

Ilaria Boscolo Galazzo

Curriculum Vitæ

Ilaria Boscolo Galazzo

Post-Doc Researcher

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Education

- Jan 2011 - **PhD in Neuroscience** (XXVI cycle), University of Verona, Graduate School of
Dec 2013 Sciences Engineering and Medicine
Thesis: “Arterial Spin Labeling methods for quantitative brain perfusion mapping”. Supervisor: Prof. Paolo Manganotti
Doctoral degree obtained in May 2014
- Oct 2007 - **Master’s degree in Bioengineering**, University of Padova
Jul 2010 Thesis: “Models for the PET quantitative imaging of the adenosine receptor radioligand [11C]SCH442416 in humans”. Supervisor: Prof. Alessandra Bertoldo
Degree final mark: 110/110 cum laude
- Oct 2004 - **Bachelor’s degree in Biomedical Engineering**, University of Padova
Sep 2007 Thesis title: “PET applications in the diagnosis and follow-up of Alzheimer’s disease and other neurodegenerative pathologies”. Supervisor: Prof. Claudio Cobelli
Degree final mark: 100/110
- Sep 1999 - **Scientific High School Diploma**, Liceo “G. Veronese”, Chioggia (Venice)
Jul 2004 School leaving examination mark: 100/100

Work Experiences

- Sep 2018 - **Post-doc Researcher**, University of Verona
today Research activity: “Investigation and modeling of the structure/function link in brain connectivity”. Supervisor: Prof. Gloria Menegaz. Department of Computer Science, SSD INF/01.
- Sep 2017 - **Post-doc Researcher**, University of Verona
Aug 2018 Research activity: “Brain connectivity underlying physiological and pathological patterns in action tremor”. Supervisor: Prof. Gloria Menegaz. Department of Computer Science, SSD INF/01. Project funded by Verona Brain Research Foundation.

- Sep 2016 - **Post-doc Researcher**, University of Verona
 Aug 2017 Research activity: “Models and methods for the analysis of perfusion and structural MRI data”. Supervisor: Prof. Gloria Menegaz. Department of Computer Science, SSD INF/01. Project co-funded by the Ministry of Health (Bando Giovani Ricercatori GR-2011-02349787) and Verona Brain Research Foundation.
- Sep 2014 - **Post-doc Research Associate**, University College London (UCL)
 Aug 2016 Research activity: “Advanced models and methods for multi-parametric PET/MRI imaging in epilepsy”. Supervisors: Prof. Ashley Groves, Dr. Francesco Fraioli. Medical Physics Group, Institute of Nuclear Medicine.
- Jan 2014 - **Post-doc Research Fellow**, University of Verona and IRCCS SDN Naples
 Dec 2014 Research activity: “New post-processing strategies and analyses for ASL and PET data acquired with a PET/MRI scanner in controls and patients with neurodegenerative disorders”. Supervisor: Prof. Paolo Manganotti. Department of Neurological and Movement Sciences. Co.Co.Pro funded by IRCCS SDN Foundation-Institute of Diagnostic and Nuclear Development, Naples.
- Sep 2010 - **Research Fellow**, University of Padova
 Dec 2010 Research activity: “Models and methods for the analysis of PET images ([11C]SCH442416, [18F]FDG)”. Supervisor: Prof. Alessandra Bertoldo. Department of Information Engineering, SSD ING-INF/06.

Visiting

- Sep 2016 - Associate Staff Status at University College London (UCL), Division of Medicine –
 today Institute of Nuclear Medicine. Activity in the context of the funded UK multicentre study “NEST: NMDA-receptors in Epilepsy, Stroke and TBI”. Referees: Prof. Ashley Groves, Dr. Anna Barnes.
- Oct 2012 – Visiting PhD student at the Department of Biomedical Engineering (IBME), Uni-
 Mar 2013 versity of Oxford, UK. Development of new methods and algorithms for the analysis of multiple time point Arterial Spin Labeling data. Supervisor: Prof. Michael Chappell.

