

Just-infinite Jordan Banach algebras

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By analogy with the well-established notions of just-infinite groups and just-infinite algebras, in particular C^* -algebras, we initiate a study of just-infinite JB -algebras, i.e. infinite dimensional JB -algebras for which all proper quotients are finite dimensional. We investigate the connections between a just-infinite C^* -algebra A and its Jordan algebra $H(A, *)$ of self-adjoint elements. We also show that any just-infinite JB -algebra J either is a infinite-dimensional spin factor or there exists a C^* -algebra A and just-infinite norm-closed real $*$ -subalgebras A_1 and A_2 of A such that $H(A_1, *) \trianglelefteq J \subseteq H(A_2, *)$.