaluator and Reviewer activities

- 2020** Dutch Research Council (NWO), Utrecht, The Netherlands
- 2019– 2020** Fondation Voir et Entendre (FVE), Paris, France
- 2015** U.S.-Israel Binational Science Foundation
- 2012 – 2014** MIUR - “Italian Ministry for Education University & Research”
- 2011 – 2012** ANR - France “Agence Nationale de la Recherche”
- 2009 – 2014** Research Executive Agency, Remote and Panel Evaluator for EC FP7
- 2004 – 2006** Swiss National Science Foundation
- 2022** Academic appointment, Area di Neuroscienze, SISSA
- 2019** Academic appointment, Dept. Scienze della Vita, Univ. Trieste (Italy)
- 2017** Academic appointment, Fac. of Medicine, Technion, Haifa (Israel)
- 2013** Academic appointment, Bernstein Center, Germany
- 2013** Academic appointment, Faculty of Science, Univ. Antwerp (Belgio)
- 2011** Academic appointment, Fac. of Medicine, Technion, Haifa (Israel)
- 2010** Academic appointment, Fac. of Engineering, EPFL (Svizzera)

Organizer of workshops, symposia and international conferences

- 2017** Antwerp (Belgio), co-organiser of a symposia on “Theory in HBP” (OCNS)
- 2017** Antwerp (Belgio), local organiser, OCNS days Computational Neuroscience Conference (~500 participants; 6 giorni; tutorials; satellite events)
- 2015** Mons (Belgio), 11th Congress of the Belgian Society for Neurosci. organiser
- 2015** Gdansk (Poland), 2-days scientific EC-ITN workshop organiser
- 2015** Prague (Czech Rep), co-organiser of a symposia on “Spike initiation” (OCNS)
- 2014** Genova (I), co-organiser of Workshop on Future Emerging NeuroTechnologies
- 2013** Paris (France), co-organiser of a symposia on “Network Neuroscience” (OCNS)
- 2012** Genova (I), co-organiser European Summer School of Neuroengineering
- 2011** Antwerp (Belgio), co-organizer Belgian Neuroinformatics Congress
- 2011** Antwerp (Belgio), 3-days workshop organiser
- 2010** Monte Verità (Ascona, Svizzera), 5-days workshop organiser
- 2009** Italian Society for Neurosciences, workshop organiser
- 2005** Italian Society for Neurosciences, Ischia (Italy), mini-symposium organiser.
- 2005** “BeNeFri” PhD Program in Neuroscience, Univ. Bern, Fribourg, & Neuchatel.
- 2001** “*Neuroengineering intensive course*”, Univ. Genoa
- 1999** “*In vitro neuroscience: contributions of bioengineering*”, Univ. Genoa / CBA

Participation in scientific committees of (inter)national conferences

- 2010, 12, 14, 16, 2022** Reutlingen (DE), Intl. Meeting(s) on Substrate-Integrated MEAs
- 2021** 14h International Conference on Brain Informatics (online)
- 2017** Padova, 9th IEEE Intl. Con. on Brain-Inspired Cognitive Systems (BICS2017)
- 2014** Montreal, Quebec (Canada,) NIPS
- 2013, 14** Rome (I) and Algarve (Portugal), Intl. Conf Neurotech., Electronics & Informatics
- 2012, 13, 14** Lausanne, Hamburg, Sofia, Intl Conf(s) on Artificial Neural Networks (ICANN)
- 2013, 2014** London (UK) and Milan (I), Living Machines on Biomimetics and Neurotech.
- 2013** Lausanne (Svizzera), 11th Intl Conf. on Adaptive & Natural Computing Algorithms
- 2012** Barcelona (Spain), 1st International Con. on Biomimetics & Bio-hybrid Systems
- 2010** Antwerp (Belgium) Belgian Brain Congress

PhD evaluation committees membership (external, internal, chairman roles)