Citation Indices

- ORCID ID 0000-0002-4153-3749
- Scopus ID 55604019700
- H*-index Scopus = 7, Google Scholar = 7
- Citations Scopus = 176, Google Scholar = 265

Scientific Production Summary

- 20 Papers on International Peer-Reviewed Journals (5 as first author, 4 as second author)
- 8 Short Papers on International Conferences (Proceedings)
- 3 Short Papers on National Conferences (Proceedings)
- 39 Abstracts presented in International Conferences
- 4 Abstracts presented in National Conferences

Scientific Participation in Research Projects

Projects funded by Public Organizations

- 2015 - today **Multicentre research study – Medical Research Council (MRC)**
Title: “NEST: NMDA-receptors in Epilepsy, Stroke and TBI” (principal investigator: Prof. Matthias Koeppe). Participating partners: UCL, Imperial College London, Cambridge University Hospitals NHS Foundation. Duration: 60 months.
Role: Honorary member of UCL unit, collaborator for the analysis of PET/MRI data from the UCL centre acquired on epilepsy patients.
- 2015 - today **Multicentre research study – University College London**
Title: “Optimization of Magnetic Resonance Vascular Imaging for planning and follow up of Gamma Knife Radiosurgery for brain arteriovenous malformations” (principal investigator: Prof. Rolf Jager). Participating partners: UCL, Institute of Neurology, London, UK and Azienda Ospedaliera Universitaria Integrata of Verona, Italy. Duration: 60 months.
Roles: member of AOUI Verona unit, responsible for analysing ASL data.
- 2014 - 2018 **Italian research project – Ministry of Health (Bando Giovani Ricercatori 2011-2012)**
Title: “A non-invasive, multimodal approach to restore functional networks and cognition in Alzheimer’s disease and frontotemporal dementia” (principal investigator: Dr. Michela Piovani). Duration: 48 months.
Role: member of the third operative unit (UO3 - Verona) for the collection of MRI data, analysis of ASL and multimodal integration with other biomarkers.
- 2014 - 2015 **PRIN 2010-2011 – Ministry of Education, Universities and Research**
Title: “Impact of physical activity on healthy aging: multidisciplinary analysis of mechanisms and outcomes” (principal investigator: Prof. Di Baldassarre Angela). Duration: 36 months.
Role: co-coordinator for MRI data collection and analysis in Verona.
- 2013 - 2015 **Innovative Medicines Initiative PharmaCog Project – European Community’s FP7/2007-2013**
Title: “Prediction of cognitive properties of new drug candidates for neurodegenerative diseases in early clinical development” (academic coordinator: Prof. Regis Bordet). Duration: 72 months.
Role: Coordinator of the sub-study on “ASL-MRI in PharmaCOG”.

- 2011 - 2015 **COST Action BM1103 – European Union**
Title: “Arterial spin labeling Initiative in Dementia (AID)” (chair: Prof. Xavier Golay). Duration: 48 months.
Role: Active member of the Verona unit within the European network.

Projects funded by Private Organizations

- 2017 - 2018 **Research project – Verona Brain Research Foundation**
Title: “Brain connectivity underlying physiological and pathological patterns in action tremor“ (principal investigators: Prof. Gloria Menegaz, Dr. Francesca B. Pizzini). Duration: 12 months.
Role: responsible for analysing fMRI data (BOLD and ASL, task and resting-state).
- 2016 - 2017 **Research project – Verona Brain Research Foundation**
Title: “Mapping functional connectivity patterns in neurological and neurosurgical diseases with Arterial Spin Labeling and Blood Oxygenation Level Dependent MRI” (principal investigators: Prof. Gloria Menegaz, Dr. Francesca B. Pizzini). Duration: 12 months.
Role: responsible for analysing fMRI data (BOLD and ASL).

Awards

- 2018 Best poster award at the 2nd International Workshop on Connectomics in NeuroImaging (CNI) held in conjunction with MICCAI 2018, September 20, 2018, Granada, Spain.
- 2017 Winner of a Mobility Grant from the University of Verona (University Internationalization programme CooperInt – 2017). Declined for family reasons.
- 2012 2nd place at the European competition entitled “EU-COST: ASL Acquisition Challenge” aimed at the acquisition of the best ASL image with the highest spatial resolution. Endorsed by the European COST Action BM1103.
- 2012 Winner of a Short Term Scientific Mission (STSM) Grant from the European COST Action BM1103 (Arterial spin labeling Initiative in Dementia).

International Event Organization

- 2019 **2019 IEEE 16th International Symposium on Biomedical Imaging (ISBI)**. Member of the Organizing Committee, in charge for Student Liaisons. Apr 8-11, 2019, Hilton Mulino Stucky, Venice, Italy. <https://biomedicalimaging.org/2019/>.

