

Gloria Menegaz



Professor of Bioengineering

Dept. of Engineering for Innovative in Medicine (DIMI)
University of Verona, Italy

[Institutional page](#)

[BrainNavLab](#)

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Gloria Menegaz is **Professor of Bioengineering** at the **Dept. of Engineering for Innovation Medicine, University of Verona (Italy)**, where she leads the **BrainNavLab**. She holds a **PhD in Applied Sciences (EPFL 2000)**, a **MSc in Electronic Engineer (1993)** and a **post-graduate Master's in information technology (1995) (Politecnico di Milano, Italy)**. From 2000 to 2002 she was first research assistant at the **Telecommunications Lab (LCAV) of EPFL**, headed by Prof. Martin Vetterli, that she left to join the **Computer Science Dept. of the University of Fribourg (Switzerland)** as an Assistant Professor. In 2004 she was awarded the **Rita Levi Montalcini grant (Rientro dei Cervelli)** by the Italian Ministry of University and Research (**MIUR**)(**DM 20/03/2003 n. 501**) and joined the **Dept. of Information Engineering of the University of Siena (Italy)** as an Assistant Professor. In 2007 she joined the Dept. of Computer Science of the University of Verona (Italy) as an Associate Professor in Computer Science and became full Professor in Computer Science in 2017 and Professor in Bioengineering (ING-INF/06) in 2021.

Prof. Menegaz is a **Senior Member** of the Institute of Electrical and Electronics Engineers (**IEEE, 2017, valued member 1995-2017**), and member of the IEEE Woman in Engineering since 2000. She is a member of the **Signal Processing Society (SPS)**, Liason representative of the IEEE-SPS, **Chair of the Steering Committee of the IEEE Transactions on Medical Imaging (IEEE-TMI)**, **Chair of the IEEE Bioimaging and Signal Processing (IEEE-SPS-BISP)**, **member of the IEEE-SPS Technical Directors Board** and Member of the **IEEE-SPS Challenges and Data Collection TC**. She is also **Member** of the Medical Image Computing and Computer Assisted Intervention Society (**MICCAI**) Special Interest Group on Biomedical Image Analysis Challenges (**SIG-BIAC**), of the **Ad Hoc Group (AHG) on Digital Media Storage using DNA (JPEG-DNA)** and **Observer** for the **DICOM WG-32** (Neurophysiology data).

She is **Associate Editor** for **IEEE-TMI**, and has been Guest Editor of special issues for different venues including the IEEE-SPM. She is a **panel member for the ERC Advaced Grants and Advaced Grant Plus** since 2026. She has been **Vice-Chair** for the **FET-REA** and the **MSCA-IF** for many years and Independent Expert and panel member for many international Institutions including European Research Council (ERC), European Science Fundation (ESF), SKF, Sweden, among others. She authored more than 160 publications in international journals and conference proceedings (Scopus) and two patent and has been chair, area chair and technical committee member of many international conferences, especially of the IEEE.

Prof. Menegaz holds a highly interdisciplinary profile, starting with a MSc in Microelectronics, focusing on physics, microelectronics and optics, moving to ICT topics with the post-grade MSc and then the PhD, where she has been working on compression and coding of multi-dimensional medical data with application to medical imaging, also contributing to the JPEG2000 standardization activities. During this work she also faced topics related to visual perception investigation and modeling, with emphasis on color vision contributing in the field of color naming in Italian language. After joining the University of Verona, she directed her research activity on neuroimaging, brain connectivity (structural, functional and effective), brain microstructure modeling imaging genetics and numerical biomarker discovery relying on classical and AI (statistical/machine/deep learning) with emphasis on explainable methods.

During her career she has obtained **funding** from several international institutions for a total of over 3 million euros. Worth mentioning are the Rita Levi Montalcini program (MIUR, D.M. n.96 del 23.04.2001, 01/03/2004-28/02/2007) and the PRIN-2009, BrainFit: Brain tractography from diffusion imaging for radioterapico and surgical planning as the national PI, AI4Health: empowering neurosciences with eXplainable AI methods, PI, funded under the and MUR DM737/2021, the PRIN 2022 and the INTELLI-MI project for the RIR Tech4Life. She has a rich network of international collaborations including Georgia Tech University (TRENDS lab), INRIA (France), EPFL (Switzerland), Queen Mary University (QMU, London) and University College London (UCL).

