RIGIDITY IN CONTACT TOPOLOGY

Online seminar

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Abstract: Legendrian links play a central role in low dimensional contact topology. The most influential and powerful Legendrian invariant is the Chekanov-Eliashberg differential graded algebra (Chekanov, Inventiones, 2002). The functor of points for the dga can be used to distinguish exact Lagrangian fillings. Such fillings are difficult to construct and to study, whereas the only known classification is the unique filling for Legendrian unknot (Eliashberg-Polterovich, Annals, 1996). For a long time, a folklore belief is that exact Lagrangian fillings are scarce and a Legendrian link can only have finitely many. In this talk, I will report a joint work with Roger Casals, where we applied the techniques from contact topology, microlocal sheaf theory and cluster algebras, and successfully found the first examples of Legendrian links with infinitely many Lagrangian fillings, reversing the general belief.