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Ángel F. Doval
Cristina Trillo
J. Carlos López-Vázquez
Editors

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Introduction

Twelve years have passed since *Interferometry in Speckle Light* was held in Lausanne (Switzerland). Though that first meeting —focused on the fundamentals and applications of the speckle phenomenon—was conceived as a single event, it stimulated the speckle community to gather in further occasions, and thus started the successful series of conferences continued by *Speckle Metrology 2003* in Trondheim (Norway); *Speckle 2006: Speckles, From Grains to Flowers* in Nîmes (France); and *Speckle 2010: Speckle Fields Forever* in Florianópolis (Brazil).

Speckle 2012: V International Conference on Speckle Metrology, which we are honoured to host in Vigo (Spain) from 10 to 12 September 2012, is thus far, the last step on this fascinating journey. Authors from many institutions and countries will present their latest research and share information of current advancements in the field, what will be an excellent opportunity to strengthen scientific bonds and international cooperation.

This volume contains the proceedings papers corresponding to keynote lectures, oral and poster communications contributed by the participants in Speckle 2012. Its contents have been arranged by subject matter into the following ten sections that cover the topics of the conference:

- Speckle Theory and Fundamentals
- Speckle Pattern Photography and Digital Image Correlation
- Speckle Pattern Interferometry
- Digital Holography and Holographic Interferometry
- Data Retrieval in Speckle Metrology
- Metrological Characterization of Speckle Techniques
- Applications in Engineering
- Applications in Natural and Life Sciences
- Other Speckle Techniques
- Speckle Sensors and Sensor Fusion

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We hope that the readers will find in these proceedings useful information for their research and that they will enjoy this look on the random side of light.

Ángel F. Doval
Cristina Trillo
J. Carlos López-Vázquez