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Walter Tholen* (tholen@mathstat.yorku.ca), Dept. of Mathematics and Statistics, York University, 4700 Keele Street, Toronto, Ontario M3J 1P3, Canada. *Dualizing closure operators*. Preliminary report.

Categorical closure operators have been studied for almost three decades now (see in particular the Dikranjan-Tholen and Castellini monographs) and may be regarded as an essential tool not only in categorical topology, but also in algebra, order and domain theory. What is the dual notion of closure operator? When dualized from a merely order-theoretic perspective, one arrives at Vorster's notion of interior operator (S. J. R. Vorster, *Quaestiones Mathematicae* 23 (2000) 405-416) that has found renewed interest in recent papers by Castellini, Holgate and Slapal. However, when the relevant subobject lattices are complemented, all interior operators are induced by closure operators. In this talk we investigate the categorically dualized notion, develop the theory and give a variety of examples from algebra and topology. This is joint work with Dikran Dikranjan. (Received September 17, 2013)