Examples of absorbers in continuum theory

Alicja Samulewicz, Paweł Krupski*

Alicja.Samulewicz@polsl.pl,
Pawel.Krupski@math.uni.wroc.pl

The theory of absorbing sets, developed in the eighties and nineties of the last century, enables to establish that some incomplete metric spaces are homeomorphic to certain standard objects. Absorbers in a given Borel or projective classes are topologically unique and they have their models contained in the Hilbert cube I^ω. Furthermore, some families of compact subsets of Euclidean spaces (e.g. ANR's, locally connected continua, compacta with nonempty interiors, compact countable subsets of $[0,1]$) were recognized as absorbers in appropriate Borel or projective classes.

Looking for another natural absorbers in continuum theory we focus on subspaces of 2^X and $C(X)$, where X is a compact connected manifold (with or without boundary). We give several new examples of hyperspaces being F_σ-, $F_{\sigma\delta}$-, Π^1_1- and $D_2(F_\sigma)$-absorbers ($D_2(F_\sigma)$ denotes the small Borel class consisting of differences of two F_σ-sets).

TOPOSYM
Prague 2016