

**Workshop on
“Moonshine”
September 10 – 14, 2018**

organized by

**John Duncan (Emory U, Atlanta), Anne Taormina (Durham U),
Katrín Wendland (U of Freiburg), Timm Wrase (TU Vienna)**

• **Monday, September 10, 2018**

09:00 – 09:30 **Registration**

09:30 – 10:30 **Don Zagier**

Constructing mock modular forms with a given shadow

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 12:00 **Sameer Murthy**

Mock modular forms as torus integrals

12:00 – 13:00 **Daniel Grumiller**

Aspects of chiral gravity and $AdS_3/\log CFT_2$

13:00 – 14:30 *Lunch Break*

14:30 – 15:30 **Michael H. Mertens**

Moonshine in weight $3/2$

15:30 – 16:00 *Coffee / Tea Break*

16:00 – 17:00 **Yingkun Li**

Mock modular forms of small weights

17:00 – 19:00 **Welcome Reception at the ESI**

• **Tuesday, September 11, 2018**

09:30 – 10:30 **Justin David**

Applications of moonshine symmetry in string compactifications and black holes

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 12:00 **Abhishek Chowdhury**

Calabi-Yau manifolds and sporadic groups

12:00 – 13:00 **Max Zimet**

Umbral Moonshine and String Duality

13:00 – 14:30 *Lunch Break*

14:30 – 14:45 **Maria Schimpf**

M_{24} Moonshine in IIA and IIB string theory

14:45 – 15:00 **Aradhita Chattopadhyaya**

Black hole degeneracies from Mathieu moonshine

15:00 – 15:15 **Andreas Banlaki**

Gromow-Witten-Invariants and Moonshine

15:15 – 15:30 **Brandon Rayhaun**

Skew-holomorphic moonshine

15:30 – 16:00 *Coffee / Tea Break*

16:00 – 16:15 **Vassilis Anagiannis**

A module for a case of umbral moonshine

16:15 – 16:30 **Valentin Reys**

Mixed mock modular forms and BPS black hole entropy

16:30 – 16:45 **Abhiram Mamandur Kidambi**

Exact entropy and Rademacher series for orbifolded BPS black holes

• **Wednesday, September 12, 2018**

09:30 – 10:30 **Nils Scheithauer**

Generalised deep holes in the vertex operator algebra associated with the Leech lattice

10:30 – 10:45 *Coffee / Tea Break*

10:45 – 11:00 **Victor Aricheta**

Supersingular elliptic curves and moonshine

11:00 – 11:15 **Lea Beneish**

Quasimodular moonshine and arithmetic connections

11:15 – 11:30 **Sam Fearn**

A supersymmetric index for a class of 2d sigma models with large $N=4$ superconformal symmetry

11:30 – 11:45 **Thomas Gemünden**

Orbifolds of Lattice Vertex Operator Algebras at $d=48$ and 72

11:45 – 12:00 *Coffee / Tea Break*

12:00 – 12:15 **Fabian Kertels**

Characterizing Borchers-Kac-Moody algebras

12:15 – 12:30 **Caner Nazaroglu**

Indefinite Theta Series and Applications

12:30 – 12:45 **Rajesh Gupta**

Squashed Toric Manifolds and Mock Modular Forms

12:45 – 13:00 **Wolfgang Riedler**

Global sections of the chiral de Rham complex on Enriques surfaces

13:00 – 14:30 *Lunch Break and free afternoon*

• **Thursday, September 13, 2018**

09:30 – 10:30 **Boris Pioline**

BPS black holes, wall-crossing and mock modularity of higher depth I

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 12:00 **Sergey Alexandrov**

BPS black holes, wall-crossing and mock modularity of higher depth II

12:00 – 13:00 **Scott Carnahan**

More Modular Moonshine

13:00 – 14:30 *Lunch Break*

14:30 – 15:30 **Bailin Song**

Matheiu moonshine and $K3$ surfaces

15:30 – 15:45 *Coffee / Tea Break*

15:45 – 16:45 **Thomas Creutzig**

The moonshine module and friends

18:30 Meet in front of ESI to go to Schübel-Auer (dinner at 19:30)

• **Friday, September 14, 2018**

09:30 – 10:30 **Jens Funke**

Indefinite theta series

10:30 – 11:00 *Coffee / Tea Break*

11:00 – 12:00 **Roberto Volpato**

Superstrings and BKM (super-)algebras

12:00 – 13:00 **Albrecht Klemm**

Periods and quasiperiods of modular forms and D-brane masses of the quintic

13:00 – 14:30 *Lunch Break and free afternoon*

All talks take place at ESI, Boltzmann Lecture Hall!