Claudio Vinegoni, Ph.D.

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Citizenship

Dual Citizenship: **USA**, **Italy**.

Education

- **University of Geneva**, Geneva, Switzerland.
  Ph.D. in Physics, in the group of Prof. N. Gisin (2002).
  Thesis title: *Nonlinear Effects in Optical Fibers*.
- **University of Trento**, Trento, Italy.
  M.Sc. in Physics, October 1996.
  Thesis title: *Structure and Vibrational Properties of Electrochromic Materials*

Present Appointment

- Assistant Professor at the *Center for Systems Biology* at MGH-Harvard University (Dir. Prof. R. Weissleder).
- Director of the In-vivo Microscopy Core at the *Center for Systems Biology* at MGH-Harvard University.
- Head Laboratory for Biooptics and Molecular Imaging at the *Center for Molecular Imaging Research* at MGH-Harvard University.

Previous Appointments

- **05/2008–12/2010** Instructor of Radiology at the Center for Systems Biology at MGH-Harvard University (*prof. R. Weissleder*)
- **09/2007–04/2008** Post-Doc researcher at the Center for Systems Biology at MGH-Harvard University (*prof. R. Weissleder*)
- **09/2005–08/2007** Post-Doc researcher at the Center for Molecular Imaging Research CMIR at MGH-Harvard University in the Lab for Biooptics and Molecular Imaging (*prof. V. Ntziachristos*)
- **07/2003–08/2005** Post-Doc at the Beckman Institute at the University of Illinois Urbana-Champaign, in the Biophotonics Imaging Laboratory.
- **05/2002–06/2003** Guest Research Fellow at Chalmers University (Sweden)- Photonics Laboratory.
- **05/2001–09/2001** Guest researcher at EXFO (Quebec, CAN)
- **03/1999–01/2002** Research Assistant at the University of Geneva, CH
- **06/1998–03/1999** Research Assistant at the University of Pittsburgh, PA.
- **03/1997–06/1998** Technical Supervisor of the Ultrafast Spectroscopy Univ. of Trento (Italy).
- **10/1996–03/1997** Technical Supervisor in the Raman Spectroscopy Laboratory Univ. of Trento (Italy).

Personal Statement

Assistant Professor in Physics at Harvard Medical School and a faculty member of the Center for Systems Biology at Massachusetts General Hospital. 25 years of experience in optical imaging and the development of several novel optical microscopic and macroscopic molecular

imaging techniques for biomedical imaging. In particular, my work has been focused on cancer imaging, functional imaging of engineered tissue, neural imaging and cardiovascular imaging. Recent work involves the development of new imaging modalities and imaging processing techniques for motion compensation for *in vivo* heart imaging, development of high throughput high-resolution imaging systems for drug-target engagement, *in vivo* and *in vitro* studies of pharmacodynamics for different drugs, longitudinal microscopy imaging study of insulitis in mice, and the development of novel high content data analysis and visualization tool. The research background in the optical imaging field includes fluorescence, fluorescence polarization and time resolved measurements, multiphoton and confocal microscopy, Raman spectroscopy, Coherent anti-Stokes Raman Scattering (CARS) imaging, optical coherence microscopy and tomography, mesoscopic imaging, optical projection tomography, and fluorescence molecular tomography in diffusive regime for whole mouse imaging.

Scientific Contributions

Author and coauthor of 182 scientific contributions. Among them, 3 Invited Review Chapters, 1 Patent, 110 articles, published in peer-reviewed international scientific journals, 35 oral presentations and poster sessions at international conferences, and 33 proceedings.

Committee Services and Activities

- Editorial Board *"Scientific Reports"* in the category Electronics, Photonics and Device Physics
- Reviewer for the following journals: *Advanced Science, Applied Physics Letters Photonics, Biomedical Optics Express, Biotechnology Journal, Circulation: Cardiovascular Imaging, Cytometry, eLife, Frontiers in Physics, Frontiers in Immunology, IEEE Access, IEEE Transactions on Information Technology in BioMedicine, IEEE Transaction on Biomedical Engineering, IEEE Transactions of Instrument. and Measurements, IEEE Transactions on Med. Imaging, IEEE Journal of Biomedical and Health Informatics, Int. J. of Biochemistry, Int. J. of Biomedical Imaging, JACC: Cardiovascular Imaging, Journal of Biophotonics, J. Lightwave Technology, Journal of Mathematical Imaging and Vision, Journal of Microscopy, Journal of Molecular Imaging, Journal Nuclear Medicine, JOVE, Methods and Applications in Fluorescence, Micromachines, Molecular Imaging, Molecular Imaging and Biology, Nature Communications, Nature Methods, Nature Protocols, Optica, Optics Communications, Optics Express, Optics Letters, Photoacoustics, Photonics and Technology Letters, PhotoniX, Physical Review A, Physical Review E, PlosOne, Review of Scientific Instruments, Scientific Reports, SLAS Discovery.*
- Chair of the "Molecular Infrared and other novel imaging modalities" session at *IEEE Engineering Medicine and Biology, Boston USA (2011).*
- Technical Program Committee of the *IEEE Biomedical and Health Informatics*, Hong Kong (2012).
- Associate Editor, Biomedical Imaging and Image Processing, *IEEE Engineering Medicine and Biology* (2012-2021).

Webpage

A copy of this curriculum vitae, a short resume, and a complete dowloadable bibliography with all the published articles and conference contributions, can be found at the following address: https://cvinegoni.github.io

Last Updated

August 30, 2022