

PROGRAMME

Monday, June 18

- 8:45-9:00 Opening address by Motoko Kotani (Tohoku University)
- 9:00-9:50 Mohammed Abouzaid (Columbia University)
"Homological mirror symmetry via families of Lagrangians"
- 9:50-10:40 Nima Arkani-Hamed (IAS)
"Spacetime, quantum mechanics and positive geometry at infinity"
- 10:40-11:20 Coffee break
- 11:20-12:10 Maissam Barkeshli (University of Maryland, College Park)
"Space-time reflection anomalies in $(2+1)D$ topological quantum field theories"
- 12:10-14:00 Lunch
- 14:00-14:50 Francis Brown (All Souls College, Oxford)
"Open and closed superstring amplitudes in genus 0 and 1"
- 14:50-15:40 Masahito Yamazaki (Kavli IPMU, University of Tokyo)
"Integrability as duality"
- [Moving to Sakura Hall, Katahira Campus]
- 17:00-18:30 Gong show
- 18:30-20:30 Welcome reception (All participants are invited)

Tuesday, June 19

- 9:00-9:50 Antonella Grassi (University of Pennsylvania)
"Terminal singularities and F-theory"
- 9:50-10:40 Jeffrey Harvey (University of Chicago)
"Hecke relations in rational conformal field theory"
- 10:40-11:20 Coffee break
- 11:20-12:10 Mikhail Kapranov (Kavli IPMU, University of Tokyo)
"Perverse schobers and application"
- 12:10-14:00 Lunch
- 14:00-14:50 Christoph Keller (ETH Zurich)
"Holographic orbifold CFTs"
- 14:50-15:30 Coffee break
- 15:30-16:20 Zohar Komargodski (Simons Center)
"Topological aspects of 2+1 dimensional gauge theories"
- 16:20-17:10 Marcos Marino (University of Geneva)
"Topological strings, resurgence, and quantum mechanics"

Wednesday, June 20

- 9:00-9:50 Victor Mikhaylov (Simons Center)
"Teichmüller TQFT, complex Chern-Simons theory and duality"
- 9:50-10:40 Gregory Moore (Rutgers University)
"On four-manifolds and $N=2$ supersymmetric field theory"
- 10:40-11:20 Coffee break
- 11:20-12:10 David Morrison (UC Santa Barbara)
"Abel-Jacobi mappings and mirror symmetry for open strings"

[Afternoon free]

■ Thursday, June 21

- 9:00-9:50 Hiraku Nakajima (Kavli IPMU, University of Tokyo)
"3d $N=4$ QFT and ring objects on the affine Grassmannian"
- 9:50-10:40 Tony Pantev (University of Pennsylvania)
"Mirror symmetry, intersection of quadrics, and Hodge theory"
- 10:40-11:20 Coffee break
- 11:20-12:10 Leonardo Rastelli (C. N. Yang Institute for Theoretical Physics, Stony Brook.)
"Free field realizations of vertex operator algebras from the Higgs branch"
- 12:10-14:00 Lunch
- 14:00-14:50 Jörg Teschner (University of Hamburg and DESY)
"Quantum curves, integrability and topological string partition functions"
- 14:50-15:30 Coffee break
- 15:30-16:20 Yukinobu Toda (Kavli IPMU, University of Tokyo)
"Birational geometry for d -critical loci and wall-crossing in Calabi-Yau 3-folds"
- 16:20-17:10 Mirjam Cvetič (University of Pennsylvania)
"Global constraints on matter representations in F-theory"
- 19:00-21:00 Banquet (reception starts at 18:30)

■ Friday, June 22

Special Sessions for celebrating the Anniversaries of CY, TFT and Topological String

- 9:00-9:50 Edward Witten (IAS)
"Open-closed topological gravity in two dimensions"
- 9:50-10:40 Cumrun Vafa (Harvard University)
"Topological strings on compact CY and SCFT's"
- 10:40-11:20 Coffee break
- 11:20-12:10 Mina Aganagic (UC Berkeley)
"Knot categorification from geometry, via string theory"
- 12:10-14:00 Lunch
- 14:00-14:50 Dan Freed (University of Texas at Austin)
"Extended topological field theory and the 2-dimensional Ising model"
- 14:50-15:30 Coffee break
- 15:30-16:20 Andrew Neitzke (University of Texas at Austin)
"Abelianization in complex Chern-Simons theory"
- 16:20-17:10 Si Li (Tsinghua University)
"Semi-infinite Hodge structure: from BCOV theory to Seiberg-Witten geometry"
- 17:10-17:20 Closing remark by Ron Donagi (University of Pennsylvania)

Special Lecture on the Fifth Anniversary of the Tohoku Forum for Creativity

- 17:30-18:20 Shing-Tung Yau (Harvard University)
"Brief history of Calabi-Yau manifold related to string theory"