

# DISCRETE 2014: Fourth Symposium on Prospects in the Physics of Discrete Symmetries



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## Status and prospects for the Mu2e experiment at Fermilab

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The Mu2e Experiment at Fermilab will search for coherent, neutrino-less conversion of muons into electrons in the field of a nucleus with a sensitivity improvement of a factor of 10,000 over existing limits. Such a lepton flavor-violating reaction probes new physics at a scale inaccessible with direct searches at either present or planned high energy colliders. The experiment both complements and extends the current search for muon decay to electron+gamma at MEG and searches for new physics at the LHC. We will present the physics motivation for Mu2e, the design of the muon beamline and the detector, and the current status of the experiment.

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