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Sequential order of compact sequential spaces

Abstract. The problem of finding compact sequential spaces of arbitrary order is presented and its dependence on the assumptions of the Theory of Sets is examined. Arhangel'skiĭ and Franklin [AF] found examples of sequential spaces (but not compact) of any order in ZF. Baškirov [B] proved, under CH, that there are compact Hausdorff spaces of any sequential order up to and including ω_1. The results of Baškirov, concisely presented in a Doklady article, are completely revisited and compared with the results of Dow [D1, D2] under MA.

A short comparison is made also with results of Kannan on the same subject, under CH.

If K_α and K_β are Baškirov spaces of sequential order α and β respectively, then $K_\alpha \times K_\beta$ has sequential order $\max(\alpha, \beta)$.

References

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