

Curriculum Vitae Dr. Marcelo Trivi
(May 2012)



Marcelo Trivi received his MS and PhD degrees in Physics from the University of La Plata, Argentina, in 1979 and 1986, respectively. In 1982 he joined the Optical Research Center (CIOP) and he is currently its Vice-Director (Director from 2010 to 2012). He is Principal Researcher of the Buenos Aires Research Council (CICPBA), Argentina and a full professor with the Faculty of Engineering, University of La Plata. He spent 4 years with the Istituto Nazionale di Ottica, Florence, Italy (1988 to 1989 and 1995 to 1996) and was a Senior Associate Member of the International Centre for Theoretical Physics (ICTP), Trieste, Italy (2003-2010). He was an invited professor with the Universities and Scientific Institutes of Colombia, Brazil, Mexico, Chile, Peru and Italy. Currently he is the Argentine delegate to International Commission for Optics (ICO).

He is author or co-author over 70 peer-refereed publications in international scientific journals, over 150 conference papers, 4 book chapters, co-editor of a book and 5 patents. He has been Advisor of PhD and Masters Thesis.

His research interests include optical processing, optical metrology, interferometry and dynamical speckle techniques. Optics Education.

Recent papers (2009-2012)

1. "Differentiation of the drying time of paints by dynamic speckle interferometry
P.A. Faccia, O.R. Pardini, J.I. Amalvy, N. Cap, E.E Grumel, R. Arizaga, M. Trivi.
Progress in Organic Coating. (ISSN 0300-9440), 64, 350-355, (2009).
2. "Numerical model for simulation of dynamic speckle reference patterns". G. H. Sendra, H. J. Rabal, M. Trivi, R. Arizaga. Optics Communications (ISSN: 0030-4018) 282, 3693-3700, (2009).

3. "Analysis of bacterial chemotactic response using dynamic laser speckle". S. E. Murialdo, G. H. Sendra, L. I. Passoni, R. Arizaga, J. F. Gonzalez, H. J. Rabal, M. Trivi. *Journal of Biomedical Optics* (ISSN 1083-3668), 14, 064015, (2009).
4. "Vortex analysis in dynamic speckle images". G. H. Sendra, H. J. Rabal, R. Arizaga, M. Trivi. *Journal of the Optical Society of América A* (ISSN: 1084-7529), 26, 2634-2639, (2009).
5. "Image distortion due to refraction by planar surfaces", R. Arizaga, N. Cap, H. Rabal, M. Trivi. *European Journal of Physics* (ISSN 0143-0807), 31, 115–127 (2010).
6. "Characterization of a paint drying process through granulometric analysis of speckle dynamic patterns". A. Mavilio Nuñez, M. Fernández Limia, M. Trivi, H. J. Rabal, R. Arizaga. *Signal Processing* (ISSN: 0165-1684). 90, 1623–1630 (2010).
7. Use of time history speckle pattern and pulsed photoacoustic techniques to detect the self-accommodating transformation in a Cu–Al–Ni shape memory alloy", F.M. Sánchez-Arévalo, W. Aldama-Reyna, A.G. Lara-Rodriguez, T. García-Fernández, G. Pulos, M. Trivi, M. Villagran-Muniz, *Materials Characterization* (ISSN: 1044-5803) 61, 518 – 524, (2010).
8. "The images of axial objects". H. Rabal, N. Cap, M. Trivi, *Physics Education* (ISSN 0031-9120). 46, 407-411, (2011).
9. "Materials Adsorption Characterization by Random Coherent Electromagnetic Waves", C. I. Cabello, G. Bertolini, M. J. González, I. L. Botto, R. Arizaga, M. Trivi *Progress In Electromagnetics Research Symposium*, (ISSN: 1559-9450), 499-501, (2011).
10. "Laser speckle technique: a novel approach for the classification and grading the gastric precancerous lesions". C. A. Andrade Eraso, M. M. Patiño Velasco, J. A. Vasquez Lopez, L. E. Bravo, J. Leon Tellez, M. Trivi, H. Rabal, *Annals of Oncology* (ISSN 0923-7534), 22 (Suppl 5) v 45-v46 (2011).
11. "Identification of motility clusters per area in surfaces colonized by *Pseudomonas aeruginosa*", M. Guzman, J. Pastore, S. Murialdo, V. Ballarin, M. Trivi. *Journal of Physics: Conference Series* (ISSN: 1742-6588), 332, 012038, (2011).
12. "Identification of Gastric Cancer from Speckle Patterns". C.A. Andrade-Eraso, M. Patiño-Velasco, J. Vásquez-López, J. León, G. Bolaños-Pantoja, M. Trivi, *Acta Physica Polonica A* (ISSN 1898-794X), 121, 62-64, (2012).

13. "Q-statistics in dynamic speckle pattern analysis", H. Rabal, N. Cap, M. Trivi, M. N. Guzmán. Optics and Laser in Engineering (ISSN: 0143-8166), 50, 855–861, (2012).
14. "Discrimination of motile bacteria from filamentous fungi using dynamic speckle". S. E. Murialdo, L. I. Passoni, M. N. Guzmán, G. H. Sendra, H. Rabal, M. Trivi, J. F. Gonzalez. Journal of Biomedical Optics (ISSN 1083-3668), 17, 056011, (2012).

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