

European Union's UNIFY Workshop

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Since 2011, the Kavli IPMU has been participating in the research program entitled, "Unification of Fundamental Forces and Applications (UNIFY)," under the International Research Staff Exchange Scheme of the Marie Curie Actions of the European Union (EU). There are three nodes in the UNIFY network in Europe: the Berlin node consisting of Humboldt University and the Max-Planck Institute for Gravitation Physics, the Paris node with the École Normale Supérieure, the University of Paris VI, and the Centre de Saclay of the French Atomic Energy Commission, and the Portuguese node with the University of Porto. Non-EU nodes in the network are at the California Institute of Technology and the Stony Brook University in the United States and the Perimeter Institute of Canada, as well as the Kavli IPMU. The purpose of the program is to enhance exchanges and collaborations among researchers in the UNIFY network. The Marie Curie Programs cover the travel expenses of EU researchers when they visit non-EU nodes. The research objectives of the programs are fundamental aspects of superstring theory and quantum field theory toward understanding the unification of forces in nature. Hirosi Ooguri represents the Kavli IPMU as a member of the executive board of the

UNIFY network.

Over the past 3 years, several collaborations have emerged within the UNIFY network. Every summer, the network hosts its main conference. The first main conference was held at the University of Porto in 2011, followed by the second main conference in Berlin in 2012. This summer, the third meeting was held at the Kavli IPMU. For two weeks from August 26 to September 6, the Kavli IPMU hosted the UNIFY workshop entitled, the "Kavli IPMU Workshop on Gauge and String Theory."

Unlike regular research conferences, we only scheduled a two hour talk for each morning, leaving afternoons for informal discussions and collaborations, to enhance exchanges and collaborations within the UNIFY network. This followed the successful style of workshops practiced at the Aspen Center for Physics for more than 50 years. In fact, several

research results have emerged from collaborations during the workshop.

The first week of the workshop was dedicated to the integrability structure of the AdS/CFT correspondence, and the second week, to exact techniques such as localization in supersymmetric gauge theories.

Approximately 50 researchers from Europe came to participate in the workshop, some of whom stayed at the Kavli IPMU for a few months and contributed to its research activities. Most of the researchers from abroad were supported by EU's Marie Curie Action, and the total cost for the Kavli IPMU was about half of its regular Focus Week.

Though the workshop turned out to be larger than we originally anticipated, it was very successful. We are grateful to the administrative staff members of IPMU for their dedicated service.

