



Mathematics and CS Seminar

Mirror symmetry for generalized Kummer varieties

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The generalized Kummer variety K_n of an abelian surface A is the fibre of the natural map $\text{Hilb}^{n+1}A \rightarrow \text{Sym}^{n+1}A \rightarrow A$. Debarre described a Lagrangian fibration on K_n whose fibres are the kernels of $\text{Jac}C \rightarrow A$, where C are curves in a fixed linear system in A . A different (isotrivial) Lagrangian fibration on K_n arises when A is the product of elliptic curves. In this talk we consider the dual Lagrangian fibrations. The dual of the Debarre system is constructed in a similar way to the duality between SL- and PGL-Hitchin systems described by Hausel and Thaddeus, and in a few cases we are able to verify topological mirror symmetry', i.e., equality of (stringy) Hodge numbers of the Debarre fibration and its dual. The dual of the isotrivial fibration is easier to describe and we can verify topological mirror symmetry in many more cases. Finally, we speculate on how to enhance this to homological mirror symmetry'.

Thursday, March 23, 2023 01:00pm - 03:00pm

Heinzel Seminar Room (I21.EG.101), Office Building West, ISTA



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