

# Categorical neighborhood operators

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We continue the study of categorical neighborhoods initiated in [1] and then developed in [2]. Differently from these papers where neighborhoods are associated with a given closure operator, we introduce and study neighborhood operators as basic topological structures on categories. Such an operator is obtained by assigning to every subobject of an object of the category a stack of subobjects of the object subject to certain axioms. We discuss closure and interior operators, convergence, separation and compactness with respect to a neighborhood operator.

## REFERENCES

- [1] E. Giuli and J. Šlapal, *Raster convergence with respect to a closure operator*, Cahiers de Top. et Géom. Diff. Cat. 46 (2006) 275-300.
- [2] E. Giuli and J. Šlapal, *Neighborhoods with respect to a categorical closure operator*, Acta Math. Hungar. 124 (2009) 1–14.

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