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**Justin Sawon\*** ([sawon@email.unc.edu](mailto:sawon@email.unc.edu)), Department of Mathematics, University of North Carolina, Chapel Hill, NC 27599-3250. *Debarre's fibration on generalized Kummer varieties, and its dual.*

In this talk we consider four Lagrangian fibrations on holomorphic symplectic manifolds, and their dual fibrations. The non-compact examples are Hitchin systems, specifically, the  $GL(n)$  and  $SL(n)$  Hitchin systems. The compact examples are the Beauville-Mukai integrable system on the Hilbert scheme of points on a K3 surface, and the Debarre integrable system on the generalized Kummer variety. A degeneration of the Beauville-Mukai system is a compactification of the  $GL(n)$  Hitchin system, whereas the Debarre system behaves similarly to the  $SL(n)$  Hitchin system. We use this latter analogy to construct a dual fibration of the Debarre system, by imitating Hausel and Thaddeus's construction of the duality between  $SL(n)$  and  $PGL(n)$  Hitchin systems, and we conjecture some deeper mirror symmetry relations between the Debarre system and its dual. (Received September 19, 2014)