

# Finite Groups



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<b>Status</b>	Lecturer
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<b>Affiliations</b>	The Mathematical Society of Japan
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<b>Keywords</b>	Finite Group, Representation theory
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<b>Technical Support Skills</b>	<ul style="list-style-type: none"> <li>Algebra</li> </ul>
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## Research Contents

### Modular Representation of Finite Groups

We study “Modular representations of finite groups”, that is, representations of finite groups over a field of characteristic  $p$  where  $p$  is a prime. When  $p$  divides an order of the group, the group algebra over a field of characteristic  $p$  is not semisimple and has a complicated structure. The group algebra is decomposed into block algebras and the structure of the block algebras are determined by its source algebra. The source algebra is described by the hyperfocal subgroup and hyperfocal subalgebra of the block. We are studying the block algebras under some condition on the hyperfocal subgroup of the block. In fact, recently we showed some results on the number of irreducible Brauer characters of the block having the Klein four hyperfocal subgroup.

## Available Facilities and Equipment
