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Peter Lambert-Cole* (plambe7@lsu.edu). *New examples of Legendrian submanifolds in higher dimensions.*

Contact geometry in higher dimensions (≥ 5) is not well understood but is attracting increasing attention. This talk will explore higher dimensional contact manifolds by constructing a wealth of examples of Legendrian submanifolds. I will describe a construction that takes two Legendrians, $L \subset P \times \mathbb{R}$ and $K \subset Q \times \mathbb{R}$, and gives a Legendrian submanifold $L \times K \subset P \times Q \times \mathbb{R}$. Surprisingly, this simple construction yields many interesting examples because it depends upon the explicit embeddings of L, K and not their Legendrian isotopy classes. The proof relies on a formula for the Thurston-Bennequin invariant of the product Legendrian. This construction demonstrates that contact geometry in higher dimensions is extremely rich. (Received August 27, 2012)