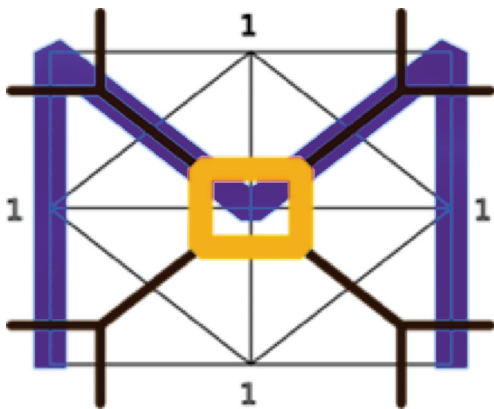


# Mirror Symmetry and Tropical Geometry Research Center



Intensive interaction between string theory and geometry in the last 25 years has led to the creation of entirely new mathematical areas. It has been suggested through string theory that conventional geometry emerges from the quantum theory at certain limits. Additionally, various string dualities give equivalent but mathematically different descriptions of the same physical quantities. Mirror theory is a beautiful, intricate example illustrating these ideas.

The M-Center supports and promotes research in mathematical questions arising from string theory, in which mirror symmetry and tropical geometry play a central role.

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Some of the current research areas pursued at the M-Center:

- Floer theory on non-compact symplectic manifolds wall-crossing formulas.
- Tropical enumerative geometry of real and complex curves.
- Perverse sheaves of triangulated categories — schobers.
- Moduli spaces of instantons arising in gauge theories.
- Derived algebraic geometry.

*Director:* Yan Soibelman

*Deputy Director:* Ilia Zharkov

*Faculty:* Lino Amorim, Rina Anno, Gabriel Kerr, Yan Soibelman, Ilia Zharkov

*Collaborators include University of Cambridge, University of California, San Diego; University of Paris-6, France; University of Milan, Italy; University of Miami; University of Vienna, Austria; University of Strasbourg, France; IHES, France; University of Geneva, Switzerland; and Hebrew University, Israel.*

## Graduate study in math

K-State offers a master's degree, doctorate, concurrent B.S./M.S. degree and a graduate certificate in applied mathematics. Our nationally ranked programs are well regarded for access to advanced research centers, faculty mentors and professional support. Learn more at [math.k-state.edu/graduate](http://math.k-state.edu/graduate).

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