

Fusion systems, linking systems and localities

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Saturated fusion systems and associated linking systems are categories modelling the p -local structure of finite groups. In particular, linking systems contain the algebraic information that is needed to study p -completed classifying spaces of fusion systems. Every linking system corresponds to a group-like structure called a locality. I will report on a project (partly joined with Andrew Chermak and partly joined with Valentina Grazian) where we redevelop and extend the theory of fusion systems using localities. Moreover, we show some close conceptual connections between fusion systems and localities. I will furthermore report on a project with Assaf Libman and Justin Lynd, where we aim to find localities with large object sets associated to known exotic fusion systems.