

On a category theoretic perspective of many-valued logic

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In a well-known paper from 1973 on metric spaces and generalized logic (available as TAC reprint No.1 [1]), Lawvere showed how categories enriched over a lattice (or quantale) embody a many-valued logic. Taking this as a starting point, we will show how MV-algebras arise from this perspective.

References

- [1] F. W. Lawvere, Metric spaces, generalized logic and closed categories. Originally published as: Rendiconti del Seminario Matematico e Fisico di Milano, XLIII (1973), 135-166. (Available at: <http://www.tac.mta.ca/tac/reprints/articles/1/tr1abs.html>)