QUALIFICATIONS

01/2026	Qualified as Examiner for the National Scientific Habilitation (Commissario per Abilitazione Scientifica Nazionale – ASN), Section of Bioengineering (I-BIO-01/A)
04/2021	Qualified as Full Professor of Bioengineering (<i>IBIO-01/A, Bioengineering</i>)
1/2015	Qualified as Full Professor of Computer Science (<i>Abilitazione Scientifica Nazionale, Prima fascia, INFO-01, Informatics</i>)
2008, 2012, 2019	Qualification à Professeur des Universités, France, Section 27 – Computer Science (2008, 2012, 2019) and Section 61 – Signal Processing, Computer Science and Automation (2019), until 31/12/2023

DEGREES

7/2000	PhD (Docteur ès Sciences Techniques), Signal Processing Lab. (ITS), EPFL, Lausanne, Switzerland. Thesis Director: Prof. Murat Kunt. Thesis title: Model-based coding of multi-dimensional data with applications to Medical Imaging
9/1994-7/1995	Post-graduate Master (MSc) in Information Technology, CEFRIEL-Politecnico di Milano, Italy. MSc thesis title: A Prototype Waveform Interpolation low-bitrate speech codec.
7/1993	Masters' Degree in Electronic Engineering, Politecnico di Milano, 100/100. Master thesis title: Design and characterization of single photon avalanche diodes for time-resolved photoluminescence

CAREER

03/2023	Professor of Bioengineering, Dept. of Engineering for Innovation Medicine, University of Verona
04/2021	Professor of Bioengineering, Dept. of Computer Science, University of Verona
02/2017	Professor of Computer Science, Dept. of Computer Science, University of Verona
7/2014-7/2019	Director of the Doctoral School of Natural and Engineering Sciences
2007-2017	Associate Professor (tenure 10/2010), Dept. of Computer Science, University of Verona, Italy.
3/2004-2/2007	Assistant Professor, Dept. of Information Engineering, University of Siena, Italy. Funding from the Italian Ministry for University and Research (MIUR) (DM 20/03/2003 n. 501, <i>Rientro dei Cervelli – Rita Levi Montalcini</i> program).
12/2002-2/2004	Assistant Professor (Maître Assistant), Dept. of Computer Science, University of Fribourg, Switzerland
10/2000-10/2002	First research assistant, Audiovisual Communications Lab. (LCAV), School of Computer and Communications Sciences (I&C), EPFL, Lausanne, Switzerland
05/2000-09/2000	post-doc research associate, Biomedical Imaging Group (BIG), Department of Applied Optics (IOA), EPFL, Lausanne, Switzerland
9/1995-07/2000	Research Assistant and PhD student, Signal Processing Lab. (LTS). Department of Electrical Engineering (DE), EPFL, Lausanne, Switzerland
9/1995-09/1996	Research Assistant, CEFRIEL-Politecnico di Milano, Milan, Italy

RESEARCH EVALUATION AND PANEL MEMBER (Selection)

FWO Review College for the next three years (panels 2025 – 2027)

European Commission

Since 2026	Panel member for the ERC Advanced and ERC Plus Grants
Since 2018	Evaluator for the European Science Foundation (ESF)
2021	Vice Chair/Quality Checker in the evaluation of the EISMEA-EIC Transition Open call for the call Research Executive Agency (REA)
2020	Selected as VICE-CHAIR FETOPEN-01-2018-2019-2020: FET-Open Challenging Current Thinking
2017	VICE-CHAIR H2020 MSCA Individual Fellowships Call 2016 for panel LIF (Life Sciences)
2016	VICE-CHAIR H2020 MSCA Individual Fellowships Call 2016 for panel LIF (Life Sciences)
2015	Selected as VICE-CHAIR: H2020 FET OPEN RIA Call 2016-2017
2015	Selected as VICE-CHAIR: H2020 FETOPEN 2014-2015 REA 2015 (Suspended for possible conflict of interest)
2015	EVALUATOR AND RAPPORTETUR: H2020-MSCA-IF-2015
2015	EVALUATOR: H2020-FET OPEN-2015-1-REA and H2020-PHC11, remote evaluation
	EVALUATOR: panel member and rapporteur, DG-Research. Calls: New and Emerging Science and Technology (FP6-NEST), European Research Council (FP7-ERC), European Spatial Agency (ESA) and ICT (Brain inspired ICT)
2006	REVIEWER: Directorate General for Information Society and Media (DG-INFSO) FP6 and FP7
	EVALUATOR: Directorate General for Information Society and Media (DG-INFSO), calls FP6 and FP7 Information and Communication Technologies (ICT). Funding instrument: Integrated Projects (IP), Networks of Excellence (NoE) and Single Target Research Projects (STREPS)