- 2023** Ext. jury member PhD defense, Dr. Robin De Schepper, Univ. Pavia (I)
- 2023** Ext. jury member PhD defense, Dr. Manuel Reyes, Univ. Madrid (ES)
- 2023** Ext. jury member PhD defense, Dr. Mattia Tambaro, Univ. Padova (I)
- 2023** Ext. jury member PhD defense, Dr. Rodrigo Amaducci, Univ. Madrid (ES)
- 2022** Ext. jury member PhD defense, Dr. Chao Han, Univ. Sheffield (UK)
- 2022** Ext. jury member of PhD defense, Dr. Brijesh Modi, Sapienza U, Rome (I)
- 2022** Int. jury member of PhD defense, Dr. Alessandro Barenghi, SISSA, Trieste (I)
- 2021** Chair of the jury PhD defense, Dr. Francesca Zummo, SISSA, Trieste (I)
- 2021** Chair of the jury PhD defense, Dr. Nicole Sarno, SISSA, Trieste (I)
- 2021** Chair of the jury PhD defense, Dr. Ivo Calaresu, SISSA, Trieste (I)

2021	Chair of the jury PhD defense, Dr. Giulia Panattoni,	SISSA, Trieste (I)
2020	Int. jury member of PhD defense, Dr. Xiaoyun Li,	SISSA, Trieste (I)
2020	Int. jury member of PhD defense, Dr. Jing Xu,	SISSA, Trieste (I)
2020	Int. jury member of PhD defense, Dr. Qin Song,	SISSA, Trieste (I)
2020	Int. jury member of PhD defense, Dr. Miao Xiao,	SISSA, Trieste (I)
2019	Int. jury member of PhD defense, Dr. N. Secomandi,	SISSA, Trieste (I)
2019	Int. jury member of PhD defense, Dr. T. Sorbo,	SISSA, Trieste (I)
2019	Chair of the jury PhD defense, Dr. Jan Van Erum,	Univ. Antwerp (BE)
2019	Ext. jury member of PhD defense, Dr. E. Geminiani,	Politecnico di Milano (I)
2018	Int. jury member of PhD defense, Dr. C. Somers,	Univ. Antwerp (BE)
2018	Ext. jury member of PhD defense, Dr. D. Ciliberti,	KULeuven, Leuven (BE)
2018	Ext. jury member of PhD defense, Dr. D. Pozzi,	SISSA, Trieste (I)
2018	Ext. jury member of PhD defense, Dr. M. McDonald,	Univ. Hasselt (BE)
2018	Ext. jury member of PhD defense, Dr. A. Soloperto,	IIT, Genova (I)
2018	Ext. jury member of PhD defense, Dr. D. Lonardoni,	IIT, Genova (I)
2017	Ext. jury member of PhD defense, Dr. E. Losiouk,	Univ. Pavia (I)
2017	Chair of the jury PhD defense, Dr. P. Hung Nguyen,	Univ. Antwerp (BE)
2017	Ext. jury member of PhD defense, Dr. S. Usmani,	SISSA, Trieste (I)
2017	Ext. jury member of PhD defense, Dr. N. Pampaloni,	SISSA, Trieste (I)
2017	Chair of the jury PhD defense, Dr. L. Van Ruijssevelt,	Univ. Antwerp (BE)
2017	Ext. jury member of PhD defense, S. Vreysen,	KULeuven, Leuven (BE)
2017	Ext. jury member of PhD defense, N. Barros Zulaica,	Univ. Lausanne + Madrid
2017	Chair of the jury PhD defense, Dr. C. Bigot,	Univ. Antwerp (BE)
2017	Ext. jury member of PhD defense, Dr. P. Warnaar,	Univ. Rotterdam (NL)
2017	Internal jury member of PhD defense, Dr. J. Stas,	Univ. Antwerp (BE)
2016	Ext. jury member of PhD defense, Dr. M. Martens,	Univ. Nijmegen (NL)
2016	Ext. jury member of PhD defense, Dr. F. Vadipuur,	Univ. Hasselt (BE)
2016	Internal jury member of PhD defense, Dr. S.K. Sudhakar,	Univ. Antwerp (BE)
2015	Chair of the jury PhD defense, Dr. C. Van Cauwenberghe,	Univ. Antwerp (BE)
2015	Ext. jury member PhD defense, Dr. A. Tomkins,	Univ. Sheffield (UK)
2015	Chair of the jury PhD defense, Dr. D. Roose,	Univ. Antwerp (BE)
2015	Ext. jury member of PhD defense, Dr. A. Van der Kant,	Univ. Leiden (NL)
2014	Chair of the jury PhD defense, Dr. I. Raikov,	Univ. Antwerp (BE)
2014	Ext. jury member PhD defense, Dr. T. Ness, Norwegian Univ.	Life Sci. (Norway)
2014	Ext. jury member of PhD defense, Dr. S. Mensi,	EPFL (CH)
2014	Internal jury member of PhD defense, Dr. A. Anwar,	Univ. Antwerp (BE)
2014	Internal jury member of PhD defense, Dr. H. Nedelescu,	Univ. Antwerp (BE)
2014	Ext. jury member of PhD defense, Dr. O. Lilach Bareket,	Tel Aviv Univ. (IL)
2014	Ext. jury member of PhD defense, Dr. O. Avella Gonzalez,	Vrije Univ. Amsterdam
2013	Internal jury member of PhD defense, Dr. P. Verstralen,	Univ. Antwerp (BE)
2013	External jury member of PhD defense, Dr. L. Micholt,	KULeuven (BE)
2013	Internal jury member of PhD defense, Dr. E. Jonckers,	Univ. Antwerp (BE)
2013	Ext. jury member of PhD defense, Dr. V. Delattre,	EPFL (CH)
2013	Ext. jury member of PhD defense, Dr. G. Testa Silva, Vrije	Univ. Amsterdam (NL)
2013	Internal jury member of PhD defense, Dr. Ivan Kopjar,	Univ. Antwerp (BE)
2012	Ext. jury member of PhD defense, Dr. I. Heuelens,	Univ. Antwerpen (BE)
2011	Internal jury member of PhD defense, Dr. J. Dom,	Univ. Antwerpen (BE)
2011	External jury member of PhD defense, Dr. S. Musa,	KULeuven (BE)

