

Luong Q. Tuyen, Ong V. Tuyen
Fréchet–Urysohn properties in rectifiable spaces

Comment.Math.Univ.Carolin. 66,1 (2025) 127–133.

Abstract: We give conditions for a sequential rectifiable space to be Fréchet–Urysohn. Moreover, we give a property of a Fréchet–Urysohn rectifiable space. By these results, we obtain some results related to (strongly) topological gyrogroups and topological groups.

Keywords: rectifiable space; strongly topological gyrogroup; topological gyrogroup; topological group; sequential space; Fréchet–Urysohn space

AMS Subject Classification: 22A22, 54A20, 54D55

REFERENCES

- [1] Atiponrat W., *Topological gyrogroups: generalization of topological groups*, Topology Appl. **224** (2017), 73–82.
- [2] Bao M., *On strongly topological gyrogroup*, Filomat **38** (2024), no. 8, 2821–2833.
- [3] Bao M., Lin F., *Feathered gyrogroups and gyrogroups with countable pseudocharacter*, Filomat **33** (2019), no. 16, 5113–5124.
- [4] Bao M., Xu X., *A note on (strongly) topological gyrogroups*, Topology Appl. **307** (2022), Paper No. 107950, 18 pages.
- [5] Birkhoff G., *A note on topological groups*, Compositio Math. **3** (1936), 427–430.
- [6] Cai Z., Lin S., He W., *A note on paratopological loops*, Bull. Malays. Math. Sci. Soc. **42** (2019), no. 5, 2535–2547.
- [7] Choban M. M., *On topological homogeneous algebras*, in: Interim Reports of II Prague Topol. Symp. Prague, (1987), 25–26.
- [8] Čhoban M. M., *The structure of locally compact algebras*, Serdica **18** (1992), no. 3–4, 129–137.
- [9] Engelking R., *General Topology*, Sigma Series in Pure Mathematics, 6, Heldermann Verlag, Berlin, 1989.
- [10] Gul’ko A. S., *Rectifiable spaces*, Topology Appl. **68** (1996), no. 2, 107–112.
- [11] Lin F., Liu C., Lin S., *A note on rectifiable spaces*, Topology Appl. **159** (2012), no. 8, 2090–2101.
- [12] Nyikos P. J., *Metrizability and the Fréchet–Urysohn property in topological groups*, Proc. Amer. Math. Soc. **83** (1981), no. 4, 793–801.
- [13] Tuyen L. Q., Tuyen O. V., *Some properties of rectifiable spaces*, Fasciculi Math. **60** (2018), 181–190.
- [14] Uspenskiĭ V. V., *Topological groups and Dugundji compact spaces*, Mat. Sb. **180** (1989), no. 8, 1092–1118 (Russian); translated in: Math. USSR-Sb. **67** (1990), no. 2, 555–580.