

THE BIRS FIVE DAY WORKSHOP
MODULAR FORMS AND STRING DUALITY
JUNE 3–8, 2006
WORKSHOP SCHEDULE

JUNE 3, 2006
Arrival

JUNE 4, 2006

- 8:50am–9:00am **BIRS**
BIRS Station Manager’s welcoming address
- 9:00am–10:00am **Don Zagier**, MPIM Bonn and College de France
Introduction : Modular Forms and Differential Equations
- 10:00am **Coffee Break**
- 10:15am–11:15am **Ron Livné**, Hebrew University and IAS Princeton, Mathematics
Modularity of Galois Representations: Overview
- 11:30am–12:30pm **Bong H. Lian**, Brandeis University
Introduction to Mirror Symmetry
- 12:30 **Lunch**
- 2:30pm **Coffee Break**
- 3:00pm–4:00pm **Jan Stienstra**, University of Utrecht
From multi-grid to multi helix: remarkable geometries from AdS/CFT
- 4:15pm–5:15pm **Emanuel Scheidegger**, Technical University of Vienna
Topological Strings on $K3$ Fibrations and Modular Forms
- 5:30pm–6:30pm **Helena Verrill**, Louisiana State University
Introduction to the Batyrev–Borisov Construction of Toric Calabi–Yau Varieties
- 6:30pm **Dinner**
- 8:00pm **Welcoming Party at the lounge**

JUNE 5, 2006

- 9:00am–10:00am **Don Zagier**, MPIM Bonn and College de France
Introduction: Modular Forms and Applications to Physics
- 10:00am **Coffee Break**
- 10:15am–11:15am **Masanobu Kaneko**, Kyushu University
Modular and Quasimodular Forms and their Applications
- 11:30am–12:30pm **Johannes Walcher**, IAS Princeton, Natural Sciences
Opening Mirror Symmetry on the Quintic
- 12:30pm **Lunch**
- 2:30pm **Coffee Break**

2:50pm **Photo Session at the Front Door of Corbett Hall**

3:00pm–4:00pm **Gert Almkvist**, University of Lund
Apéry-like limits connected with Calabi–Yau equations

4:15pm–5:15pm **Chris Herzog**, University of Washington, Physics
How Exceptional Collections Stack Up

5:30pm–6:30pm **Nam-Hoon Lee**, KIAS
Constructing Calabi–Yau Threefolds

6:30pm **Dinner**

8:00pm–9:00pm **Ling Long**, Iowa State University
Modular Forms for Noncongruence Subgroups

JUNE 6, 2006

9:00am–10:00am **Adrian Clingher**, Stanford University
Geometry underlying the F-theory/Heterotic String Duality in Eight Dimensions

10:00am **Coffee Break**

10:15am–11:15am **Sergei Gukov**, Caltech, Physics
Strings, Fields, and Arithmetic

11:30am–12:30am **Noriko Yui**, Queen’s University and MPIM Bonn
Motives, Mirror Symmetry, and Modularity

12:30pm **Lunch**

Free Afternoon

6:00pm **Dinner**

8:00pm **Informal Session,**

JUNE 7, 2006

9:00am–10:00am **Albrecht Klemm**, University of Wisconsin
Modular, Quasimodular Forms and Gromov–Witten Invariants

10:00am **Coffee Break**

10:15am–11:15am **Ron Livné**, Hebrew University and IAS Princeton, Mathematics
Explicit descriptions of universal $K3$ families over Shimura curves

11:30am–12:30pm **Chuck Doran**, University of Washington
Algebraic Topology of Calabi–Yau Threefolds in Toric Varieties

12:30pm **Lunch**

2:30pm **Coffee Break**

3:00pm–4:00pm **Marco Aldi**, Northwestern University
Twisted homogeneous coordinate rings of abelian surfaces via Mirror Symmetry

4:15pm–5:15pm **Masahiko Saito**, Kobe University
Painlevé Property of ODEs and Deformation of Logarithmic Symplectic Varieties

5:30pm–6:30pm **Rolf Schimmrigk**, Indiana University South Bend
String Modular Ω -Motives and Aspect of Mirror Symmetry

6:30pm **Dinner**

8:00pm–9:00pm **Ahmed Sebber**, Univeristy of Bordeaux
Differential Theta Relations and Galois Theory for Riccati Equations

JUNE 8, 2006

9:00am–10:00am **Andrey Todorov**, University of California Santa Cruz
Regularized Determinants of CY Metrics and Application to Mirror Symmetry

10:00am **Coffee Break**

10:15am–11:15am **TBA**,
TBA

11:30am–12:30pm **TBA**,
TBA

Afternoon **Departure**