LAUDATIO FOR PROFESSOR BENJAMIN SCHLEIN

Benjamin Schlein is currently Professor at the Institute of Mathematics of the University of Zurich, in Switzerland. He received his PhD from the Institute of Theoretical Physics of ETH Zurich in 2002. From 2002 until 2006 he held postdoctoral positions at the Courant Institute of New York University, at Stanford University and at Harvard University. From 2006 to 2007, he was Assistant Professor at the University of California at Davis. From 2007 to 2008, he was a Research Fellow at LMU Munich, supported by a Kovalevskaja Award. From 2007 to 2010, he was a Lecturer at the Department of Pure Mathematics and Mathematical Statistics of Cambridge University. From 2010 until 2014, he held a Hausdorff Chair at the University of Bonn.

The research area of Benjamin Schlein is mathematical physics, with focus on the mathematical analysis of many-body quantum systems. In the last years, he worked on the rigorous derivation of effective equations, emerging in certain limiting regimes from many-body quantum mechanics, and on the mathematical justification of Bogoliubov theory to obtain precise information about the low-energy spectrum and the time-evolution of quantum gases. Other directions of his scientific activity have been scattering theory for models of non-relativistic matter coupled to quantized radiation fields, the derivation of Lieb-Robinson bounds for the time evolution of anharmonic lattice systems and the universality of local eigenvalue statistics for Wigner ensembles of random matrices.

His research has been funded by the US National Science Foundation, the Humboldt Foundation, the European Research Council (with a Starting Grant assigned in 2009 and an Advanced Grant in 2019) and by the Swiss National Science Foundation.

His commitment to the scientific community is confirmed by his editorial activities (he is currently Editor in Chief of the "Journal of Functional Analysis", Associate Editor of the "Journal of Mathematical Physics" and Associate Editor of "Probability and Mathematical Physics") and by the organization of several scientific events (including the "International Congress of Mathematical Physics", held in Geneva in 2021).

For the quality, the depth, the innovative character and international value of over 20 years of activity the Scientific Committee of the Levi-Civita Prize in Mechanical and Mathematical Sciences is honored to propose Benjamin Schlein as the Recipient of the 2022 Prize Edition.