

Groupoids in Algebraic Topology: *Another Version of the Truth (pt.1)*

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ABSTRACT

In this talk a generalization of the well-known Van Kampen's theorem will be presented, by means of elementary categorical tools such as groupoids and colimits.

The fundamental groupoid of a space will be defined, and it will be shown that this functor commutes with suitable colimits. Moreover, this setting will be adapted to produce the fundamental group version of the theorem, and some examples will be treated (for instance, pushouts and wedge sums of sufficiently nice spaces).

*This talk will be held in english, unless there are no foreign students present.
In that case the language spoken will be italian.*

References

- [1] J.P.May *A Concise Course in Algebraic Topology*, Chicago Lectures in Mathematics, 1999.
- [2] Francis Borceux *Handbook of Categorical Algebra*, Cambridge University Press, 1994.