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Alastair Ethan Hamilton* (hamilton@math.uconn.edu), Mathematics Department, University of Connecticut, 196 Auditorium Road, Storrs, CT 06269. *Noncommutative Geometry and A-infinity structures.*

In this talk I will describe how an important type of A-infinity structure, called a cyclic A-infinity structure, can be described as a Maurer-Cartan element in a certain Lie algebra introduced by Kontsevich. This Lie algebra is a noncommutative analogue of the Poisson algebra of Hamiltonian vector fields on a symplectic manifold. I will use this formulation to explain how a cyclic A-infinity algebra produces a class in the moduli space of curves. (Received December 04, 2008)