

Workshop: Representations, cohomology and support spaces: Bielefeld, 29 April–1 May, 2007

Eric M. Friedlander (with Jon F. Carlson and Julia Pevtsova):

Maximal π -points and modules of constant Jordan type

We discuss the condition that a π -point be maximal for a given kG -module M . To better understand this condition, we introduce the natural relationship of strict specialization of π -points. The non-maximal support variety of a module is a refinement of the usual support variety and leads to the concept of a module of constant Jordan type: a module whose non-maximal support variety is empty.

The class of modules of constant Jordan type is closed under taking direct sums, tensor products, duals, Heller shifts and direct summands, and includes endotrivial modules. It contains all modules in an Auslander-Reiten component which has at least one module in the class. Various non-trivial examples are constructed using cohomological techniques.