2011	External jury member of PhD defense, Dr. D. Linaro,	Univ. Genova (Italia)
2011	External jury member of PhD defense, Dr. H. Kasi,	EPFL (Svizzera)
2010	Internal jury member of PhD defense, Dr. E. Bocksteins,	Univ. Antwerp (BE)
2009	External jury member of PhD defense, Dr. Jan Stegenga,	Univ. Twente (NL)
2003	External jury member of Master defense, Mr Kilian Imfeld,	Univ. Neuchatel (CH)

Membership or Direction of Scientific Societies

2022 –	Italian Soc. of Physiology (SIF);	Italian Soc. Experim. Biology (SIBS)
2015 – 2018	Organization for Comp. Neurosciences (OCNS),	member steering committee
2014 - 2015	Federation Eur. Neurosci. Societies,	voting member of the Governing Council
2014 - 2015	Belgian Society of Neurosciences,	president (two-year term)
2012 - 2013	Belgian Society of Neurosciences,	secretary (two-year mandate)
2008 - 2020	Belgian Society of Neurosciences,	member of the steering committee
2003 – 2008	American Physiological Society (APS), Swiss Physiological Society (SPS)	
2002 – 2008	Swiss Society for Neuroscience (SSN), Italian Ass Medical Biol Eng. (AIIMB)	
2005 –	National Bioengineering Group (GNB)	
2000 –	American Soc. Neuroscience (SfN), Italian Society of Neurosciences (SIN)	