- 2017 **2017 IEEE SPS Winter School of Brain Connectomics - second edition.** Sponsored by the PhD School in Natural Sciences and Engineering and Dept. of Computer Science at University of Verona, IEEE Signal Processing Society, MICCAI, Verona Brain Research Foundation. Oct 09-13, 2017, Department of Computer Science, University of Verona, Italy. Member of the Local Committee. <http://brainconnectomics.org>.
- 2016 **2016 Summer School on Brain Connectomics - first edition.** Sponsored by the PhD School in Natural Sciences and Engineering and Dept. of Computer Science at University of Verona, Fondazione Bruno Kessler, MICCAI, ISMRM Italian Chapter, AINR, University of Trieste. Sep 19-22, 2016, Department of Computer Science, University of Verona, Italy. Member of the Organizing Committee. <http://brainconnectomics.org>.
- 2012 **International Workshop on: Multimodal Brain Imaging in Epilepsy**, Mar 23, 2012, Department Neurosciences, Biomedicine and Movement Sciences, University of Verona, Italy. Member of the Local Organizing Committee.

Advisory Activity

- 2016 - today Co-supervisor of 1 PhD student at UCL, London, UK. Candidate: Bianca De Blasi, PhD in Medical Physics and Bioengineering.
Title: “Multi-Parametric Imaging Using Hybrid PET/MRI to Investigate Neurological Disorders“.
- 2016 - 2017 Co-advisor of 2 students of the Bachelor’s Degree in Bionformatics, University of Verona (Italy).

Editorial Responsibilities and Referee Activity

- Since 2017 Referee for several international conferences, including Organization for Human Brain Mapping (OHBM), International Society for Magnetic Resonance in Medicine (ISMRM), International Symposium on Biomedical Imaging (ISBI).
- Since 2013 Guest Associate Editor - Frontiers in Epilepsy.
- Since 2012 Referee for several international peer-reviewed journals, including PloS One, Nature Scientific Reports, Journal of Neuroengineering and Rehabilitation, Frontiers in Neurology, Neuroimage: Clinical, BioMed Research International, Epilepsy Research, Neurorehabilitation and Neural Repair, Aging and Disease, EJNMMI Research, IEEE Transactions on Biomedical Engineering.

Scientific Production

Papers on International Peer-Reviewed Journals

- [J20 - 2019] **Boscolo Galazzo I**, Storti SF, Barnes A, De Blasi B, De Vita E, Koepp M, Duncan JS, Groves A, Pizzini FB, Menegaz G, Fraioli F. Arterial spin labeling reveals disrupted brain networks and functional connectivity in drug-resistant temporal epilepsy. *Frontiers in Neuroinformatics*; in press.
- [J19 - 2019] Pedrinolla A, Venturelli M, Tamburin S, Fonte C, Stabile AM, **Boscolo Galazzo I**, Ghinassi B, Venneri MA, Pizzini FB, Muti E, Smania N, Baldassarre AD, Naro F, Rende M, Schena F. Non-A β -Dependent Factors Associated with Global Cognitive and Physical Function in Alzheimer's Disease: A Pilot Multivariate Analysis. *Journal of Clinical Medicine*; 8:E224, 2019.
- [J18 - 2018] De Blasi B, Barnes A, **Boscolo Galazzo I**, Hua CH, Shulkin B, Koepp M, Tisdall M. Age-Specific 18F-FDG Image Processing Pipelines and Analysis Are Essential for Individual Mapping of Seizure Foci in Paediatric Patients with Intractable Epilepsy. *Journal of Nuclear Medicine*; 59:1590-1596, 2018.
- [J17 - 2018] Gandolfi M, Formaggio E, Geroin C, Storti SF, **Boscolo Galazzo I**, Bortolami M, Saltuari L, Picelli A, Waldner A, Manganotti P, Smania N. Quantification of Upper Limb Motor Recovery and EEG Power Changes after Robot-Assisted Bilateral Arm Training in Chronic Stroke Patients: A Prospective Pilot Study. *Neural Plasticity*; 8105480, 2018.
- [J16 - 2018] Venturelli M, Pedrinolla A, **Boscolo Galazzo I**, Fonte C, Smania N, Tamburin S, Muti E, Crispolti L, Stabile A, Pistilli A, Rende M, Pizzini FB, Schena F. Impact of Nitric Oxide Bioavailability on the Progressive Cerebral and Peripheral Circulatory Impairments During Aging and Alzheimer's Disease. *Frontiers in Physiology*; 9:169, 2018.
- [J15 - 2018] **Boscolo Galazzo I**, Brusini L, Obertino S, Zucchelli M, Granziera C, Menegaz G. On the Viability of Diffusion MRI-Based Microstructural Biomarkers in Ischemic Stroke. *Frontiers in Neuroscience*; 12:92, 2018.
- [J14 - 2018] Storti SF, **Boscolo Galazzo I**, Pizzini FB, Menegaz G. Dual-echo ASL based assessment of motor networks: a feasibility study. *Journal of Neural Engineering*; 15: 026018, 2018.
- [J13 - 2017] Storti SF, **Boscolo Galazzo I**, Montemezzi S, Menegaz G, Pizzini FB. Dual-echo ASL contributes to decrypting the link between functional connectivity and cerebral blood flow. *Human Brain Mapping*; 38: 5831-5844, 2017.
- [J12 - 2017] Pievani M, Pini L, Ferrari C, Pizzini FB, **Boscolo Galazzo I**, Cobelli C, Cotelli M, Manenti R, Frisoni GB. Coordinate-based meta-analysis of the default mode and salience network for target identification in non-invasive brain stimulation of AD and bvFTD networks. *Journal of Alzheimer's Disease*; 57: 825-843, 2017.
- [J11 - 2017] Storti SF, **Boscolo Galazzo I**, Khan S, Manganotti P, Menegaz G. Exploring the Epileptic Brain Network using Time-Variant Effective Connectivity and Graph Theory. *IEEE Journal of Biomedical and Health Informatics*; 21:1411-1421, 2017.

