

Q-CONVERGENCE OF GRADED DIFILTERS

Ramazan Ekmekçi¹, Rıza Ertürk²

¹*Çanakkale Onsekiz Mart University, Çanakkale, Turkey*

²*Hacettepe University, Ankara, Turkey*

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Abstract

Convergence of graded difilters have been presented and investigated by the authors in [3]. In this work, using graded Q-dinhd systems defined in [2] the authors define a different convergence type of graded difilters called Q-convergence which has some advantages and some disadvantages in comparison with the convergence defined in [3].

Keywords: Texture, Q-convergence, Graded ditopology, graded difilter, fuzzy topology.

References

- [1] L.M. Brown, R. Ertürk, Ş. Dost, *Ditopological texture spaces and fuzzy topology, I. Basic concepts*, Fuzzy Sets and Systems, **147(2)** (2004), 171–199.
- [2] R. Ekmekçi and R. Ertürk, *Neighborhood structures of graded ditopological texture spaces*, Filomat, accepted.
- [3] R. Ekmekçi and R. Ertürk, *Graded difilters*, submitted.
- [4] S. Özçağ, F. Yıldız and L. M. Brown, *Convergence of regular difilters and the completeness of di-uniformities*, Hacettepe Journal of Mathematics and Statistics, **34S** (2005), 53–68.
- [5] A. Šostak, *On a fuzzy topological structure*, Rend. Circ. Matem. Palermo, Ser. II, **11** (1985), 89–103.
- [6] A. Šostak and L.M. Brown *Categories of fuzzy topology in the context of graded ditopologies on textures*, Iranian Journal of Fuzzy Systems, 11, No 6 (20140) 1–20.

¹First Author's e-mail: ekmekci@comu.edu.tr

²Second Author's e-mail: rerturk@hacettepe.edu.tr