Languages

2013	ITACE.be Flemish Univ. Consortium (B) – Academic English certification level C1
2009	Linguapolis, Antwerp (B) – elements of Dutch
2005	Media Center of the EPFL, Lausanne (CH) – elements of French
2001 – 2003	Volkhochschule, Bern (CH) – elements of German
1996	T.O.E.F.L. (Test for English as a Foreign Language), score: 620
1995	Abon Language School, Bristol (UK): 3 weeks, intensive English course

Teaching activities

Graduate Level

2019 –	SISSA: lecturer in the graduate course “Theoretical Neurobiology” (15h/yr).
2007	EPFL: contributing lecturer to the course entitled “Neural Intelligence” (6h)
2006	Okinawa Computational Neuroscience Course, Okinawa (Japan), tutoring (3 wk)
2001,02,06	European School of Neuro-IT and Neuroengineering, Genova (I), (2h/yr)
2005	“BeNeFri” PhD in Neuroscience, Univ. Bern, Fribourg and Neuchatel (4h)
2000	Univ. of Genova (I), cycle of seminars (4h) on Computational Neuroscience

Undergraduate Level

2022 –	Univ. Trieste: titolare di un corso, curriculum “Neuroscience master” (26h/yr)
2019 –	Univ. Trieste: contributor to a course, “Neuroscience master” curriculum (6h/yr)
2013 – 2019	Univ. Antwerp: co-holder of “ State-of-the-Art-Lectures in Biomedicine ” (4h/year)
2013 – 2018	Univ. Antwerp: co-holder of “ Bachelor Thesis ” (2h/year)

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- 2008 – 2019** Univ. Antwerp: holder of a “ Computational Neuroscience ” course (40h/year)
2008 – 2019 Univ. Antwerp: co-owner of “ System Neuroscience ” (6h/year)
2006 – 2007 EPFL: co-owner of “ Intracellular Recording Techniques ” (6h/year)
2006 – 2007 EPFL: contributions to “ Topics in Molecular and Cellular Neuroscience ” (12h/yr)
2001 – 2005 Univ. Bern, Faculty of Medicine: practical courses in Physiology (4h/year)
2003 Univ. Genova, Faculty of Biomedical Engineering, Adjunct Professor (10h)
1997 – 2002 Univ. Genova, Fac. Electronic and Biomedical Engineering: assistant (2h/year)

Teaching Interests

In addition to my specialisation in Neurophysiology and Computational Neuroscience, I have contributed to the teaching of conventional subjects such as System Neuroscience, Neurobiology and Cellular Biophysics. Thanks to my heterogeneous background, I can contribute to introductory courses such as mathematical analysis, probability theory and stochastic processes, machine learning, electrical network theory, systems theory, electrical communications, digital signal processing, computer science and programming, having full awareness of the sometimes incomplete training of students with a " biological " background . During 11 years as a professor in Belgium, I fully treasured interactions with students intimidated by quantitative approaches. Finally, I can also contribute to more interdisciplinary courses , in the field of Biosensors, Bioelectronics and Neuroengineering. I have extensive experience teaching hands-on courses that use the computer as a teaching aid (e.g. using Julia, Jupyter Notebook, Google Colab, GitHub, MATLAB, Neuron, etc.).

Philosophy and approach to teaching

I try to convey to students my enthusiasm for Brain Sciences and my passion for quantitative experimental, theoretical, computational and neurotechnological approaches. I use a variety of techniques to keep my students engaged in intuitive explorations of simple models of neurobiological and electrophysiological phenomena. In more detail, I use and consider

