

**Exact Sciences Seminar**  
**Monday 30.03.20 Monday on 16:00-17:00, Ficus 303**

**Dr. Yochay Jerby**  
**HIT**

**Tropical and Co-tropical geometry, mirror symmetry and the  
Landau-Ginzburg equations**  
**Abstract**

The Landau-Ginzburg equations are a system of algebraic equations of special importance in the study of mirror symmetry of toric Fano manifolds. For instance, they are central for the description of the Fukaya category of Lagrangian submanifolds on the mirror of  $X$  as well as the small quantum cohomology of  $X$  itself. In this talk, we will describe how tropical/co-tropical methods lead to new insights on the LG-equation. In particular, to invariants related to the structure of the derived category of coherent sheaves  $D^b(X)$ . No preliminary knowledge would be required

**Coordinators: Dr. G. Ben-Simon, Prof. D. Fishelov,  
Prof. I Goldman, Dr. Alex Segal**