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Hans U Boden* (boden@icarus.mcmaster.ca), Department of Mathematics and Statistics, McMaster University, 1280 Main Street West, Hamilton, Ontario L8S-4K1, Canada, **Christopher M Herald** (herald@math.unr.edu), Department of Mathematics, University of Nevada, Reno, NV 89557, and **Paul Kirk**, Indiana University. *An integer valued $SU(3)$ Casson invariant via gauge theory.*

This talk will present a new definition of the generalized $SU(3)$ Casson invariant for homology 3-spheres. The new invariant is integer-valued, and one interesting problem is to compare it to the existing definition of the $SU(3)$ Casson invariant, which is real-valued (and only conjecturally rational). (Received September 29, 2000)