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*Holomorphic symplectic geometry of the space of Bridgeland stability conditions*

For a Calabi-Yau triangulated category  $D$  of odd dimension, the space  $\text{Stab}(D)$  of Bridgeland stability conditions on  $D$  is naturally a holomorphic symplectic manifold. I will discuss geometry of Lagrangian submanifolds of  $\text{Stab}(D)$  in comparison with the Donagi-Markman integrable system. I will also explain our attempt to identify the gauged Kahler moduli space inside  $\text{Stab}(D)$  when  $D$  comes from Calabi-Yau geometry. This is a joint work with Y.-W. Fan and S.-T. Yau.