

Reconstructing population pedigrees and hypergraphs

Bhalchandra D. Thatte (Oxford)

I will introduce the problem of reconstructing population pedigrees from their subpedigrees (pedigrees of sub-populations) and present a construction of pairs of non-isomorphic pedigrees that have the same collection of sub-pedigrees. I will then show that reconstructing pedigrees is equivalent to reconstructing hypergraphs with isomorphisms from a suitably chosen group acting on the ground set. I will then discuss some ideas to characterize non-reconstructible pedigrees.