

On Two Types of Slightly Countable Dense Homogeneous Spaces

Samer Al Ghour

Department of Mathematics and Statistics,
Jordan University of Science and Technology, Jordan
E-mail: algore@just.edu.jo

ABSTRACT

We introduce the concepts of slightly dense set as well as slightly separable space, and use them to introduce two new types of slightly countable dense homogeneous spaces. Several results, relationships, examples and counter-examples concerning these concepts are obtained.

References

- [1] W. Sierpenski, Sur une propriété topologique des ensembles dénombrables en soi. Fund. Math 1 (1920), 11-28.
- [2] R. Bennett, Countable dense homogeneous spaces. Fund. Math. 74 (1972), 189–194.
- [3] A. V. Arhangel'skii and J. van Mill, On the cardinality of countable dense homogeneous spaces. Proc. Amer. Math. Soc. 141 (2013), 4031–4038.
- [4] R. Hernandez-Gutierrez and M. Hruak, Non-meager P-filters are countable dense homogeneous. Colloq. Math. 130 (2013), 281–289.
- [5] M. Hrusak and J. van Mill, Nearly countable dense homogeneous spaces. Canad. J. Math. 66 (2014), 743–758.
- [6] D. Repov, L. Zdomskyy and S. Zhang, Countable dense homogeneous filters and the Menger covering property. Fund. Math. 224 (2014), 233–240.
- [7] A. R. Singal and R. C. Jain, Slightly continuous mappings. J. Indian Math. Soc. (N.S.) 64 (1997), 195–203.
- [8] S. Al Ghour and N. Al Khatib, On slight homogeneous and countable dense homogeneous spaces. Mat. Vesnik 63 (2011), 133–144.
- [9] S. Al Ghour, Minimality and prehomogeneity. Acta Math. Univ. Comenian 72 (2003), 237-244.
- [10] S. Al Ghour, Components and local prehomogeneity. Acta Math. Univ. Comenian. (N.S.) 73 (2004), 187–196.
- [11] S. Al Ghour, K. Zoubi and A. Fora, Semihomogeneous topological spaces. Publ. Math. Debrecen 67 (2005), 131-142.
- [12] R. Engelking, General Topology, Heldermann-Berlin, 1989.
- [13] M. Yassien, Homogeneous spaces. Master Thesis, Department of Mathematics, Yarmouk University, Irbid-Jordan, 1995.