



# UNIVERSITÀ DEGLI STUDI DELL'AQUILA

**Prof. Dario Ambrosini**

## **Curriculum scientifico**

(Aggiornato il 2020/10/30)

Dario Ambrosini was born in Rome, Italy. He earned his degree in electronic engineering from the Sapienza University of Rome (Italy), defending an experimental thesis about the optical information processing by the Talbot effect and Talbot interferometers (Advisor Prof. Franco Gori). After spending two years in the Optics Laboratory of Prof. Gori (Sapienza University), in 1995 he joined the Department of Energetics (presently DIIE, Department of Industrial Engineering, Information and Economics) of the University of L'Aquila as an Assistant Professor. A Temporary Professor since 1998 and an Associate Professor since 2006, since October 2020 he is a Professor of Thermal Sciences, Energy Systems and Building Physics. Since 2015 he is the Head of the ["Gino Parolini" Technical Physics Laboratory](#). Since 2016 he is an associate researcher of [ISASI CNR](#).

He is one of the founding members of [SENSing S.r.l.](#), a 2017 spin-off of the University of L'Aquila.

His research interests include flow visualization and heat and mass transfer, buildings physics, optical metrology, nondestructive testing, thermography, digital image analysis as well as the history of science and engineering.

He pioneered the use of optical techniques (speckle methods, background oriented schlieren, fringe projection...) in flow visualization and in cultural heritage conservation. His application of these devices to art enabled him to work on many famous artworks, including [The Resurrection](#) by Piero della Francesca, [The Monochrome](#) by Leonardo da Vinci in the Sforza Castle (Milan), [The Madonna of the Zodiac](#) by Cosmè Tura, the "[Natività](#)" by Andrea Della Robbia, [The North Door of Florence Baptistery](#) by Lorenzo Ghiberti, the [Madonna di Castelfiorentino](#) by Cimabue (and perhaps Giotto), the [frescoes in the Chapel of Queen Teodolinda](#) (Monza, Italy) by the Zavattari family, [The Dancing Satyr of Mazara del Vallo](#), the "[city fresco](#)" and the "[Philosopher mosaic](#)" in the Cryptoporticus of the baths of Trajan (Rome, Italy) as well as on many historical buildings including the basilica of [Santa Maria di Collemaggio](#) in L'Aquila.

He is a member of ATI (Associazione Termotecnica Italiana), [FTI](#) (Associazione della Fisica Tecnica Italiana), [UIT](#) (Italian Union of Thermal-Fluid Dynamics), [OSA](#) (The Optical Society), [Sigma Xi](#) (The Scientific Research Honor Society) and [SPIE](#) (The International Society for Optics and Photonics). He was a member of [IIC](#) (The International Institute for Conservation of Historic and Artistic Works) between 2004 and 2011. He was also a member of INFM and, since 2005, he is a member of [CNISM](#).

In 2013 he was designated a Senior Member of both OSA and SPIE. In 2019 he has been named a Fellow Member of SPIE. He was selected as an SPIE Community Champion for outstanding volunteering with the Society in 2019.

He has been elected a member of the Steering Committee of UIT (Italian Union of Thermal-Fluid Dynamics) for the years 2017 - 2019, and reelected for 2020 - 2022.

He was a member of the Editorial Board of the journal [Optics and Lasers in Engineering](#) (Elsevier) from 2007 to 2019 and of the journal [Heritage](#) (MDPI) in 2019; since december 2019 he is an associate editor of the journal [Optics and Lasers in Engineering](#) (Elsevier). He chaired several congress sessions and in 2015 was the co-chair of the 33rd UIT Heat Transfer Conference, held in L'Aquila. Since 2013 he is a member of the Programme Committee of the biennial Conference "O3A: Optics for Art, Architecture and Archaeology", the leading event for optical metrology for heritage.

He was the recipient (with G. Schirripa Spagnolo) of the 2001 SPIE Rudolf Kingslake Medal and Prize and one of the recipients of the 2016 OSA Outstanding Reviewer recognition.

He was the Guest Editor of several Special Issues of international journals:

- 1) (with Pramod K. Rastogi) "[Optical methods in Heat Transfer and Fluid Flow](#)", [Optics and Lasers in Engineering](#) vol. 44, pp. 155-350, March-April 2006.
- 2) (with Pramod K. Rastogi) "[Diffusion measurements by optical methods: Recent advances and applications](#)", [Optics and Lasers in Engineering](#) vol. 46, pp. 849-920, December 2008.
- 3) (with Jean-Pierre Prenel) "[Advances in flow visualization](#)", [Optics and Lasers in Engineering](#) vol. 50, pp. 1-98, January 2012.
- 4) (with D. Paoletti, S. Sfarra) "[33rd UIT \(Italian Union of Thermo-fluid dynamics\) Heat transfer Conference](#)", [Journal of Physics: Conference Series](#) vol. 655, October 2015.
- 5) (with S. Sfarra) "[Novel Idea for Infrared Thermography also Applied in Integrated Approach](#)", [Applied Sciences](#) vol. 8, 2018.
- 6) (with P. Ferraro) "[Optical tools for metrology, imaging and diagnostics](#)", [Optics and Lasers in Engineering](#) vol. 104, pp. 1-304, May 2018.

Between 2009 - 2016, He spent about one week per year in EPFL Lausanne (Switzerland), collaborating with Prof. Pramod K. Rastogi.

For more information:

- <http://laser.diiie.univaq.it> Lab website

- [Google Scholarprofile](#)

- [ResearchGateprofile](#)

-[SCOPUS profile](#)

-[ResearcherIDprofile](#)

[-ORCIDprofile](#)

[-SPIE profile](#)

[-Academia.eduprofile](#)