

### Dante Mantini - Biosketch

Dante Mantini is Scientific Director of the IRCCS San Camillo in Venice and Professor at the KU Leuven (Belgium). He has published more than 150 papers in peer-reviewed scientific journals, among which papers in high-impact factor journals like *Science*, *Nature Methods* and *PNAS*. He has been invited speaker at prestigious research centers in Europe and America, and serves as a reviewer for several journals and funding agencies. He moved to the field of neuroscience after a Master degree in electrical engineering (2002) and a PhD in computer science (2006) at the Marche Polytechnic University (Italy). During his first post-doc (2006-2009), he worked at the University of Chieti where he received extensive training in the fields of computational, cognitive and translational neuroscience. He was among the first scientists who used neuroimaging, in particular fMRI and MEG/EEG, to investigate dynamic interactions between distant brain regions, i.e. brain connectivity. He moved to the KU Leuven in 2009, after being granted a postdoctoral fellowship by the Research Foundation Flanders (FWO). At the KU Leuven, he worked on the study of brain connectivity techniques in human and non-human primates. In 2012 he was jointly appointed at the University of Oxford as independent research fellow and at ETH Zurich as research group leader. He then established the Brain Imaging and Neural Dynamics (BIND) group, aiming at better understanding the neural mechanisms underlying brain connectivity. In 2015 he went back to Belgium to take up a prestigious Research Professorship at the KU Leuven, and in 2018 he was appointed Scientific Director of the IRCCS San Camillo in Venice.

### Dante Mantini - Five representative publications

Mantini D, Perrucci MG, Del Gratta C, Romani GL, Corbetta M (2007). Electrophysiological signatures of resting state networks in the human brain. **PNAS**, 104(32), 13170-5.

de Pasquale F, Della Penna S, Snyder AZ, Lewis C, Mantini D, Marzetti L, Belardinelli P, Ciancetta L, Pizzella V, Romani GL, Corbetta M (2010). Temporal dynamics of spontaneous MEG activity in brain networks. **PNAS**. 107(13), 6040-6045.

Mantini D, Hasson U, Betti V, Perrucci MG, Romani GL, Corbetta M, Orban GA, Vanduffel W (2012) Interspecies activity correlations reveal functional correspondences between monkey and human brain areas. **Nat. Methods**. 9(3), 277-282.

Betti V, Della Penna S, de Pasquale F, Mantini D, Marzetti L, Romani GL, Corbetta M. (2013) Natural scenes viewing alters the dynamics of functional connectivity in the human brain. **Neuron**. 79(4):782-797.

Boets B, Op de Beeck H, Vandermosten M, Scott SK, Gillebert CR, Mantini D, Bulthé J, Sunaert S, Wouters J, Ghesquière P (2013). Intact but less accessible phonetic representations in adults with dyslexia. **Science**. 342(6163), 1251-1254.

## EDUCATION

- Feb 2006**      **PhD in Computer Science** (with distinction)  
Marche Polytechnic University (Ancona, Italy)
- Sep 2004**      **Advanced Master in Business Administration**  
ISTAO - Adriano Olivetti Business School (Ancona, Italy)
- July 2002**      **Master in Electrical Engineering** (110/110 cum laude)  
University of Ancona (Ancona, Italy)
- July 1997**      **High School Diploma – Scientific Studies PNI** (60/60)  
Liceo Scientifico “Leonardo da Vinci” (Pescara, Italy)
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## EMPLOYMENT

- 2018-**            **Scientific Director**  
San Camillo Research Hospital – IRCCS (Venice, Italy)
- 2020-**            **Full Professor**  
Department of Movement Sciences, KU Leuven (Leuven, Belgium)
- 2015-2020**      **Associate Professor**  
Department of Movement Sciences, KU Leuven (Leuven, Belgium)
- 2015-2019**      **Honorary Research Fellow**  
Department of Experimental Psychology, Oxford University (Oxford, United Kingdom)
- 2012-2015**      **Senior Research Fellow**  
Department of Experimental Psychology, Oxford University (Oxford, United Kingdom)
- 2012-2016**      **Group Leader**  
Department of Health Sciences and Technology, ETH Zurich (Zurich, Switzerland)
- 2009-2012**      **Post-doctoral Research Fellow**  
Department of Neurosciences, KU Leuven, (Leuven, Belgium)
- 2006-2009**      **Postdoctoral Research Associate**  
Institute for Advanced Biomedical Technologies, University of Chieti (Chieti, Italy)
- 2002-2006**      **PhD student**  
Department of Engineering in Computer Science, Management and Automation,  
Marche Polytechnic University (Ancona, Italy)

## TEACHING

2020-	Advanced Research Skills, KU Leuven, Belgium
2018-	Advanced Medical Imaging, KU Leuven, Belgium
2011-2012	Advanced Topics in Magnetic Resonance Imaging, KU Leuven, Belgium
2007-2008	Sound Physics and Applied Optics, University of Chieti, Italy
2005-2007	Basic physics, University of Chieti, Italy
2002-2003	Signal Theory, Marche Polytechnic University, Italy