Evaluator for (selection) European Science Foundation (ESF), Swiss National Foundation (SNF); Belgian Public Research Programme; Linz Institute of Technology (LIT) (Austrian Federal Ministry of Education, Science and Research, the State of Upper Austria and the Johannes Kepler University (JKU)); La Caixa Foundation, Spain; Swedish Knowledge Foundation (SKF); Agence Nationale de Recherche (ANR), France, LABEX; Italian Ministry of University and Research (MIUR).

FUNDED PROJECTS

2025	INTELLI-MI Intelligent Technologies for Innovation Medicine, Consorzio Tech4Life, Programma Regionale FESR 2021-2027 (2.5M euro) https://www.venetosviluppo.it/index.php/finanza-agevolata/fondo-di-partecipazione-pr-veneto-fesr-2021-2027?view=article&id=306&catid=24
2023	AntiAGING: Artificial Intelligence for Healthy Aging, Call FSE+ 2021-2027 Assegni di ricerca 2023DGR n. 553 del 09 maggio 2023 (121.000 euros)
2023	AI4BRAVE: AI for modeling of the Brain-Heart Axis in aging, Decreto Direttoriale n. 104 del 2 febbraio 2022, Avviso pubblico per la presentazione di Progetti di ricerca di Rilevante Interesse Nazionale (PRIN) da finanziare nell'ambito del PNRR, Italian Ministry of University and Research (MIUR). Role: PI (210.000 euros)
2022	Funding from the Italian Ministry of University and Research (MIUR), DM737/2021 AI4Health: empowering neurosciences with eXplainable AI methods (230000 euro)
2021	PhD grant from the Italian Ministry for the Sud e connessione territoriale, <i>Bando per la concessione di risorse destinate al finanziamento in via sperimentale da parte dei comuni presenti nelle aree interne, anche in forma associata, di borse di studio per "Dottorati comunali"</i> . Project: JPEG-DNA: Design and implementation of new compression and coding methods for the next generation JPEG standard (75000 euro).
2022-2024	PhD grant, funded by the Italian Ministry for University and Research (MIUR), DM 1061-1062/2021 - PON "Ricerca e Innovazione" 2014-2020, Asse IV "Istruzione e ricerca per il recupero" con riferimento all'Azione IV.4 "Dottorati e contratti di ricerca su tematiche dell'innovazione" e all'Azione IV.5 "Dottorati su tematiche green". PhD course of Computer Science - XXXVII ciclo (grant n. CUP B39J2102723000) Project: AI-4Health: empowering Telemedicine through explainable AI methods for perinalized diagnosis, monitoring and treatment" (75000 euro)
2020	CARIVERONA, Call for Research and Development projects, <i>Osservazione dei processi lavorativi, con garanzie oggettive di tutela della Privacy, per la prevenzione di Errori e situazioni di Rischio in maniera Automatica ai tempi di Industria 4.0 (OPERA 4.0)</i> , WP leader for the (Intelligent Sensing WP)
2019	CARIVERONA, Call for Scientific Excellence, EDIPO: <i>A computational solution for bringing neuroimaging genetic into translational research</i> (180000 euro). Role: PI
2018	Programma Operativo Regionale - Fondo Sociale Europeo 2014-2020 - Obiettivo generale "Investimenti a favore della crescita e dell'occupazione"- Reg. 1304/2013 - Asse I Occupabilità. Approvazione dell'Avviso pubblico "La ricerca a sostegno della trasformazione aziendale - Innovatori in azienda - Assegni di ricerca 2018" e della Direttiva per la presentazione dei progetti. FAIR-PLAY: studio e sviluppo di nuovi servizi e modelli di marketing 4.0 in ambiente fieristico", Role: CO-PI, (82500 euros)
2018	PhD Grant, Fondazione Cariverona, "Profilazione multimediale di utenti (web + reale) attraverso tecniche di deep learning", Role: CO-PI (70000 euros)
2017	Verona Brain Fundation, PI: G. Menegaz for Neuroimaging, F.B. Pizzini for Clinical Imaging. Project: <i>Brain connectivity underlying physiological and pathological patterns in action tremor</i> (25000 euros)
2016	Verona Brain Fundation, PI F. Pizzini, MD, PhD. Project: <i>Mapping functional connectivity patterns in neurological and neurosurgical diseases with Arterial Spin Labeling and Blood Oxygenation Level Dependent MRI</i> (16000 euros)
2016	DGR nr. 2121 del 30 dicembre 2015 nell'ambito del Programma Operativo Regionale - Fondo Sociale Europeo 2014 - 2020, in collaboration with EBNeuro Spa. Title: <i>Studio, implementazione e validazione di interfacce per sistemi robotici</i>
2013	Contributi per l'inserimento nelle imprese di personale qualificato di ricerca" (POR Misura II), nell'ambito del Programma di finanziamento Regionale Operativo 2007/2013 Parte FSE Asse I, Azione 1.1.3, Misura II, Regione Veneto, in collaborazione con QR Srl, Verona, Fusione e quality assessment di immagini da TC volumetrica Cone Beam, (34000 euro). Role: PI
2009-2011	PRIN-2009, BrainFit: <i>Brain tractography from diffusion imaging for radiotherapical and surgical planning</i> (Trattografia da risonanza in diffusione per la pianificazione radioterapica e chirurgica) in collaboration with the Dept. of Neurosurgery of the University of Verona and the Signal Processing Lab. (LTSS) of EPFL (Prof. J.-Ph. Thiran). (55142 euro) Role: national coordinator (PI)
GRANTS AND FELLOWSHIPS	
2004-2007	RIENTRO DEI CERVELLI (BRAIN DRAIN PROGRAM) MIUR, D.M. n.96 del 23.04.2001, 01/03/2004-28/02/2007. Project title : Perceptual image modeling : bridging vision. (93000 euro). Individual fellowship
2003-2008	Ramon y Cajal grant, Spanish Ministry of Science and Technology, withdrawn after grant assignment for joining the Rientro dei Cervelli program (2004)
2002-2005	Swiss National Science Foundation (SNF). Grant number 21067012.01. Progetto: Perceptual modeling of color textures (131.016 CHF)

