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# 2d Categorical Wall-Crossing With Twisted Masses, And An Application To Knot Invariants

*Wednesday, 2 June 2021 09:00 (1h 15m)*

We review how supersymmetric quantum mechanics naturally leads to several standard constructions in homological algebra. We apply these ideas to 2d Landau-Ginzburg models with (2,2) supersymmetry to discuss wall-crossing. Some aspects of the web formalism are reviewed and applied to the categorification of the Cecotti-Vafa wall-crossing formula for BPS invariants. We then sketch the generalization to include twisted masses. In the final part of the talk we sketch how some of these ideas give a natural framework for understanding a recent conjecture of Garoufalidis, Gu, and Marino and lead to potentially new knot invariants. The talk is based on work done with Ahsan Khan and recent discussions with Ahsan Khan, Davide Gaiotto, and Fei Yan.

**Presenter:** MOORE, Gregory (Rutgers)