

Geometric and Metric Characterizations of Transversality Properties

Journal Article

Dr Hoa Bui

Authors: Hoa T. Bui, Nguyen Duy Cuong, Alexander Y. Kruger

2020-03-05

Publication

Vietnam Journal of Mathematics

48, pages 277–297 (2020)

Published online: March 2020

Quality Indicators

Peer Reviewed

Q2 Journal as rated in SJR

This paper was marked as "Editors' choice" on the basis of review comments:

<https://www.springer.com/journal/10013/updates/17187002>

Relevance to the Centre

This paper continues the study of 'good arrangements' of collections of sets near a point in their intersection. We clarify quantitative relations between several geometric and metric characterizations of the transversality properties of collections of sets and the corresponding regularity properties of set-valued mappings. We expose all the parameters involved in the definitions and characterizations and establish relations between them. This allows us to classify the quantitative geometric and metric characterizations of transversality and regularity, and subdivide them into two groups with complete exact equivalences between the parameters within each group and clear relations between the values of the parameters in different groups.

DOI: 10.1007/s10013-020-00388-1

[Link to Publication](#)