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Ralph M. Kaufmann* (kaufmann@math.uconn.edu), University of Connecticut, Department of Mathematics, 196 Auditorium Rd, Storrs, CT 06268. *Moduli spaces, Cells and Operadic Actions.*

Due to the confluence of ideas in string topology, D-branes and Deligne's conjecture, there has been a great interest in cell level actions of moduli spaces. The goal is to construct operadic cell models for certain moduli spaces of curves with extra structure and then find natural algebras over them. We will present results on this subject using a combinatorial description of moduli space. We first show how to obtain cell level operads and then describe how these operate on Hochschild cochains of various algebras. (Received September 19, 2005)