- films, animations and interactive demos: where possible, I provide insights and practical demonstrations both on the computer and on the blackboard, trying to develop an intuitive understanding of the topic, to be subsequently refined in a more rigorous way . I also promote practical sessions in the laboratory or simple classroom demonstrations (as in Antwerp also using a simple amplifier and skin electrodes for EEG or even needles to demonstrate the motor units in portions separated by small insects).
- skills: I encourage students to participate actively so that those colleagues who are introverted and less inclined to participate see that the concepts are easily grasped by their peers . I explored “ blended ” learning for the preliminary mathematical portions of my courses and was rewarded with good feedback from students with less technical backgrounds, quickly picking up elementary computer programming for data visualization, analysis and numerical simulations. This strategy is particularly effective in university courses, where students come from different mathematical backgrounds. Indeed, students enjoy learning from their peers.
- quizzes: I prepare periodic 10 minute quizzes, as an informal control mechanism and to monitor how well the class is assimilating the information, slowing my pace if necessary. This also encourages students to regularly follow the actual pace of the presentation.
- most motivated students to do what they can to learn a little more or simply to fuel their curiosity and appreciation of a subject, keeping them motivated.
- mini projects: for a very small number of interested students, I organise " mini " monographic projects, which I follow directly. The " homework" is precisely defined but the format of the written presentation of the results is left to the student, as a personal exploration: I appreciate the process and effort, before the correct solution.

The teaching experience is a unique learning experience for me.

Finally, in an advanced negotiation phase, I have signed a contract with Springer Nature as the author of an introductory monographic book on Computational Neuroscience, aimed at university students with non-technical backgrounds.

List of publications (reprints available from <http://www.giugliano.info/lab>)

(♦ =MG first/last author and/or correspondent)

4 in preparation or submitted

1. ♦ Gjorgievska E, Franco G, Giugliano M, Probing neuronal excitability via Optogenetics.
2. ♦ Stacchetti A, Giugliano M, Dynamical Response Properties *in silico*.
3. ♦ Moskalyuk A, Gigante G, Gjorgievska E, del Giudice P, Giugliano M, Gamma-range firing-rate reverberations during synchronous activity in *in vitro* random neuronal networks.
4. ♦ Hosseini A, Noselli G, Giugliano M, Two-Photon Polymerisation 3D-Printing of Micro-scale Neuronal Cell Culture devices.

