

## **IQSA 2014 – Editorial Introduction**

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The 12th Biennial Meeting of the International Quantum Structures Association (IQSA) Quantum Structures 2014 was hosted by the Palacký University in Olomouc, Czech Republic, from 23 June to 27 June 2014. The number of registered participants was over one hundred. The topics of the conference covered all standard areas which are interesting for mathematicians, physicists, logicians, philosophers, and experts in quantum information working in quantum structures. Owing to its interdisciplinary and foundational character, the objective of the conference was to encourage communication between researchers throughout the world who are interested in logico-algebraic structures, orthomodular structures, quantum logics, empirical logics, operational structures, quantum mechanics, quantum measurements, quantum computation, quantum information, quantum communication, philosophy of quantum mechanics, quantum probability, interdisciplinary applications of quantum structures, etc.

Invited speakers were John Harding (New Mexico State University, Las Cruces, United States), Chris Heunen (University of Oxford, United Kingdom), Matt Leifer (Perimeter Institute for Theoretical Physics, Waterloo, Canada), Paolo Perinotti (University of Pavia, Italy), Franklin Schroeck (University of Denver, United States), and Constantine Tsinakis (Vanderbilt University, Nashville, United States).

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The Birkhoff-von Neumann Prize 2014 has been awarded to Dr. Weihua Liu (Department of Mathematics, University of California) and Dr. Anna Jenčová (Mathematical Institute, Slovak Academy of Sciences).

A trip to Archbishop's Chateau in Kroměříž with its historic halls, picture gallery and floral garden was organized for the participants of the conference. The social event continued in the evening with a conference dinner in Olomouc.

The conference was supported by the ESF project CZ.1.07/2.3.00/20.0051 "Algebraic Methods in Quantum Logic" of Masaryk University and Palacký University in Olomouc.

The present proceedings gather 39 contributions which cover practically all areas of the conference. We would like to thank all the contributing authors and reviewers for their effort and we believe that potential readers will find this issue interesting and enriching.

The 13th Biennial IQSA Meeting 2016 will take place in Leicester, United Kingdom, on 11–15 July 2016.

It is with great sadness that we have to report the death of Professor Peter Mittelstaedt, who passed away on 21 November 2014, three days before his 85th birthday. Peter Mittelstaedt was professor of theoretical physics at the University of Cologne from 1965 to 1995. He made fundamental contributions to research into the philosophical and conceptual foundations of modern physics. He was a founding member of IQSA and as president of the association (1994–1996) he organized (together with K.-E. Hellwig) the highly successful Quantum Structures 1996 meeting in Berlin, Germany. He has remained an active member of our scientific community for nearly 20 years since his retirement in 1995. We must consider it a special gift that he was able to complete a summary and synthesis of his life work in the form of his last book, *Rational Reconstructions of Modern Physics* (Springer, Heidelberg 2011, 2013), which has thus become his scientific legacy. A (near) complete list of his scientific publications is available at the URL <http://www.peter-mittelstaedt.de>, and an appraisal of his work as a physicist and philosopher was published in a special issue of the journal *Foundations of Physics* in 2010.<sup>1</sup>

Peter Mittelstaedt will be remembered as an eminent scholar, and in him we will miss a dear colleague, mentor, and a noble and gentle human being. This special issue of the *IJTP* is dedicated to him.

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