Symplectic Vertices for Simple Modules
John Murray
Maynooth University
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Our talk is about the symplectic representations $G \to \mathrm{Sp}(M)$ of a finite group G. So there is an underlying field k of characteristic p and M is a module for the group algebra kG which has a G-invariant non-degenerate symplectic bilinear form.

It is fruitful to relate kG-modules to those of the subgroups of G. The key tools are restriction and induction. If M is indecomposable, a vertex of M is a subgroup V of G which is minimal subject to M being a direct summand of a kG-module induced from V.

Restriction and induction also applies to symplectic forms. We aim to extend the theory of vertices and sources to symplectic modules. Our focus is on two particularly important classes of kG-modules: the projective modules and the simple modules.