

P r o c e e d i n g s

of the

8th MATHEMATICAL PHYSICS MEETING:

**Summer School and Conference
on Modern Mathematical Physics**

August 24–31, 2014, Belgrade, Serbia

Editors

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Institute of Physics

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Belgrade, August 24 - 31, 2014

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P R E F A C E

This volume contains some reviews and original research contributions, which are presented at the **8th Mathematical Physics Meeting: Summer School and Conference on Modern Mathematical Physics**, held in Belgrade (Serbia), August 24–31, 2014 (<http://www.mphys8.ipb.ac.rs>). The programme of this meeting was mainly oriented towards some recent developments in gravity and cosmology, string and quantum field theory, and some relevant mathematical methods. We hope that articles presented here will be valuable literature not only for the participants of this meeting but also for many other PhD students and researchers in modern mathematical and theoretical physics. We are grateful to all authors for writing their contributions for these proceedings.

The previous seven meetings in this series of summer schools and conferences on modern mathematical physics were also held in Serbia: Sokobanja, 13–25 August 2001; Kopaonik, 1–12 September 2002; Zlatibor, 20–31 August 2004; Belgrade, 3–14 September 2006; Belgrade, 6–17 July 2008; Belgrade, 14–23 September 2010; and Belgrade, 9–19 September 2012. The corresponding proceedings of all these meetings were published by the Institute of Physics, Belgrade, and are available in the printed form as well as online at the meeting websites.

This eighth meeting took place at the “Milutin Milankovic Society” located in Belgrade downtown. There was conference dinner in Little Bay restaurant and excursion to Sremski Karlovci and Novi Sad. We hope that all attending this meeting will recall it as a useful and pleasant event, and will wish to participate again in the future.

We wish to thank all lecturers and other speakers for their interesting and valuable talks. We also thank all participants for their active participation. Financial support of our sponsors: *Ministry of Education, Science and Technological Development of the Republic of Serbia, Belgrade; ICTP – SEENET–MTP grant RRJ-09 “Cosmology and Strings”, Niš, Serbia; Project 174012 (Geometry, Education and Visualization with Applications) Belgrade*, was very significant for realization of this activity.

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