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Dev Prakash Sinha* (dps@uoregon.edu), Department of Mathematics, University of Oregon,
Eugene, OR 97403. *The Lie cooperad and Hopf invariants.*

Using a combinatorially rich model for the Lie cooperad, we give a new approach to rational homotopy theory. The geometric payoff to this approach is a method of constructing homotopy functionals, correcting a formula of Sullivan's. Time permitting, we may indicate some progress at characteristic p . (Received September 14, 2007)