Geometry, Topology and Dynamics Seminar

Lagrangian tori in four-dimensional Milnor fibres Ailsa Keating (Columbia University)

Abstract: The Milnor fibre of any isolated hypersurface singularity contains exact Lagrangian spheres: the vanishing cycles associated to a Morsification of the singularity. Moreover, for simple singularities, it is known that the only possible exact Lagrangians are spheres. I will explain how to construct exact Lagrangian tori in the Milnor fibres of all non-simple singularities of real dimension four. Time allowing, I will use these to give examples of fibres whose Fukaya categories are not generated by vanishing cycles, and explain applications to mirror symmetry for those fibres.

Monday, November 17 at 3:00 PM in SEO 636