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THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

The Chaim Leib Pekeris Memorial Lecture

,Ebner Auditorium Building  
on Sunday, Feb 19, 2023 at 11:00

Alexander Givental UC Berkeley

A belated introduction to mirror symmetry

Abstract:

The mirror conjecture is the somewhat vague yet highly inspiring and influential observation (made by string theorists some three decades ago) that two disparate mathematical fields --- one, called "symplectic topology" and studying discrete invariants of phase spaces in classical mechanics, the other, called "complex geometry" and studying deformations of complex structures on some other such phase spaces --- are in some sense equivalent to each other. In this talk, I plan to trace the history of symplectic topology and the mirror conjecture back to Pascal and even Euclid, and then illustrate the mirror phenomenon in a quite intricate "pre-historic" example: Arnold's strange duality between the so-called 14 exceptional singularities.