NONSEPARABLE GROWTH OF ω SUPPORTING A STRICTLY POSITIVE MEASURE

TOMASZ ŻUCHOWSKI

A compact space K is a growth of ω if there exists a compactification $\gamma\omega$ of ω such that K is homeomorphic to $\gamma\omega\backslash\omega$. We present a ZFC example of a nonseparable growth X of ω, on which is defined a strictly positive measure μ, i.e. such that $\mu(U) > 0$ for any open $U \subseteq X$. It extends results of Bell, van Mill and Todorčević, who have found compactifications $\gamma\omega$ of ω with ccc nonseparable $\gamma\omega\backslash\omega$, and the result of Drygier and Plebanek, who have provided a nonseparable growth of ω supporting a strictly positive measure under assumption $\mathfrak{b} = \mathfrak{c}$. Our growth X is of the form $\mathrm{ult}(\mathfrak{A})$, where $\mathfrak{A}$ is a Boolean algebra containing the algebra of clopen subsets of 2^ω.

University of Wrocław
E-mail address: Tomasz.Zuchowski@math.uni.wroc.pl