2001-2003	EPFL internal research grant. Project title: Image models built on joint texture and color characterization for natural images in digital imaging systems
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INTERNATIONAL LEADERSHIP

1/1/2026	Chair of the Bio Signal and Image Processing TC of the IEEE-SPS , Member of the IEEE Signal Processing Society Technical Directions Board
1/2025 – 12/2027	Member of the IEEE SPS-EMBS Steering Committee of the International Symposium on Biomedical Imaging (ISBI)
1/2024-12/2025	Chair of the Steering Committee and of the IEEE Transactions on Medical Imaging
Since 2022	Vice-Chair of the Biomedical Signal and Image Processing TC of the SPS Liason representative of the IEEE Signal Processing Society (IEEE-SPS) for the IEEE Transactions on Medical Imaging (IEEE-TMI)
Since 2023	Member of the IEEE SPS Technical Committee for Challenges and Data Collection (IEEE-SPS-CDC)
Since 2021	Member of the Medical Image Computing and Computer Assisted Intervention Society (MICCAI) Special Interest Group on Biomedical Image Analysis Challenges (SIG-BIAC)
2020-2024	Co-chair of the Subcommittee on Challenges & Data Collections of the IEEE Signal Processing Bio Image and Signal Processing (BISP) Committee (Co-chair Prof. Vince Calhoun, Georgia Institute of Technology)

