

Bartsch, René**On a space of compactoid filters.** (English) [Zbl 1212.54050](#)

Breaz, Daniel (ed.) et al., Proceedings of the 5th international conference on theory and applications of mathematics and informatics, ICTAMI 2007, Alba Iulia, Romania, August 30–September 2, 2007. Alba Iulia: Aeternitas Publishing House (ISBN 978-973-1890-01-2). 289-303 (2008).

Summary: In his famous paper [Topology Appl. 82, No. 1–3, 355–358 (1998; [Zbl 0888.54014](#))], *T. Mizokami* studied a nice mapping from the space of all continuous functions between topological spaces endowed with compact-open topology into the space of continuous functions between their Vietoris-hyperspaces endowed with pointwise topology and proved that it is indeed an embedding, whenever the base spaces are Hausdorff. In [*R. Bartsch*, Compactness properties for some hyperspaces and function spaces. Berichte aus der Mathematik. Aachen: Shaker Verlag; Rostock: Univ. Rostock, Mathematisch-Naturwissenschaftliche Fakultät (Diss.) (2002; [Zbl 1206.54020](#))], this mapping is studied in the slightly more general context of almost arbitrary set-open topologies for sets of continuous functions between the base spaces.

Here, we give some results of a similar kind concerning the same natural mapping, for sets of continuous functions between the base spaces being equipped with the structure of continuous convergence. In order to do this, the families of compact subsets with Vietoris-hyperstructure are replaced by the families of the so called compactoid filters with a suitable pseudotopology.

For the entire collection see [[Zbl 1187.00034](#)].

MSC:

- [54C35](#) Function spaces in general topology
- [54C25](#) Embedding
- [54B20](#) Hyperspaces in general topology
- [54D80](#) Special constructions of topological spaces (spaces of ultrafilters, etc.)
- [54D30](#) Compactness
- [54A05](#) Topological spaces and generalizations (closure spaces, etc.)

Keywords:

[compactoid filters](#); [function spaces](#); [Vietoris topology](#); [Mizokami map](#)