

**Charatonik, Janusz J.; Charatonik, Włodzimierz J.**

**Continua determined by mappings.** (English) Zbl 0946.54025

Publ. Inst. Math., Nouv. Sér. 67(81), 133-144 (2000).

A family  $\mathcal{C}$  of compact, connected, metric spaces (continua) is determined by a class  $\mathcal{M}$  of mappings if a necessary and sufficient condition for  $Y \in \mathcal{C}$  is that every epimorphic mapping  $f : Z \rightarrow Y$  is an element of  $\mathcal{M}$  for any continuum  $Z$ . The authors characterize various classes  $\mathcal{C}$  of continua by describing the associated determining families  $\mathcal{M}_{\mathcal{C}}$ . For example they show that  $Y$  is indecomposable iff  $Y$  is determined by “almost monotone” mappings and that  $Y$  is hereditarily indecomposable iff  $Y$  is determined by the class of so-called confluent mappings. Along similar lines they show that  $Y$  does not contain any subcontinuum which is a union of a 3-chain iff  $Y$  is determined by the class of so-called joining mappings. They systematically analyze results of this type and among other classes of maps arising this way are so-called atriodic mappings, universal mappings etc.

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**MSC:**

- 54F15 Continua and generalizations
- 54E40 Special maps on metric spaces
- 54F65 Topological characterizations of particular spaces

Cited in 1 Document

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