



Short Communications

IV Seminar on Categories and Applications

Bellaterra, 6 to 9 of June of 2007

Panagis Karazeris, University of Patras

Completeness of cocompletions in enriched category theory

(Joint work with J. Velebil.) We study the existence of limits of a certain class L inside the cocompletion $C(A)$ of a V -category A under a class of colimits C , where V is a symmetric monoidal closed category that is locally finitely presentable as such. We investigate conditions that are equivalent to the existence of L -limits of representables inside the C -cocompletion of a category and we exploit them in order to characterize the L -completeness of $C(A)$ for particular classes C and L . Some well-known conditions for additive categories and posets arise from our analysis, while we obtain a (seemingly new) characterization of the small completeness of the inductive completion of both an ordinary category as well as of a category enriched in simplicial sets.

Contact address: pkarazer@upatras.gr
