On the strong Arnold chord conjecture for convex contact forms

Arnold conjectured that every closed Legendrian submanifold in the standard contact sphere S^{2n-1} with a contact form has a Reeb chord. This was confirmed by K. Mohnke in 2001. In fact, Arnold originally conjectured that a Reeb chord with distinct endpoints exists. I will give a proof of this strong version of the conjecture for convex contact forms, namely contact forms on S^{2n-1} induced by convex embeddings into $\mathbb{R}^{2n}$. I will also present a counterexample to the conjecture for nonconvex contact forms due to M. Hutchings.

Orateur: KANG, Jungsoo