

13 – 24 July 2026

# Topics in Theoretical and Mathematical Physics

MITP  
SUMMER  
SCHOOL



**An Introduction to Vertex Operator Algebras**  
Ioana Coman | IPMU

**Renormalization group methods in  
Quantum Gravity**

Renata Ferrero | FAU Erlangen-Nürnberg

**Arithmetic in Mathematical Physics**  
Pyry Kuusela | Sorbonne Université

**Anomalies in Quantum Field Theory  
and String Theory**

Ruben Minasian | CEA-Saclay

**Mathematical Aspects of  
Conformal Field Theories**

Sven Möller | Maynooth University

**Machine Learning in Quantum  
Field Theory and String Theory**

Fabian Rühle | Northeastern University

**Anomalies and Generalized  
Symmetries**

Sakura Schäfer-Nameki |  
University of Oxford

**The Swampland program**  
Irene Valenzuela | CERN

## Special Lecturers

Jens Eberhardt | JGU Mainz

Manfred Lehn | JGU Mainz

Ferdinand Schmidt-Kaler | JGU Mainz

2026

## Organized by

► Hans Jockers | JGU Mainz ► Felix Yu | JGU Mainz ► Ida Zadeh | University of Southampton

<https://indico.mitp.uni-mainz.de/event/450/>

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