

Solvay Workshop on 'Kähler geometry: From topological quantum matter to quantum field theories' (27 - 29 May, 2026)

VENUE : Fondation Universitaire 11, Rue d'Egmont (Salle Félicien Cattier)

PROGRAM

WEDNESDAY 27 MAY

- 10:00 - 10:30 Registration and welcome coffee
- 10:30 - 11:30 **Joel Fine:** *Lecture I: A rapid introduction to Kähler geometry*
- 11:30 - 12:30 **Bruno Mera:** *Lecture II: Kähler geometry in topological quantum matter*
- 12:30 - 14:00 LUNCH BREAK
- 14:00 - 14:45 **James Sparks:** *Localization in supergravity*
- 14:45 - 15:30 **Ashvin Vishwanath:** *Vortexable bands and ideal quantum geometry from the lattice to the continuum*
- 15:30 - 16:00 COFFEE BREAK
- 16:00 - 16:45 **Jerome Gauntlett:** *Equivariant localization in supergravity*
- 16:45 - 17:30 **Jutho Haegeman:** *The Kähler geometry of variational tensor network methods*

THURSDAY 28 MAY

- 10:30 - 11:15 **Duncan Haldane:** *Real vs K-space quantum geometry in condensed matter*
- 11:15 - 12:00 **Mario Garcia-Fernandez:** *Gravitating vortices*
- 12:00 - 13:30 LUNCH BREAK
- 13:30 - 14:15 **Shinsei Ryu:** *Hearing Fermi surface topology and geometry from charge fluctuations*
- 14:15 - 15:00 **Stefan Vandoren:** *Applications of Kähler, Hyperkahler and Quaternion-Kähler geometry in physics*
- 15:00 - 15:30 COFFEE BREAK
- 15:30 - 16:15 **Yugo Onishi:** *Repulsive Casimir effect and quantum geometric force*
- 16:15 - 17:00 **Chris Hull:** *Kähler geometry and supersymmetric sigma model duality*
- 19 :30** **CONFERENCE DINNER (Registration mandatory)**
Aux Vieux Saint Martin, Place du Grand Sablon, 38

FRIDAY 29 MAY

- 10:30 - 11:15 **Magdalena Larfors:** *Machine learning perspectives on Kähler geometry within string theory*
- 11:15 - 12:00 **Robert-Jan Slager:** *Quantum geometry beyond single flat bands and Euler exact projected entangled pair ground states*
- 12:00 - 12:45 **Tristan Collins:** *Stability and the deformed Hermitian-Yang-Mills equation*

Coffee Breaks:

Coffee breaks will be provided for all attendees in the hall adjacent to the conference room.

Lunches:

No group lunches have been organized during the workshop. Participants are welcome to explore the many cafés and restaurants located near the venue.