

14th International Workshop on Advanced Computing and Analysis Techniques in Physics Research (ACAT 2011)

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Preface



This volume of *Journal of Physics: Conference Series* is dedicated to scientific contributions presented at the 14th International Workshop on Advanced Computing and Analysis Techniques in Physics Research (ACAT 2011) which took place on 5–7 September 2011 at Brunel University, UK.

The workshop series, which began in 1990 in Lyon, France, brings together computer science researchers and practitioners, and researchers from particle physics and related fields in order to explore and confront the boundaries of computing and of automatic data analysis and theoretical calculation techniques. It is a forum for the exchange of ideas among the fields, exploring and promoting cutting-edge computing, data analysis and theoretical calculation techniques in fundamental physics research.

This year's edition of the workshop brought together over 100 participants from all over the world. 14 invited speakers presented key topics on computing ecosystems, cloud computing, multivariate data analysis, symbolic and automatic theoretical calculations as well as computing and data analysis challenges in astrophysics, bioinformatics and musicology. Over 80 other talks and posters presented state-of-the art developments in the areas of the workshop's three tracks: Computing Technologies, Data Analysis Algorithms and Tools, and Computational Techniques in Theoretical Physics. Panel and round table discussions on data management and multivariate data analysis uncovered new ideas and collaboration opportunities in the respective areas.

This edition of ACAT was generously sponsored by the Science and Technology Facility Council (STFC), the Institute for Particle Physics Phenomenology (IPPP) at Durham University, Brookhaven National Laboratory in the USA and Dell.

We would like to thank all the participants of the workshop for the high level of their scientific contributions and for the enthusiastic participation in all its activities which were, ultimately, the key factors in the success of the workshop.

Further information on ACAT 2011 can be found at <http://acat2011.cern.ch>

Dr Liliana Teodorescu
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