

Méthodes topologiques en analyse non linéaire:développements récents -
Conférence à la mémoire du Professeur Andrzej Granas
4 - 8 juillet 2022

Topological Methods in Nonlinear Analysis: Recent Advances - Conference
in memory of Professor Andrzej Granas
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Wojciech Kryszewski
(Łódź University of Technology)

**Fixed point index for c-admissible set-valued maps on absolute
neighborhood retracts**

Among the numerous interests of Professor Granas was the theory of fixed points of multivalued mappings. One of the most frequently cited works by Granas (in collaboration with L. Górniewicz) concerned an approach based on a strictly formal idea close to the notion of a fraction in the Gabriel-Zisman sense in the category of continuous mappings. My talk will be devoted to some new aspects of this approach to the fixed point theory, with particular emphasis on the construction of the fixed point index on ANR-spaces, a topic that was never fully and successfully covered before. The results, which I am going to talk about, also allow us to obtain a fairly comprehensive theory of homotopy of set-valued maps in a general setting.