

**Program**  
**Conference-school "Siberian summer school: Current developments in Geometry"**

Monday, August 27	
10:30-11:00	<b>Registration + Coffee break</b>
11:00-12:00	<b>A. Takahashi.</b> <i>Singularities and Mirror Symmetry.</i>
12:15-13:15	<b>A. Szenes.</b> <i>Localization techniques and the structure of the cohomology ring of the moduli spaces of Higgs bundles.</i>
<b>Lunch (75 minutes)</b>	
14:30-15:30	<b>A. Mironov.</b> <i>Integrable systems and algebraic geometry.</i>
<b>Coffee break (20 minutes)</b>	
15:50-16:50	<b>T. Panov.</b> <i>Geometry and topology of toric varieties.</i>
17:00-19:00	<i>Short talks:</i> <b>S. Abramyan.</b> <i>Higher Whitehead products in toric topology.</i> <b>A. Basalaev.</b> <i>Mirror symmetry for smooth toric varieties and Saito canonical filtration.</i> <b>A. Lushin.</b> <i>Toric Cycles in the Complement to a Complex Curve in <math>C^2</math>.</i>

Tuesday, August 28	
10:30-11:00	<b>Coffee break</b>
11:00-12:00	<b>E. Balzin.</b> <i>Families of categories in geometry, algebra, and homotopy theory.</i>
12:15-13:15	<b>A. Szenes.</b> <i>Localization techniques and the structure of the cohomology ring of the moduli spaces of Higgs bundles.</i>
<b>Lunch (75 minutes)</b>	
14:30-15:30	<b>A. Mironov.</b> <i>Integrable systems and algebraic geometry.</i>
<b>Coffee break (20 minutes)</b>	
15:50-16:50	<b>T. Milanov.</b> <i>Frobenius manifolds in singularity theory.</i>
17:00-19:00	<i>Short talks:</i> <b>A. Kazhymurat.</b> <i>Geometry of Lagrangian submanifolds in <math>CP^2</math>.</i> <b>M. Ovcharenko.</b> <i>On Hamiltonian-minimal isotropic homogeneous tori in <math>C^n</math> and <math>CP^n</math>.</i>

Wednesday, August 29	
09:30-10:00	<b>Coffee break</b>
10:00-11:00	<b>T. Milanov.</b> <i>Mirror symmetry for orbifold quotients of the Fermat type Calabi-Yau hypersurfaces.</i>
11:10-12:10	<b>A. Szenes.</b> <i>Localization techniques and the structure of the cohomology ring of the moduli spaces of Higgs bundles.</i>
<b>Coffee break (20 minutes)</b>	
12:30-13:30	<b>A. Takahashi.</b> <i>Singularities and Mirror Symmetry.</i>
<b>Cultural program</b>	

Thursday, August 30	
10:30-11:00	<b>Coffee break</b>
11:00-12:00	<b>A. Sheshmani.</b> <i>Enumerative geometry of Calabi-Yau manifolds: Gromov-Witten and Donaldson-Thomas theories in dimensions 2,3,4.</i>
12:15-13:15	<b>K. Shramov.</b> <i>Severi-Brauer varieties and their automorphisms.</i>
<b>Lunch (75 minutes)</b>	
14:30-15:30	<b>T. Panov.</b> <i>Geometry and topology of toric varieties.</i>
<b>Coffee break (20 minutes)</b>	
15:50-16:50	<b>V. Przyjalkowski.</b> <i>Weighted complete intersections.</i>
17:00-19:00	<i>Short talks:</i> <b>I. Fedorov.</b> <i>How to compute the ring structure on the cohomology of Joyce's <math>G_2</math> manifolds via intersections of embedded cycles.</i> <b>V. Kulikov.</b> <i>Criterion of convergence Mellin-Barnes integral for solution of the system of algebraic equations.</i> <b>K. Loginov.</b> <i>Non-rational fibres in del Pezzo fibrations.</i>

Friday, August 31	
10:30-11:00	Coffee break
11:00-12:00	S. Barannikov. <i>Noncommutative Hodge structures, Batalin -Vilkovisky geometry and mirror symmetry.</i>
12:15-13:15	A. Sheshmani. <i>Enumerative geometry of Calabi-Yau manifolds: Gromov-Witten and Donaldson-Thomas theories in dimensions 2,3,4.</i>
Lunch (75 minutes)	
14:30-15:30	T. Milanov. <i>Analytic continuation of Gromov-Witten invariants.</i>
Coffee break (20 minutes)	
15:50-16:50	A. Efimov. <i>Introduction to derived categories.</i>
17:00-19:00	Short talks D. Tyrin. <i>Milnor K-groups and Khler differentials.</i> G. Papayanov. <i>Coherence of higher direct images for superconnections.</i>

Saturday, September 1	
09:30-10:00	Coffee break
10:00-11:00	S. Barannikov. <i>Noncommutative Hodge structures, Batalin -Vilkovisky geometry and mirror symmetry.</i>
11:10-12:10	A. Takahashi. <i>Singularities and Mirror Symmetry.</i>
Coffee break (20 minutes)	
12:30-13:30	A. Bondal. <i>Quasi-hereditary algebras via exceptional collections.</i>