FLEXIBILITY FOR BRACKET–GENERATING DISTRIBUTIONS.

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Abstract. In the first part of the talk we will discuss the relationship between the curvature form of a distribution and integrability conditions. We will first focus on the contact $\left(\mathbb{R}^3, \xi_{std}\right)$ case and its horizontal submanifolds (knots). We will define the Lagrangian projection and prove an $h-$principle for legendrian immersions. This will motivate the second part of the talk, where we will introduce generalised Lagrangian projections for a broader family of distributions; i.e. bracket–generating distributions. We will prove a surjection at π_0-level between the space of horizontal embeddings of the circle into a bracket–generating manifold $\mathcal{H}or(M, \mathcal{D})$ and the space of formal horizontal embeddings $\mathcal{FH}or(M, \mathcal{D})$. This last theorem results from a joint work with Álvaro del Pino (Utrecht University).

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