

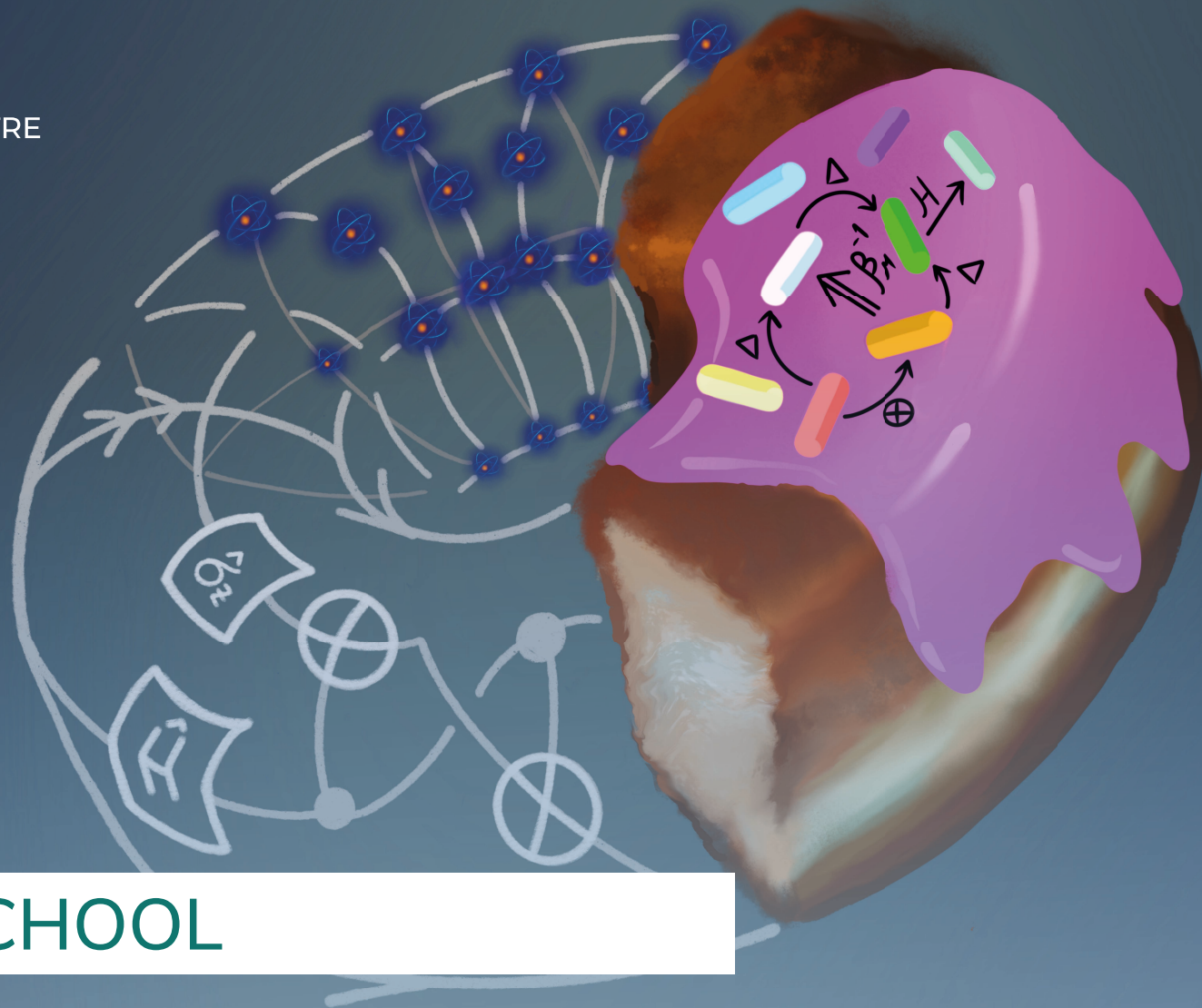
**ICMU**INTERNATIONAL CENTRE
FOR MATHEMATICS
IN UKRAINE

Illustration by Yevheniia Cheipesh

ICMU WINTER SCHOOL

5 - 23 January 2026

MATHEMATICS OF QUANTUM MATTER

VENUE

ICMU Working Space, Kyiv

This school explores the intersection of quantum information, condensed matter physics, and modern mathematics. It aims to provide advanced undergraduate and graduate students with a foundation for approaching quantum matter physics through connections with fields like topological field theory, homotopy theory, category theory, operator algebras, tensor networks, and complexity theory.

COURSES

Operator algebras and topological phases

Corey JONES, *North Carolina State University*

Topological field theories

Vincentas MULEVICIUS, *University of Vienna*

Tensor networks

Norbert SCHUCH, *University of Vienna*Computational aspects of fermionic quantum
many-body systemsBarbara Terhal, *QuTech & DIAM / TU Delft***INVITED LECTURERS**Agnès BEAUDRY, *University of Colorado Boulder*Nils CARQUEVILLE, *University of Vienna*Margarita DAVYDOVA, *California Institute of Technology*Pavel ETINGOF, *Massachusetts Institute of Technology*Anton KAPUSTIN, *California Institute of Technology*Olexei MOTRUNICH, *California Institute of Technology***ORGANISERS**Lukas MUELLER, *Perimeter Institute*Mykola SEMENYAKIN, *Perimeter Institute*Alex TURZILLO, *Perimeter Institute*

INFORMATION AND APPLICATION

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deadline 15 October 2025

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School of
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