On an isomorphism problem for reduced finitary power monoids

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Abstract. Let H be a multiplicatively written monoid and $\mathcal{P}_{\mathrm{fin},1}(H)$ be the reduced finitary power monoid of H, that is, the monoid conisisting of all finite subsets of H that contain the identity 1_H with set multiplication as operation. In this talk, we investigate the question whether, for a pair (H, K) of non-isomorphic commutative cancellative monoids, it is possible that $\mathcal{P}_{\mathrm{fin},1}(H) \simeq \mathcal{P}_{\mathrm{fin},1}(K)$. In fact, we provide a precise classification of all such pairs.

About the speaker. Balint Rago is a 4th-year PhD student at the University of Graz (Austria) within the Discrete Mathematics Consortium of the Doctoral Academy. His research interests include commutative ring theory, factorization theory and the study of power semigroups and power monoids.

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