

INSALATE DI MATEMATICA

presents

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FABIO MASTROGIACOMO

Università degli Studi di Milano-Bicocca

Bases of permutation groups



Abstract:

Let G be a permutation group acting on a set Ω . A base for G is a sequence of points in Ω whose pointwise stabilizer is trivial—that is, no non-identity element of G fixes all the points in the sequence. In general, a permutation group may have bases of varying sizes. This talk will explore how these base sizes behave: do they always form an interval of natural numbers? Can the set of possible base sizes be arbitrarily large or sparse? We will see that the answers to these questions depend on two different notions of bases: minimal bases and irredundant bases.

Keywords: Permutation groups · Irredundant bases · Minimal bases.

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"Obvious" is the most dangerous word in mathematics.
(Eric Temple Bell)