65 Peer-reviewed Journal articles

5. Spelat R, Jihua N, Sanchez Trivino CA, Pifferi S, Pozzi D, Manzati M, Mortal S, Schiavo I, Spada F, Zanchetta ME, Ius T, Manini I, Rolle IG, Parisse P, Millan AP, Bianconi G, Cesca F, Giugliano M, Menini A, Cesselli D, Skrap M, Torre V (2022) The dual action of glioma-derived exosomes on neuronal activity: synchronization and disruption of synchrony. *Cell Death Dis.* 13(8):7 <https://doi.org/10.1038/s41419-022-05144-6>
6. Frisari S, Santo M, Hosseini A, Manzati M, Giugliano M, Mallamaci A (2022) Multidimensional Functional Profiling of Human Neuropathogenic FOXG1 Alleles in Primary Cultures of Murine Pallial Precursors, *Int. J. Mol. Sci.* 23(3), 1343, <https://doi.org/10.3390/ijms23031343>
7. George R, Chiappalone M, Giugliano M, Levi T, Vassanelli T, Partzsch J, Mayr C (2020) Plasticity and Adaptation in Neuromorphic Biohybrid Systems, *iScience* 23(10):101589, <https://doi.org/10.1016/j.isci.2020.101589>.
8. ♦Manzati M, Sorbo T, Giugliano M, Ballerini L (2020) Foetal neural progenitors contribute to postnatal circuits formation *ex vivo*: an electrophysiological investigation, *Molecular Brain* 13:78. <https://dx.doi.org/10.1186%2Fs13041-020-00619-z>
9. ♦Borda Bossana S, Verbist C, Giugliano M (2020) Homogeneous and narrow bandwidth of spike initiation in rat L1 cortical interneurons, *Frontiers in Cellular Neuroscience (section Neurobiology)* 14:118. <https://doi.org/10.3389/fncel.2020.00118>
10. Lourenço J, De Stasi AM, Deleuze C, Bigot M, Pazienti A, Aguirre A, Giugliano M, Ostojic S, Bacci A (2020) Modulation of coordinated activity across cortical layers by plasticity of inhibitory synapses, *Cell Reports* 30(3):630-41.e5., <https://doi.org/10.1016/j.celrep.2019.12.052>
11. ♦Verbist C, Müller MG, Mansvelder H, Legenstein R, Giugliano M (2020) The location of the axon initial segment affects the bandwidth of spike initiation dynamics, *PLoS Computational Biology* 16(7): e1008087. <https://doi.org/10.1371/journal.pcbi.1008087>
12. ♦Jones PJ, Moskalyuk A, Barthold C, Gutöhrlein K, Heusel G, Schröppel B, Samba R, Giugliano M (2020) Low-impedance 3D PEDOT:PSS ultramicroelectrode, *Frontiers in Neuroscience (sec. Neural Technology)*, <https://doi.org/10.3389/fnins.2020.00405>.
13. ♦Linaro D, Ocker GK, Doiron B, Giugliano M (2019) Correlation transfer by layer 5 cortical neurons under recreated synaptic inputs *in vitro*, *J Neuroscience*, 39 (39) 7648-7663, <https://doi.org/10.1523/JNEUROSCI.3169-18.2019>
14. ♦Moskalyuk A, Van De Vijver S, Verstraelen P, De Dos WH, Kooy RF, Giugliano M (2019) Single-cell and neuronal network alterations in an *in vitro* model of Fragile X syndrome, *Cerebral Cortex*, in press, <https://doi.org/10.1093/cercor/bhz068>
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17. Cagatay A, Couto J, Giugliano M, Farrow K, Bonin V (2018) Locomotion modulates specific functional cell types in the mouse visual thalamus, **Nature Communications** 9: 4882, <https://doi.org/10.1038/s41467-018-06780-3>
18. Pampaloni NP, Lottner M, Giugliano M, Matruglio A, D'Amico F, Prato M, Garrido JA, Ballerini L, Scaini D (2018) Single-layer graphene modulates neuronal communication and membrane ion channels expression via its cation- π interactions, **Nature Nanotechnology**, 13:755–64, <https://doi.org/10.1038/s41565-018-0163-6>
19. Espuny-Camacho I, Michelsen KA, Linaro D, Bilheu A, Acosta-Verdugo S, Herpoel A, Giugliano M, Gaillard A, Vanderhaeghen P (2018) Human pluripotent stem cell-derived cortical neurons integrate functionally into the lesioned adult murine visual cortex in an area-specific way, **Cell Reports** 23(9):2732-43, <https://doi.org/10.1016/j.celrep.2018.04.094>
20. ♦Linaro D, Biró I, Giugliano M (2018) Dynamical response properties of neocortical neurons to conductance-driven time-varying inputs, **European Journal of Neuroscience** 47(1):17–32, <https://doi.org/10.1111/ejn.13761>
21. McDonald M, Monaco A, Vahidpour F, Haenen K, Giugliano M, Nesladek M (2017) Diamond microelectrode arrays for in-vitro neuronal recordings, **MRS Communications** 7(3):683-90, <https://doi.org/10.1557/mrc.2017.62>
22. Singam SKR, Motylewski J, Monaco A, Gjorgievska E, Bourgeois E, Nesládek M, Giugliano M, Goovaerts E (2016) Contrast Induced by a Static Magnetic Field for Improved Detection in Nanodiamond Fluorescence Microscopy, **Phys. Rev. Fr. Applied** 6, 064013, <https://doi.org/10.1103/PhysRevAppl>
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According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, consent to process and use data provided in this CV is NOT granted for marketing communications and commercial profiling.

Trieste, 23rd Dec 2023

Prof. Dr. Eng. Michele GIUGLIANO