Board member and Chair

2026	Chair for Special Sessions at the International Symposium on Biomedical Imaging (ISBI 2027)
2024	Co-Chair Special Session on “Interpretable Imaging Genetics: Towards the molecular mechanisms underlying brain structure and function”, with Dr. Lorenza Brusini, International Symposium on Biomedical Imaging (ISBI), 2024, Athens, Greece.
2023, 2024, 2025, 2026	Area Chair for the Biomedical Imaging and Signal Processing' track for the International Conference on Acoustics, Speech, and Signal Processing (SPS-ICASSP)
2022	Chair of the Special Session on eXplainable AI in Bioimaging and Signal Processing”, IEEE International Image Processing Conference (ICIP2022). Co-chair: G. Yang, Imperial College London.
2022	Tutorial co-Chair for IEEE-ISBI 2022, Kolkata, India.
2020	TCP Chair for the Biomedical Imaging and Signal Processing' track at ICASSP 2020 (45th International Conference on Acoustics, Speech, and Signal Processing)
2019	Co-Chair Special Session on “Is Imaging Genetics the new frontier for precision medicine?”, IEEE International Symposium on Biomedical Imaging, 2019. Co-organizer with Prof. R. Giugno
2018	Organizing committee (local arrangements) for IEEE International Symposium on Biomedical Imaging, 2019
2018	Area Chair: Biomedical Signal Processing, European Signal Processing Conference (EUSIPCO2018), European Association for Signal Processing (EURASIP)
2015	Area Chair: International Conference on Image Processing (ICIP-2015), Session 6.3. ARS-IIU Image & video interpretation and understanding, IEEE
2015	Area Chair: European Signal Processing Conference (EUSIPCO2015), European Association for Signal Processing (EURASIP)
2010	Chair: Section 4a, International Conference on Neural Computation (ICNC 2010)
2009	Chair for the Poster Teaser Section in Medical Image Analysis, MICCAI, Imperial College, London, Sept. 20-24

PARTICIPATION TO STANDARDIZATION BODIES

Since 2021	Member of the Ad Hoc Group (AHG) on Digital Media Storage using DNA (JPEG-DNA)
Since 2021	Observer for the DICOM WG-32 (Neurophysiology data)

PATENTS

2015	EP2868275 (A1) Method and apparatus to increase the field of view in a cone beam computerized tomography acquisition. Inventors Sandri C., Menegaz G., Morsiani, Simonetti F., Rivalta B. Applicant CEFLA COOP IT, application n. EP20140189592 20141020, Priority n. ITBO2013A000599 20131031, Also published as US2015117592 (A1) KR20150050385 (A) ITBO20130599 (A1) CN104586417 (A)
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VISITING PROFESSOR

5-6 2026	Invited Professor, University of Poitiers and I3M Lab, France
5-6/2020	Invited Professor, INRIA Sophia Antipolis, ATHENA group (canceled because of the COVID pandemics)
4-9/2019	Visiting Professor, INRIA Sophia Antipolis, ATHENA group (grant from the University of Verona, COOPERINT program)
9/2012	Teaching staff mobility - Signal Processing Lab. 5, EPFL, Switzerland
6/2012	Teaching staff mobility - UMR-CNRS 6168, Université de la Méditerranée, Aix-Marseille II, France
6/2011	Visiting Professor, UMR-CNRS 6168, Université de la Méditerranée, Aix-Marseille II, France
10/2010	Cooperint – Mobility grant from the University of Verona - Visiting Professor at the Faculty of Engineering, Department of Computing and Hamlyn Centre of Robotic Surgery of the Imperial College, London UK

9/2010	Cooperint - Mobility grant from the University of Verona - Visiting Professor presso CNRS-UMR, 6168 Marseille, France
6/2010	Visiting Professor, UMR-CNRS 6168, Université de la Méditerranée, Aix-Marseille II, France
2/2010	Teaching staff mobility - Signal Processing Lab., EPFL, Switzerland
6/2008	Visiting Professor, UMR-CNRS 6168, Université de la Méditerranée, Aix-Marseille II, France
1/2007	Visiting Professor, UMR-CNRS 6168, Université de la Méditerranée, Aix-Marseille II, France
7/2005	Visiting Professor, LSIS, UMR-CNRS 6168, Ecole d'Ingénieurs de Luminy, Université de la Méditerranée, Aix-Marseille II, France

PHD THESIS DIRECTION AND MENTORING

Prof. Menegaz is currently leading the BrainNavLab. consisting of one Associate Prof., two Assistant Professors, one post-doctoral research associate, one young researcher and 5 PhD students.

