

## Editors' Foreword

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The international conference “*The Modern Physics of Compact Stars and Relativistic Gravity 2015*” which took place in Yerevan, Armenia, from 29 September to 3 October 2015 is the third of the conferences that were organized in Yerevan on this theme. The aim of these conferences is to bring together scientists working in astrophysics of compact stars, physics of dense matter, gravitation and cosmology, observations of pulsars and related fields. The two previous conferences in 2008 and 2013 were organized on the occasions of 100th birthdays of prominent Armenian scientists academicians Victor A. Ambartsumyan and Gurgen S. Sahakyan. With this third edition the tradition of these conferences is not only continued, but hopefully is put in the format of series that will be organized on a regular schedule.

The themes that were discussed in the scientific presentations could be roughly divided in two groups - astrophysics of neutron stars and cosmology/general relativity. A special group meeting of the European COST action NewCompStar was also held on *Hyperionization and Quarks in Superdense Matter*. The conference featured more than 40 presentations by international experts in these fields, including a good number by young researchers as well as researchers from the region (Armenia, Georgia, Iran, and Russia). These presentations are reflected in the contributions to this online publication. The reader will find here articles touching on the most diverse aspects of the relativistic astrophysics, including modern problems in ultra-dense matter, superfluidity in compact stars, gravity and its alternatives, cosmological models, quantum field theory in curved background, Casimir effect, etc.

We would like to thank all those individuals and organizations that helped us in organizing a successful conference. These include the members of the international advisory board and the organizing committee listed below and the sponsors of the conference - the Volkswagen Stiftung (Hannover, Germany), the HIC for FAIR Institute (Frankfurt am Main, Germany) and Yerevan State University (Armenia).

*Roland Avagyan, Aram Saharian, Armen Sedrakian*  
Yerevan / Frankfurt-Main, February 2016

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