nanoX invited scientist

Miłosz Panfil

Position Assistant Professor

Affiliation Faculty of Physics, University of Warsaw
Pasterura 5, 02-093, Warsaw, Poland

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Host lab at NanoX LPT Team

NanoX contact Name and email

Dates of stay 01/06/2023 - 31/07/2023

Brief Biodata

since 2018, Assistant Professor, Univeristy of Warsaw, Poland
2015-2018, Post-doc, University of Warsaw, Poland
2013-2015, Post-doc, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy
2009-2013, Phd studies, University of Amsterdam, The Netherlands
2007-2009, Master studies, Vrije Universiteit, Amsterdam, The Netherlands
Birthdate 20/07/1985

Research project during the visit at nanoX

Quantyfiying non-equilibrium states of quantum integrable models

The aim of the project is to find a characterization of non-equilibrium states of quantum integrable models through expectation values of conserved charges. Quantum integrable models are models of interacting many-body systems whose dynamics is restricted by the presence of many local conservation laws. Recently, due to advent of experimental and theoretical methods, it became possible to study non-equilibrium dynamics of such models with large precision. This raises a question of characterization of resulting non-equilibrium states of the system. With this project we will try to develop a new method to describe such state employing the expectation values of conserved charges. This will provide new insights to the inner workings of quantum integrable models and their dynamics.The results will be also relevant for experiments with cold atomic gases in which expectation values of conserved charges can be directly measured.

If relevant, add a figure

Legend