1127-22-379    **Ivan Contreras\*** (`icontrer@illinois.edu`), 1409 W Green St, Urbana, IL 61801, and **Nicolas Martinez**, Carrera 30 # 45-03, Bogota, Colombia. *Topological field theories and poly-Poisson structures.* Preliminary report.

Following the integration procedure from Lie algebras to Lie groups via the path space construction (Lie's third theorem), we propose an integration of Poly-Poisson structures, a higher order generalization of Poisson manifolds, via two dimensional topological field theories. In this talk we introduce the notion of Poly-Poisson and poly-symplectic structures and we highlight the path space construction giving rise to poly-symplectic groupoids as the integration. (Received February 07, 2017)