- [J10 - 2016] Brusini L, Obertino S, **Boscolo Galazzo I**, Zucchelli M, Krueger G, Granziera C, Menegaz G. “Ensemble average propagator-based detection of microstructural alterations after stroke. *International Journal of Computer Assisted Radiology and Surgery*; 11:1585-1597, 2016.
- [J9 - 2016] **Boscolo Galazzo I**, Mattoli MV, Pizzini FB, De Vita E, Barnes A, Duncan JS, Jäger HR, Golay X, Bomanji JB, Koepp M, Groves AM, Fraioli F. Cerebral metabolism and perfusion in MR-negative individuals with refractory focal epilepsy assessed by simultaneous acquisition of (18)F-FDG PET and arterial spin labeling. *Neuroimage: Clinical*; 11: 648-657, 2016.
- [J8 - 2015] **Boscolo Galazzo I**, Storti SF, Del Felice A, Pizzini FB, Arcaro C, Formaggio E, Mai R, Chappell M, Beltramello A, Manganotti P. Patient-specific detection of cerebral blood flow alterations as assessed by arterial spin labeling in drug-resistant epileptic patients. *PLoS One*; 10(5): e0123975, 2015.
- [J7 - 2015] Formaggio E, Storti SF, **Boscolo Galazzo I**, Gandolfi ML, Geroin C, Smania N, Fiaschi A, Manganotti P. Time frequency modulation of ERD and EEG coherence in robot assisted hand performance. *Brain Topography*; 28: 352-363, 2015.
- [J6 - 2015] Gandolfi ML, Formaggio E, Geroin C, Storti SF, **Boscolo Galazzo I**, Waldner A, Manganotti P, Smania N. Electroencephalographic changes of brain oscillatory activity after upper limb somatic sensation training in a patient with somatosensory deficit after stroke. *Clinical EEG and Neuroscience*; 46: 347-52, 2015.
- [J5- 2015] Storti SF, Del Felice A, Formaggio E, **Boscolo Galazzo I**, Bongiovanni LB, Cerini R, Fiaschi A, Manganotti P. “Spatial and temporal EEG-fMRI changes during preictal and postictal Phases in a patient with posttraumatic epilepsy. *Clinical EEG and Neuroscience*; 46: 247-52, 2015.
- [J4 - 2014] **Boscolo Galazzo I**, Storti SF, Formaggio E, Pizzini FB, Fiaschi A, Beltramello A, Bertoldo A, Manganotti P. Investigation of brain hemodynamic changes induced by active and passive movements: a combined Arterial Spin Labeling - BOLD fMRI study. *Journal of Magnetic Resonance Imaging*, 40: 937-948, 2014.
- [J3 - 2014] Formaggio E, Storti SF, **Boscolo Galazzo I**, Bongiovanni LB, Cerini R, Fiaschi A, Manganotti P. Reproducibility of EEG-fMRI results in a patient with fixation-off sensitivity. *Clinical EEG and Neuroscience*, 45: 212-217, 2014.
- [J2- 2014] Storti SF, **Boscolo Galazzo I**, Del Felice A, Pizzini FB, Arcaro C, Formaggio E, Mai R, Manganotti P. Combining ESI, ASL and PET for quantitative assessment of drug-resistant focal epilepsy. *Neuroimage*, 102: 49-59, 2014.
- [J1 - 2013] Formaggio E, Storti SF, **Boscolo Galazzo I**, Gandolfi ML, Geroin C, Spezia L, Waldner A, Fiaschi A, Smania N, Manganotti P. Modulation of event-related desynchronization in robot-assisted hand performance: brain oscillatory changes in active, passive and imagined movements. *Journal of Neuroengineering and Rehabilitation*, 10: 24-34, 2013.

