

PREFACE

The eleventh European Particle Accelerator Conference, EPAC'08, the biggest ever, took place at the Magazzini del Cotone, Genoa, from Monday to Friday, 23 to 27 June 2008, and was attended by close to 1000 full time delegates from 38 different countries on all continents. Held under the auspices of the European Physical Society Accelerator Group (EPS-AG), it was hosted by INFN-LNF Frascati, INFN Sezione di Milano LASA, INFN Sezione di Genova, and Elettra, Sincrotrone Trieste.

As at previous conferences in the series, the attendance of 66 young scientists from all over the world was made possible through the sponsorship of the following European laboratories and institutions: CEA, ESRF, IN2P3, Soleil (France), BESSY, DESY, FZJ, FZK, GSI (Germany), ELETTRA, Sincrotrone Trieste, INFN, Italian Physical Society (Italy), ALBA, CIEMAT (Spain), MSL, Max-lab (Sweden), CERN, PSI (Switzerland), ASTeC and ISIS, Cockcroft Institute, Diamond Light Source, JAI (UK). The organizers of EPAC are grateful to all sponsors for their valuable support.

The conference was opened by Caterina Biscari, INFN-LNF Frascati, Chair of the EPS-AG and the EPAC'08 Organizing Committee (OC), by Oliver Brüning, CERN, Chair of the Scientific Programme Committee (SPC), and by Paolo Pierini, INFN Sezione di Milano, LASA, Chair of the Local Organizing Committee (LOC). Frederick Bordry of CERN opened the scientific programme with a presentation on the *Status of the LHC*. Antonio Navarra, CMCC Bologna and Hitoshi Murayama, LBNL, gave inspiring closing presentations respectively on *The Challenge of Climate Simulation and Prediction* and on the *Present and Future of High Energy Physics*. Close to ninety invited and contributed oral presentations of very high quality were made during the week, including EPAC's usual "Entertainment" presentation entitled *Molecular Gastronomy, The Art of Cooking*, delivered by Davide Cassi of Parma University.

The scientific programme was developed by the EPAC'08 SPC. It spanned four and a half days, with plenary sessions on Monday and Friday mornings, and Thursday afternoon. All other sessions were composed of two oral sessions in parallel, with the poster sessions scheduled alone at the end of each afternoon. There were 55 invited papers, 33 contributed oral presentations, and 1400 posters were scheduled during the lively poster sessions. These proceedings contain the reports of more than 1200 contributions.

An industrial exhibition took place during the first three days of the conference. Industrial exhibitors occupied 90 booths and presented their high technology products and services to the delegates in an excellent atmosphere conducive to discussions. Renzo Parodi, INFN Genova and the staff of TheOffice, did a really excellent and professional job organizing this exhibition, the biggest ever in EPAC history.

In 2007 and 2008 Steve Myers (CERN) and Eberhard Keil (formerly of CERN) respectively, were made Fellows of the European Physical Society, and the EPS-AG Accelerator Prizes for 2008 were awarded during the prizes ceremony as follows.

Best Student Posters: **Said Hasan**, Univ. Insubria/INFN Milano for the contribution entitled *High Efficiency Collimation with Bent Crystals*, and **Tanuja Sushant Dixit**, GUAS/AS, Ibaraki, for the contribution entitled *Digital Acceleration Scheme of the KEK All-ion Accelerator*.

The prize for a student registered for a PhD or diploma in accelerator physics or engineering or to a trainee accelerator physicist or engineer in the educational phase of their professional career, for quality of work and promise for the future was awarded to **Rocco Paparella**, INFN/LASA, Segrate for his contribution entitled *A Control and Systems Theory Approach to the High Gradient Cavity Detuning Compensation*.

The Frank Sacherer prize for an individual in the early part of his or her career, having made a recent, significant, original contribution to the accelerator field, is awarded to **Viatcheslav Danilov**, ORNL/SNS "for numerous contributions to accelerator physics, in particular for the proposal, calculation, design, construction, and demonstration of efficient laser H stripping."

The Gersh Budker prize for a recent, significant contribution to the accelerator field with no age limit, is awarded to **Norbert Holtkamp**, ITER (formerly ORNL/SNS) "for the construction and successful commissioning of the linac-driven Spallation Neutron Source (SNS) on time and to budget, within the constraints of a multi-laboratory collaboration. His inspirational leadership and outstanding management skills, combined with a thorough understanding of the technical and scientific challenges, were the essential components in successfully bringing together the highly effective SNS team."

The Rolf Wideröe prize for outstanding work in the accelerator field with no age limit, is awarded to **Alex Chao**, SLAC *“for many ground-breaking and fundamental contributions to accelerator physics, in particular for the study and understanding of collective beam behaviour, beam instabilities, beam distribution, spin dynamics, radiative polarization and beam beam effects, including the application of beam dynamics techniques to the problem of galaxy instability in astrophysics. For the direct or indirect contribution to the design and performance of almost every major accelerator, built or not built, over the past 30 years, and for his outstanding papers, lectures and books on accelerator physics.* The prizes were presented by the Chairman of the 2008 Prizes Selection Committee, Leonid Rivkin, PSI, and the Chair of the EPS-AG, Caterina Biscari, INFN LNF.

The medium for the proceedings of this conference is publication on the JACoW site (www.jacow.org). There will be no hard copy volumes. The processing of the electronic files of contributions prior to, during and after the conference, was achieved by the usual "seasoned experts", as well as less experienced volunteers from the Joint Accelerator Conferences Website (JACoW) collaboration. The dynamic team was composed of 17 editors (including 2 working exclusively on processing transparencies), 3 IT and 5 Author Reception staff. Thanks to the work of this dynamic team and the careful preparations and guidance of Ivan Andrian, ELETTRA and Christine Petit-Jean-Genaz, CERN, a pre-press version of the proceedings (by session) was published before the end of the conference. The final version was published at the JACoW site a little over three weeks after the conference. This is yet another impressive record set by JACoW collaboration.

The success of EPAC'08 was the truly excellent collaboration between the OC, the SPC, and the LOC: Ivan Andrian, Stefano Deiuri, and Marina Nadalin (ELETTRA, Sincrotrone Trieste), Bruno Buonomo, Claudio Federici, Maria-Rita Ferrazza, Andrea Ghigo, Fabio Marcellini (INFN LNF), Renzo Parodi, INFN/Genoa, Daniele Sertore, INFN/Milan LASA, Christiana Fiandra and Nadia Sambraello, TheOffice and Christine Petit-Jean-Genaz, CERN, under the chairmanship of Paolo Pierini, INFN/Milan LASA.

And thus the biennial EPAC series comes to an end, giving way to an international series composed of three regional conferences each on a 3-year cycle. The first IPAC will take place in Kyoto (24-28 May 2010), followed by Spain (September 2011), and New Orleans (Spring 2012). We are convinced that the collaboration between the three regions, which has been steadily enhanced in recent years, will continue to grow to the benefit of IPAC and of the accelerator community as a whole.

Caterina Biscari, Chair of the EPS-AG and the EPAC'08 Organizing Committee