On the concreteness of certain categories

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Sommario

$\mathcal{K}$ is concrete when there is a faithful funtor $F : \mathcal{K} \to \mathrm{Set}$. People say that concrete categories are those such that one can think their objects as some sets and their arrows as some functions preserving a structure. For many years there was no natural example of non concrete categories. Freyd proved in [1] that the homotopy category of topological spaces is not concrete. In the seminar we will see the main ideas of the proof.

Riferimenti bibliografici

[1] J.P. Freyd, On the concretenss of certain categories.

[2] J.P. Freyd, Concreteness.

[3] J.P. Freyd, Homotopy is not concrete.

[4] F. Loregian and I. Di Liberti, Homotopical Algebra is not concrete.