

## Preface

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**G. Domokos & S. Kovesi-Domokos**

(The organizers' preface to the Proceedings)

*28<sup>th</sup> Johns Hopkins Workshop on Current Problems in Particle Theory*

The 28<sup>th</sup> Johns Hopkins Workshop on Current Problems in Particle Theory was held on the campus of The Johns Hopkins University in Baltimore. The times are interesting. On the one hand, significant theoretical developments are taking place: the AdS-CFT connection, possible long distance modifications of Einstein's theory of gravitation, in order to account for the accelerating expansion of the Universe, *etc.* On the other hand, we are awaiting exciting new results from the Large Hadronic Collider in the near future. We already have unique observational data from WMAP and perhaps from cosmic ray data furnished by detectors like AGASA, HiRes and – again in the near future, – from the Pierre Auger Observatory.

What is emerging is a new unity of the subdisciplines particle physics, astrophysics and cosmology not seen since several centuries. The work of particle physicists, astronomers, cosmic ray physicists became relevant to practitioners of all the subdisciplines.

Intense discussion of these emerging “hot topics” took place at the workshop, some of which was distilled into written contributions, enclosed here. However, as it is always in the nature of such workshops, the written contributions reproduce but a shadow of the discussions which took place.

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Last but not least, we thank Amanda de Felice and Marzia Mazzonetto of the JHEP staff for their excellent work in producing these Proceedings.

The Johns Hopkins workshops are organized by an international collaboration of theoretical physicists from five universities, including Johns Hopkins: Z. Horváth and A. Patkós at Eötvös Loránd University in Budapest, R. Casalbuoni and L. Lusanna at the University of Florence, L. Brink and R. Marnelius at The Institute of Theoretical Physics, Göteborg, O. Nachtmann and M. Jamin from the University of Heidelberg.

The local organizers of this workshop were: G. Domokos, D. Kaplan, S. Kovesi-Domokos and R. Sundrum. All of us hope that you will enjoy perusing these Proceedings.

The Organizers.