

Council for International Teaching and Research

GLOBAL SCHOLARS



2014-15 Princeton Global Scholar Simone Warzel

Simone Warzel is a dynamic figure in the rarefied field of mathematical physics. She specializes in the mathematical aspects of disordered quantum systems and is a leading scholar in the rapidly developing area of random Schrödinger operators. She is also a frequent and sought-after collaborator; together with Princeton mathematical physicist Michael Aizenman she has made groundbreaking contributions to the understanding of particles moving on tree graphs in a random environment, on Anderson localization, and on stability of matter. Her joint work on the challenging problems of many-body quantum systems continues to be a genuine source of excitement for theoretical physicists.

Warzel's academic career embodies the interdisciplinary nature of her field: she studied physics at the University of Erlangen-Nuremberg, Germany and mathematics at Cambridge University before earning her doctoral degree in natural science at Erlangen. Her outstanding work garnered her the 2009 Young Scientist Award from the International Union of Pure and Applied Physics and a number of prestigious fellowships, including an Alfred P. Sloan Research Fellowship and the von Neumann Fellowship at the Institute of Advanced Study in Princeton. In 2012 she was a plenary speaker at the International Congress on Mathematical Physics — the premier conference in the field.

As a former researcher and assistant professor in mathematics at Princeton and a current tenured faculty member at the University of Technology in Munich (UT-Munich), Warzel is a vital link between two of the world's top research centers in mathematical physics. Her appointment as a Princeton Global Scholar will generate fruitful collaborations between mathematical researchers with different areas of expertise. During her visits to campus, Warzel will lecture in the graduate seminar "Topics in Mathematical Physics," lead weekly discussions with graduate students on their works in progress, help found a new program at the Princeton Center for Theoretical Science, and launch Princeton's first international workshop in mathematical physics. Through her position as a promoter of international exchanges at UT-Munich, Warzel will connect Princeton with universities in Canada, France, the Netherlands, and Switzerland — further strengthening Princeton's international reputation in mathematical physics and providing students and faculty with exciting new networks for research and study abroad.