1116-18-1807 **Henry J. Tucker*** (htucker@usc.edu), 3620 S. Vermont Ave., KAP 104, Los Angeles, CA 90089. *Frobenius-Schur indicators for near group and Haagerup-Izumi fusion categories.*

Izumi's realization of the C^* fusion category associated to the Haagerup subfactor as a system of sectors on weak closures of Cuntz algebras began an ongoing program of studying fusion rules generalized from this example. New subfactors associated to these fusion rules have been found via this program, thus providing evidence that the Haagerup and other seemingly "exotic" subfactors are likely part of infinite families. The categorical Frobenius-Schur indicators are generalizations of the classical indicators for finite groups; they are an invariant of pivotal fusion categories under monoidal equivalence, thus their values allow us to determine whether two fusion categories may appear in the same monoidal equivalence class. In some families, e.g. the Tambara-Yamagami categories, the indicators are sufficient to distinguish the monoidal equivalence classes associated to given fusion rules. Thus their values are useful for distinguishing newly constructed subfactors associated to a given fusion rule. We compute the values of the indicators for both near group and Haagerup-Izumi fusion categories, we show that one family of near groups are completely determined by the indicators, and we provide strong evidence that the same is true for Haagerup-Izumi fusion categories in general. (Received September 21, 2015)