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CENTER OF MATHEMATICAL SCIENCES AND APPLICATIONS
**ALGEBRAIC GEOMETRY IN
STRING THEORY SEMINAR**

Benjamin Gammage
Harvard University

will speak on:
2-categorical 3d mirror symmetry

Tuesday, March 15, 2022
9:30 – 10:30 am

For information on how to join, please see:
<https://cmsa.fas.harvard.edu/seminars-and-colloquium/>

It is by now well-known that mirror symmetry may be expressed as an equivalence between categories associated to dual Kahler manifolds. Following a proposal of Teleman, we inaugurate a program to understand 3d mirror symmetry as an equivalence between 2-categories associated to dual holomorphic symplectic stacks. We consider here the abelian case, where our theorem expresses the 2-category of spherical functors as a 2-category of coherent sheaves of categories. Applications include categorifications of hypertoric category \mathcal{O} and of many related constructions in representation theory. This is joint work with Justin Hilburn and Aaron Mazel-Gee.