## Groupoids

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## Abstract

Groupoids provide a very general frame to understand internal and external symmetries of systems in a unified way. Groupoids have nowadays ramifications into many branches of Mathematics including algebra, category theory, operator algebras and applications to mathematical physics. Depending on the background of the candidate we can explore some aspects of one of the various lines of research mentioned before.

## References

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- 2. A. Paterson (ed.), *Groupoids, Inverse Semigroups, and their Operator Algebras*, Birkhäuser, Basel, 1999.