Total: 18 PhD students; 8 post-docs; 1 research Engineer; more than 50 MSc students: 28 at the University of Verona, 7 at the University of Siena (2005-2009), 5 at the Swiss Federal Institute of Technology (EPFL, LTS and LCAV, 2000-2003), 1 co-tutoring with the Universitat Autònoma de Barcelona, degree in Computer science (2011).

CO-DIRECTION

1996-2007	Three co-directions of PhD thesis, one at the Audiovisual Communications Lab. of the EPFL (see funding section), two at the Dept. of Information Engineering of the University of Siena.
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INTERNATIONAL EVENTS ORGANIZATION

2026	Co-organizer of the Special Session Multiscale and Multimodal Perspectives on Brain Connectivity for Translational Neuroscience at European Medical and Biological Engineering Conference (EMBEC 2027), Chair Dr. Lorenza Brusini
2024	Co-organizer of the Special Session "Interpretable Imaging Genetics: Towards the molecular mechanisms underlying brain structure and function", Lead organizer Dr. Lorenza Brusini, International Symposium on Biomedical Imaging (ISBI), 2024, Athens, Greece.
2022	Organizer and Chair of the Special Session "eXplainable AI in Bioimaging and Signal Processing", IEEE International Image Processing Conference (ICIP2022). Co-chair: G. Yang, Imperial College London.
2019	Organizer and Chair of the Special Session "Is Imaging genetics the frontier for precision medicine?" at the IEEE-ISBI International Conference, April 8, 2019, Venezia, Italy
2019	Winter School of Brain Connectomics (BRAINCONN2019) , Oct. 9-13, Department of Computer Science, University of Verona, third edition. Role: Head of the organization committee, supported by SPS (https://nilab.cimec.unitn.it/people/brainconnectomics/)
2019	Winter School on Imaging Genetics (IG2019) , Nov. 23-27, 2019, Department of Computer Science, University of Verona. Role: Co-organizer with Prof. Rosalba Giugno, supported by SPS (http://igs.di.univr.it/).
2017	Summer School of Brain Connectomics (BRAINCONN2017) , Oct. 9-13, Department of Computer Science, University of Verona, second edition, sponsored by SPS
2016	Summer School of Brain Connectomics (BRAINCONN2016) , Sept. 19-22, Department of Computer Science, University of Verona
2014	Verona Diffusion Workshop (VDW2016), May 16, Department of Computer Science, University of Verona

EDITORIAL ACTIVITIES

2024-2025	Associate Editor, Pattern Recognition, Elsevier
Since 2023	Associate Editor, IEEE Transactions on Medical Imaging
2022-2023	Associate Editor, Scientific Reports (Springer Nature)
2022-2023	Review Editor for Frontiers (Computer Vision and Computational Bioimaging)
2020-2021	Guest Editor of the IEEE Signal Processing Magazine for the special issue on Deep Learning in Biological Signal and Image Processing
2020	Review Editor in Computational BioImaging (specialty section of Frontiers in Bioinformatics)
2019-2021	Associate Editor: IEEE Signal Processing Letters
2012-	Associate Editor: EURASIP Springer Open J. on Image & Video Processing
2008	Guest Editor: Special Issue of the IEEE/OSA Journal of Display Technology on Medical Displays, Volume n. 4, 2008
2007	Associate Editor: EURASIP Journal of Applied Signal Processing (since 2004), Editor Special Issue on Image Perception

ASSOCIATIONS AND MEMBERSHIPS (Selection)

IEEE	Senior Member since 2017, The Institute of Electrical and Electronics Engineers, valued member, since 1995
SPS	Signal Processing Society
BISP	Bio Image and Signal Processing Society
GNB	National Biomedical Engineering Group
MICCAI	Medical Image Computing and Computer Assisted Interventions
IEEE-WIE	IEEE Women in Engineering, 2000
OSA	The Optical Society of America, 2007-2012
SPIE	The International Society for Optical Engineering, 2006