

Alan S. Cigoli *
INdAM cofund Marie Curie fellow
Università degli Studi di Milano
Université catholique de Louvain

Two factorizations of opfibrations between fibrations over a fixed base

This work is focused on two factorizations of opfibrations in the 2-category $\mathbf{Fib}(B)$ of fibrations over a fixed base category B . The first one is the internal version of the so called *comprehensive factorization* [1], where the right orthogonal class is given by internal discrete opfibrations. The second one has as its right orthogonal class internal opfibrations in groupoids, i.e. with groupoidal fibers.

These (obviously related) factorizations can be obtained by means of a single step 2-colimit. Namely, their left orthogonal parts are nothing but suitable coidentifiers and coinverters respectively. We will show how this result follows from its analogue in \mathbf{Cat} .

REFERENCES:

- [1] R. Street and R. F. C. Walters, The comprehensive factorization of a functor, *Bull. Amer. Math. Soc.* 79 (5) (1973), 936–941.

*Joint work with Sandra Mantovani and Giuseppe Metere.