

nanoX invited scientist

Konstantin Matveev

Position Senior Physicist

Affiliation Argonne National Laboratory

Host lab at NanoX Team Strongly correlated systems

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Dates of stay 26/09/2023 - 25/10/2023



Brief Biodata

1991 Ph. D., Institute of Solid State Physics, Chernogolovka
1991-1993 Postdoctoral associate, University of Minnesota, Minneapolis, MN.
1993-1996 Postdoctoral associate, Massachusetts Institute of Technology, Cambridge, MA
1996-2003 Assistant/Associate Professor, Duke University
2003-2023 Physicist/Senior Physicist, Argonne National Laboratory, Argonne, IL

Research project during the visit at nanoX

Dynamic response of the electron system at the edge of quantum Hall state

My goal for the visit to LPT is to explore theoretically the dynamic response functions of quantum Hall edge state, which include the spectral function and the dynamic structure factor. These properties can in principle be measured in experiments; such measurements are performed in various other systems. In addition to enabling measurement of the excitation spectrum, they provide a way to probe the nontrivial many-body physics of the system. I am particularly interested in response functions near the soliton branch of the excitation spectrum.

If relevant, add a figure

