

Christian Blohmann : The differentiation of higher elastic diffeological groupoids

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First, I will review the notion of elastic diffeological spaces, on which there is a natural Cartan calculus. I will define diffeological Lie algebroids, show how they arise from elastic diffeological groupoids, and give their dual description as ringed diffeological spaces with a homological vector field. Then I will explain how to generalize this construction to higher diffeological groupoids, which yields a simple universal formula given by the coend of a cosimplicial-simplicial object in ringed diffeological spaces with a homological vector field. The project is motivated by geometric deformation theory, and is joint work with Lory Kadiyan.