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## FELLOWSHIPS AND AWARDS

2009-2012	Postdoctoral Research Fellowship, Research Foundation Flanders, Belgium
2007-2008	Travel Awards, 13 <sup>th</sup> and 14 <sup>th</sup> Human Brain Mapping conferences
2005	Young Investigator Award, NonInvasive Functional Source Imaging conference
2002	Award for "eCapital - Business Plan Competition", Marche Polytechnic University

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## STUDENT AND POST-DOC SUPERVISION

2018-	Supervision of two post-docs Department of Neurorehabilitation, San Camillo Research Hospital, Italy
2015-	Supervision of two post-docs and five PhD students Department of Movement Sciences, KU Leuven, Belgium
2012-2018	Supervision of one post-doc and two research assistants Department of Experimental psychology, Oxford University, United Kingdom
2012-2016	Supervision of three PhD students Department of Health Sciences and Technology, ETH Zurich, Switzerland
2009-2012	Co-supervision of three PhD students Department of Neurosciences, KU Leuven, Belgium
2005-2009	Co-supervision of two PhD students Institute for Advanced Biomedical Technologies, University of Chieti, Italy

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## ORGANIZATION OF SCIENTIFIC CONFERENCES AND COURSES

Dec 2016	BrainModes conference, Brussels, Belgium (scientific organizer)
Dec 2015	Belgian Neuroinformatics Workshop, Leuven, Belgium (co-organizer)
Sep 2013	Belgian Summer School on Brain Imaging, Antwerp, Belgium (co-organizer)
Feb 2010	KU Leuven Symposium on Resting State Connectivity, Leuven, Belgium (organizer)

## GRANTS AND FUNDING

- 2020-2023** "Brain connectivity measured with high-density electroencephalography: a novel neurodiagnostic tool for stroke" Italian Ministry of Health (450.000 EUR, PI)
- 2019-2022** "The journey of a memory: dynamics of learning and consolidation in maturation and ageing" Research Foundation Flanders (3.700.000 EUR, co-PI)
- 2018-2022** "Integrated Platform for Closed-Loop Motor Training and Adaptive Neuromodulation" Research Foundation Flanders (800.000 EUR, PI)
- 2017-2021** "Oscillatory activity in large-scale brain networks and its relevance to behaviour" Research Foundation Flanders (750.000 EUR, PI)
- 2017-2019** "The effect of tACS at gamma frequency on working memory performance in patients affected by mild to moderate Huntington's disease" Gossweiler Foundation (138.000 EUR, co-PI)
- 2016-2019** "High-density electroencephalography methods to investigate dynamic functional interactions between distant brain areas" Research Foundation Flanders (380.000 EUR, PI)
- 2015-2021** "Aging and movement control: towards a multimodal imaging approach for the study of brain structure, function, and connectivity" KU Leuven Research Office (1.600.000 EUR, co-PI)
- 2013-2018** "Large-scale alterations of cortical activity induced by brain lesions and their relevance to behavioural deficits" Wellcome Trust (700.000 GBP, PI)
- 2013-2018** "Integrated neural networks in the primate brain" Wellcome Trust (5.000.000 GBP, co-PI)
- 2013-2017** "Inter-areal cortical communication: investigating the relationship between hemodynamic and electrophysiological measurements" European Commission (100.000 EUR, PI)
- 2013-2016** "Long-range neuronal communication in resting state networks" Swiss National Science Foundation (250.000 CHF, PI)
- 2013-2016** "Functional correspondences of brain networks in different primate species" Research Foundation Flanders (400.000 EUR, co-PI)
- 2013-2016** "Selective dopaminergic reward signals in the visual cortex of monkeys, humans and Parkinson patients" Research Foundation Flanders (500.000 EUR, co-PI)
- 2012-2015** "Enhancing memory consolidation through interventions targeting cortico-subcortical pathways and reward dependent mechanisms" Research Foundation Flanders (425.000 EUR, co-PI)
- 2012-2015** "The functional role of face-selective cortical areas in primates" Research Foundation Flanders (240.000 EUR, co-PI)
- 2011-2014** "The functional role of inter-areal cortical communication in the normal and transiently perturbed human and non-human primate brain" Research Foundation Flanders (400.000 EUR, co-PI)

## ACADEMIC SERVICE

- 2020- Member of Departmental Board, Department of Movement Sciences, KU Leuven
  - 2019- Managing Director of BrainsHub Core Facility, KU Leuven
  - 2019- Member of Permanent Education Committee for Movement Sciences, KU Leuven
  - 2018- Member of PhD Committee for Movement and Rehabilitation Sciences, KU Leuven
  - 2015- Member of Committee for Scientific Integrity, KU Leuven
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## COMMISSIONS OF TRUST

- 2019- Scientific Expert for Neuroscience, Research Foundation Flanders
  - 2019- Associate Editor, Scientific Reports
  - 2018- Guest Associate Editor, Frontiers in Brain Imaging Methods
  - 2013- Review Editor, Frontiers in Perception Science
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