Conference Proceedings on International Conferences

- [PI8 - 2019] Brusini L, Cruciani F, **Boscolo Galazzo I**, Galbusera A, Borin M, Paolone G, Diana M, Buffelli M, Gozzi A, Menegaz G. Can single shell diffusion mri detect synaptic plasticity in mice? *Proceedings of the 16th IEEE International Symposium on Biomedical Imaging (ISBI)*, Venice, Italy, Apr 8-11, 2019.
- [PI7 - 2018] Brusini L, **Boscolo Galazzo I**, Zucchelli M, Granziera C, Menegaz G. Can diffusion MRI reveal stroke-induced microstructural changes in GM? *Proceedings of the 2nd MICCAI SWITCH Workshop*, Granada, Spain, Sep 16, 2018.
- [PI6 - 2018] Storti SF, **Boscolo Galazzo I**, Iacovelli C, Caliandro P, Menegaz G. Connectivity Modulations induced by Reaching and Grasping Movements. *Proceedings of the 26th European Signal Processing Conference (EUSIPCO)*, Rome, Italy, Sep 3-7, 2018.
- [PI5 - 2018] De Blasi B, **Boscolo Galazzo I**, Pasetto L, Storti SF, Koepp M, Barnes A, Menegaz G. Pipeline comparison for the pre-processing of resting-state data in Epilepsy. *Proceedings of the 26th European Signal Processing Conference (EUSIPCO)*, Rome, Italy, Sep 3-7, 2018.
- [PI4 - 2017] Tomazzoli C, Storti SF, **Boscolo Galazzo I**, Cristani M, Menegaz G. The Brain is a social Network”. *Proceedings of the 3rd International Workshop on Knowledge Discovery on the Web*, pp. 1-14, Cagliari, Italy, Sep 11-13, 2017.
- [PI3 - 2017] Obertino S, Jiménez Hernández S, **Boscolo Galazzo I**, Pizzini FB, Zucchelli M, Menegaz G. Exploiting machine learning principles for assessing the fingerprinting potential of connectivity features. *Proceedings of the Computational Diffusion MRI - MICCAI 2017 Workshop*, Quebec, Canada, Sep 4, 2017.
- [PI2 - 2016] Obertino S, Brusini L, **Boscolo Galazzo I**, Zucchelli M, Granziera C, Cristani M, Menegaz G. “Shore-based biomarkers allow patients versus controls classification in stroke. *Proceedings of the 13th IEEE International Symposium on Biomedical Imaging (ISBI)*, Prague, Czech Republic, Apr 13-16, 2016.
- [PI1 - 2015] Brusini L, Obertino S, Zucchelli M, **Boscolo Galazzo I**, Krueger G, Granziera C, Menegaz G. Assessment of Mean Apparent Propagator-Based Indices as Biomarkers of Axonal Remodeling after Stroke. *Proceedings of the 18th Medical Image Computing and Computer Assisted Intervention (MICCAI)*, Munich, Germany, Oct 5-9, 2015.

Conference Proceedings on National Conferences

- [PN3 - 2018] De Blasi B, **Boscolo Galazzo I**, Pasetto L, Storti SF, Koepp M, Barnes A, Menegaz G. A comparison of pre-processing pipelines for the analysis of resting-state data in Epilepsy. *Proceedings of the Sixth National Congress of Bioengineering (GNB)*, Milan, Italy, Jun 25-27, 2018.
- [PN2 - 2018] Brusini L, **Boscolo Galazzo I**, Zucchelli M, Granziera C, Menegaz G. Diffusion MRI sensitivity to contralateral GM modulations after stroke. *Proceedings of the Sixth National Congress of Bioengineering (GNB)*, Milan, Italy, Jun 25-27, 2018.

[PN1 - 2018] Brusini L, Cruciani F, **Boscolo Galazzo I**, Galbusera A, Borin M, Diana G, Buffelli M, Gozzi A, Menegaz G. Assessing the effects of synaptic plasticity using structural MRI in the mouse. *Proceedings of the Sixth National Congress of Bioengineering (GNB)*, Milan, Italy, Jun 25-27, 2018.

The undersigned Ilaria Boscolo Galazzo under her own liability, in full understanding of the criminal liability for false declarations and statements, in accordance with Art. 76 of Italian Presidential Decree DPR no. 445 dated 28/12/2000, hereby declares that all information provided in the present curriculum vitae is true.

Verona, February 18, 2019

Ilaria Boscolo Galazzo