

Curriculum Vitae

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ISI ResercherID: A-4314-2009

h-index: 8 (as computed by the "ISI Web of Knowledge")

Education

- Degree in Physics, University of Florence (Università degli Studi di Firenze), April 2004. Thesis: "Studio sulla localizzazione della luce in sistemi disordinati unodimensionali" ("Study on light localization in disordered 1D structures").
- August 2005, Summer School "Photonic Metamaterials: From Micro to Nano Scale", Erice, Sicily, Italy.
- PhD in Physics, University of Florence (Università degli Studi di Firenze), 2007. Thesis: "Light transport beyond diffusion".
- June 2008, Summer School "International School on Nanophotonic and Molecular Photonics", Santander, Spain.

Professional experience

- May 2004 - December 2004 : temporary research contract (Contratto di collaborazione a tempo determinato) with the University of Florence on *Random Lasing*.
- January 2008 - present : post-doc contract at LENS (European Laboratory for Non-Linear Spectroscopy) on *Transport of light in disordered systems*.

Research skills

- Extensive knowledge of light transport phenomena in ordered (crystalline structures and Photonic Crystals), quasi-ordered (quasi-crystalline structures) and disordered systems with a special focus on anomalous transport.
- Ample experience with laser physics, quantum dots and Random Lasing phenomena.
- Long-term experience in hi-resolution characterization of optical materials (both ordered and disordered).
- Statistical analysis and computer programming experience.

Language skills

- Italian: mother language
- English: fluent
- Polish: elementary

Publications

- Bertolotti J, Gottardo S, Wiersma DS, Ghulinyan M, Pavesi L, *Optical necklace states in Anderson localized 1D systems*, PHYSICAL REVIEW LETTERS 94 (11): Art. No. 113903 MAR 25 2005.
- Cademartiri L, von Freymann G, Arsenault AC, Bertolotti J, Wiersma DS, Kitaev V, Ozin GA, *Nanocrystals as precursors for flexible functional films*, SMALL 1 (12): 1184-1187 DEC 2005.
- Cademartiri L, Bertolotti J, Sapienza R, Wiersma DS, von Freymann G, Ozin GA, *Multigram scale, solventless, and diffusion-controlled route to highly monodisperse PbS nanocrystals*, JOURNAL OF PHYSICAL CHEMISTRY B 110 (2): 671-673 JAN 19 2006.
- Arsenault AC, Clark TJ, Von Freymann G, Cademartiri L, Sapienza R, Bertolotti J, Vekris E, Wong S, Kitaev V, Manners I, Wang RZ, John S, Wiersma DS, Ozin GA, *From color fingerprinting to the control of photoluminescence in elastic photonic crystals*, NATURE MATERIALS 5 (3):179-184 MAR 2006.
- Ghulinyan M, Galli M, Toninelli C, Bertolotti J, Gottardo S, Marabelli F, Wiersma DS, Pavesi L, Andreani LC, *Wide-band transmission of nondistorted slow waves in one-dimensional optical superlattices*, APPLIED PHYSICS LETTERS 88 (24): Art. No. 241103 JUN 12 2006.
- Bertolotti J, Galli M, Sapienza R, Ghulinyan M, Gottardo S, Andreani LC, Pavesi L, Wiersma DS, *Wave transport in random systems: Multiple resonance character of necklace modes and their statistical behavior*, PHYSICAL REVIEW E 74 (3): Art. No. 035602 Part 2, SEP 2006.
- Sapienza R, García PD, Bertolotti J, Martín MD, Blanco Á, Viña L, López C, Wiersma DS, *Observation of Resonant Behavior in the Energy Velocity of Diffused Light*, PHYSICAL REVIEW LETTERS 99: Art. No. 233902 MAR 2007.
- Barthelemy P, Bertolotti J, Wiersma DS, *A Lévy flight for light*, NATURE 453 (7194): 495-498 MAY 2008.
- García PD, Sapienza R, Bertolotti J, Martín MD, Blanco Á, Altube A, Viña L, Wiersma DS, López C, *Resonant light transport through Mie modes in photonic glasses*, PHYSICAL REVIEW A 78 (2): Art. No. 023823 AUG 2008.
- Bertolotti J, Vynck K, Pattelli L, Barthelemy P, Lepri S, Wiersma DS, *Engineering disorder in superdiffusive Lévy glasses*, ADVANCED FUNCTIONAL MATERIALS 20 (6): 965-968 MAR 2010.

Congresses, conferences and workshops

- MMD Meeting, Genova, 2005 (oral contribution).
- OSA topical meeting "Meta", Grand Island, The Bahamas, 2006 (oral contribution).
- PhOREMOST scientific workshop, Florence, Italy 2006 (oral contribution).
- PhOREMOST general assembly meeting, Rome, Italy, 2007 (oral contribution).
- OSA topical meeting "Meta", Jackson Hole, Wyoming, 2007 (poster

- contribution).
- Marian Smoluchowski Symposium on Statistical Physics, Zakopane, Poland, 2008 (poster contribution).
- XIV Convegno Nazionale di Fisica Statistica e dei Sistemi Complessi, Parma, Italy, 2009 (oral contribution).
- GDR Workshop “MésoImage: Masoscopic Physics of Waves for Imaging in Complex Media”, Paris, France, 2009 (oral contribution).

Invited seminars and lectures

- Lévy flights (and walks) for light, 16 FEB 2009, University of Bologna (Italy).
- Light propagation in disordered systems: diffusion and beyond, 6 APR 2009, Wrocław University of Technology (Poland).
- Light superdiffusion in Lévy glasses, 10 APR 2009, Hugo Steinhaus Center (Poland).
- Light transport beyond diffusion, 16 DEC 2009, University of Twente (Netherlands).
- Light transport in strongly scattering media: Anderson localization and the formation of Necklace states, 13 JAN 2010, Technical University of Denmark (Denmark).
- Anomalous transport of light, 02 FEB 2010, University of Twente (Netherlands).

Short visits

- January 2007, CSIC (Madrid, Spain). Prof. Cefe López.
- April 2009, Hugo Steinhaus Center (Wrocław, Poland). Prof. Aleksander Weron.

Referee activity

Has been referee for the following journals:

- Optics Express
- Journal of the Optical Society of America B
- Chemical Engineering Communications

Non-scientific activities

- Wikipedia contributor since June 2004. Wikipedia Administrator from November 2005 to January 2008.
- Contributor to the blog “Faccio Cose Vedo Gente” (www.fcvq.it).
- Contributor to the blog “Survival Blog for Scientists” (www.sciencesurvivalblog.com).
- More than 10 years of experience as Wu-Shu/Kung-Fu instructor and referee.
- President of APRI (Associazione Precari della Ricerca Italiana) since February 2010.