

Sheaves in Grothendieck pretopologies

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1 Abstract

The aim of the seminar is to introduce sheaves in Grothendieck pretopologies. We start by considering sheaves on topological spaces, as particular case of the general theory. Then, we give fundamental definitions for the theory. In particular, we focus our attention on sieves and we use them to characterize sheaves. Finally, we discuss sheafification of functors.

References

- [1] Angelo Vistoli. Grothendieck topologies, fibered categories and descent theory. In *Fundamental algebraic geometry*, vol. 123 of *Math. Surveys Monogr.*, pag. 1-104. Amer. Math. Soc., Providence, RI, 2005.
- [2] Masaki Kashiwara and Pierre Schapira. Categories and sheaves, vol. 332 of *Grundlehren der atematischen Wissenschaften*[*Fundamental Principles of Mathematical Sciences*], 2006.
- [3] Pierre Schapira. *Algebra and Topology*. Course at Paris VI University, 2007/2008.
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