

## Colloquium

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## THE LINEARITY PROBLEM FOR MAPPING CLASS GROUPS

Friday, October 3, 2025 3:00 p.m. SS-256 (tea & coffee at 2:40 p.m.)

ABSTRACT. Mapping class groups of surfaces, the group of homotopy classes of orientation preserving homeomorphisms, are fundamental objects which play a major role in geometric group theory, algebraic geometry, and homotopy theory. I will give a survey of the history and progress on deciding whether mapping class groups of surfaces admit faithful finite dimensional linear representations. Some of the work will be joint with Mark Pengitore.