

## Martha Guzmán-Partida

### *Boundedness and compactness of some operators on discrete Morrey spaces*

Comment.Math.Univ.Carolin. 62,2 (2021) 151–158.

**Abstract:** We consider discrete versions of Morrey spaces introduced by Gunawan et al. in papers published in 2018 and 2019. We prove continuity and compactness of multiplication operators and commutators acting on them.

**Keywords:** discrete Morrey space; multiplication operator; compactness

**AMS Subject Classification:** 42B35, 46B45, 46B50

#### REFERENCES

- [1] Avsyankin O. G., *On the compactness of convolution-type operators in Morrey spaces*, Mat. Zametki **102** (2017), no. 4, 483–489; translation in Math. Notes **102** (2017), no. 3–4, 437–443.
- [2] Gunawan H., Kikianty E., Schwanke C., *Discrete Morrey spaces and their inclusion properties*, Math. Nachr. **291** (2018), no. 8–9, 1283–1296.
- [3] Gunawan H., Schwanke C., *The Hardy–Littlewood maximal operator on discrete Morrey spaces*, Mediterr. J. Math. **16** (2019), no. 1, Paper No. 24, 12 pages.
- [4] Hanche-Olsen H., Holden H., *The Kolmogorov–Riesz compactness theorem*, Expo. Math. **28** (2010), no. 4, 385–394.
- [5] Magyar A., Stein E. M., Wainger S., *Discrete analogues in harmonic analysis: spherical averages*, Ann. of Math. (2) **155** (2002), no. 1, 189–208.
- [6] Morrey C. B., Jr., *On the solutions of quasi-linear elliptic partial differential equations*, Trans. Amer. Math. Soc. **43** (1938), no. 1, 126–166.
- [7] Stein E. M., Wainger S., *Discrete analogues of singular Radon transforms*, Bull. Amer. Math. Soc. (N.S) **23** (1990), no. 2, 537–544.
- [8] Stein E. M., Wainger S., *Discrete analogues in harmonic analysis I:  $l^2$  estimates for singular Radon transforms*, Amer. J. Math. **21** (1999), no. 6, 1291–1336.
- [9] Stein E. M., Wainger S., *Discrete analogues in harmonic analysis II: Fractional integration*, J. Anal. Math. **80** (2000), 335–355.