

ARITHMETIC AND GEOMETRY OF ALGEBRAIC VARIETIES
WITH SPECIAL EMPHASIS ON
CALABI-YAU VARIETIES AND MIRROR SYMMETRY

NOVEMBER 6–7, 2010

The Fields Institute, 222 College Street, Toronto

Organized by James D. Lewis (Alberta) and Noriko Yui (Queen's)

NOVEMBER 6, 2010

- 9:30am **Valdemar Tsanov**, Queen's University
Triangular groups, cusp forms, and torus knots
- 10:30am **Swantje Gahrs**, University of Hannover/The Fields Institute
Picard-Fuchs equations of invertible polynomials
- 11:30am **Su-Jeong Kang**, Providence College
Kaehler-de Rham cohomology and Chern classes
- 12:30pm–2:30pm **Lunch**
- 2:30pm **Greg Pearlstein**, Michigan State University
The locus of Hodge classes in an admissible variation of mixed Hodge structure
- 3:30pm **Patrick Brosnan**, University of British Columbia
Split nilpotent orbits from the Tannakian viewpoint
- 4:30pm **Eugene Ha**, The Fields Institute
 C^* -Algebras and the cohomology of Arakelov line bundles
- 6:00pm **Workshop Dinner**

NOVEMBER 7, 2010

- 9:30am **Noriko Yui**, Queen's University
The modularity of certain K3-fibered Calabi-Yau threefolds over the rationals
- 10:30am **Karol Palka**, McGill University
Open algebraic surfaces and embeddings of rational curves
- 11:30pm **James Lewis**, University of Alberta
Hodge Type Conjectures and the Bloch-Kato Theorem
- Afternoon **Informal Discussions**