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Dmytro Khomenko

Education

B.Sc. Taras Shevchenko National University of Kyiv, Radiophysics Department , 2006 Sep. - 2010 June.

M.Sc. Taras Shevchenko National University of Kyiv, Institute of High Technologies, 2010 Sep. - 2012 June.

M.Sc.-Ph.D. Weizmann Institute of Science, Department of Chemical Physics, 2011 Nov. - 2017 July.
PhD thesis: "Mechanically and Thermally driven Wall-bounded superfluid turbulence of ^4He ", research advisors: Prof. Itamar Procaccia and Prof. Victor Lvov.

Employment

Engineer Researcher in Institute for Radiation Protection, Kyiv 2010 June-Aug.

Postdoctoral researcher in Ecole Normale Supérieure, CNRS, Paris 2017 Nov. - 2019 Nov. This project was done under supervision of Prof. Francesco Zamponi as a part of the Simons Collaboration on Cracking the Glass problem.

Postdoctoral researcher in Columbia University, New York 2019 Dec.-2020 Nov. This project is under supervision of Prof. David Reichman, it is continuation of my Simons Collaboration on Cracking the Glass problem.

Publications

D. Homenko , V. L'vov , Visnyk of Kiev National Taras Shenchenko University, Radiophysics and Electronics. "Heat Capacity of the single crystal with soft elastic modulus" , 2009/12

V.A. Chernenko, D.V. Homenko, V.A. L'vov and J.M. Barandiaran. "Specific heat of shape memory alloys with soft elastic moduli" , J. Appl. Phys. 109, 013526 (2011).

Laurent Boué, Dmytro Khomenko, Victor S. L'vov and Itamar Procaccia. "Analytic Solution of the Approach of Quantum Vortices Towards Reconnection" , Phys. Rev. Lett. 111, 145302 (2013)

D. Khomenko, L. Kondaurova, V.S. L'vov, P. Mishra, A. Pomyalov, I. Procaccia. "Dynamics of the density of quantized vortex lines in superfluid turbulence" , Phys. Rev. B 91, 180504(R) (2015)

D. Khomenko, V. S. L'vov, A. Pomyalov, I. Procaccia. "Mechanical momentum transfer in wall-bounded superfluid turbulence", *Phys. Rev. B* 93, 134504 (2016)

Dmytro Khomenko, Victor S. L'vov, Anna Pomyalov, Itamar Procaccia. "Counterflow-induced decoupling in superfluid turbulence", *Phys. Rev. B* 93, 014516 (2016)

D. Khomenko, P. Mishra, A. Pomyalov. "Coupled Dynamics for Superfluid ^4He in a Channel", *J Low Temp Phys* (2016).

D. Khomenko, V. S. L'vov, A. Pomyalov, and I. Procaccia. "Reply to "Comment on 'Dynamics of the density of quantized vortex lines in superfluid turbulence'", *Phys. Rev. B* 94, 146502 (2016)

L. Biferale, D. Khomenko, V. S. L'vov, A. Pomyalov, I. Procaccia, G. Sahoo. "Local and nonlocal energy spectra of superfluid ^3He turbulence", *Phys. Rev. B* 95, 184510 (2017)

L. Biferale, D. Khomenko, V. S. L'vov, A. Pomyalov, I. Procaccia, G. Sahoo. "Turbulent statistics and intermittency enhancement in coflowing superfluid $\text{He } 4$ ", *Phys. Rev. Fluids* 3, 024605 (2018)

D. Khomenko, V. S. L'vov, A. Pomyalov, I. Procaccia. "Dynamics of the vortex line density in superfluid counterflow turbulence", *Phys. Rev. B* 97, 014508 (2018)

L. Biferale, D. Khomenko, V. S. L'vov, A. Pomyalov, I. Procaccia, G. Sahoo. "Superfluid Helium in three-dimensional Counterflow differs strongly from classical flows: anisotropy on small scales", *PRL* 122, 144501 (2019)

L. Biferale, D. Khomenko, V. S. L'vov, A. Pomyalov, I. Procaccia, G. Sahoo. "Strong anisotropy of superfluid ^4He counterflow turbulence". *Phys. Rev. B*, 134515 (2019).

D. Khomenko, C. Scalliet, L. Berthier, D. R. Reichman, F. Zamponi "Depletion of two-level systems in ultrastable computer-generated glasses". *Phys. Rev. Lett.* 124, 225901 (2020)

Invited Talks in Conferences and Workshops

Workshop "Turbulence and amorphous materials". "Vortex reconnection in superfluid helium", Eilat, Israel 2013 .

Workshop "Turbulence: In the Sky as on the Earth". "Analytic Solution of the Approach of Quantum Vortices Towards Reconnection", Natal, Brazil 2014.

Workshop "Interpretation of measurements in ^4He superfluid turbulence". "Dynamics of the Density of quantized vortex lines in superfluid turbulence", Saclay, France , Sep. 2015

Quantum Fluids and Solids 2016 Quantum Turbulence Workshop. "Coupled dynamics for superfluid ^4He in the channel.", Prague, Czech Republic , Aug. 2016

Quantum Fluids and Solids 2018, Quantum Turbulence Workshop. "Turbulent statistics and intermittency enhancement in coflowing superfluid $\text{He}4$.", Tokyo, Japan, Jul. 2018

Yearly Simons Collaboration meeting on Cracking the Glass Problem . "Tunnel splitting computation using PIMD.", Royaumont Abbey, France, Oct. 2018

Workshop "Vortex Dynamics, Turbulence and Related Phenomena in Quantum Fluids". "Energy Spectra and Anisotropy of Counterflow Turbulence in Superfluid Helium", Natal, Brazil, Jul. 2019

Date: 27.04.2021

Signature:

A handwritten signature in black ink, appearing to be 'D. A. ...', written in a cursive style with a horizontal line underneath.