

## Hecke relations in rational conformal field theory

Jeffrey Harvey (University of Chicago)

Abstract: We define Hecke operators on vector-valued modular forms of the type that appear as characters of rational conformal field theories (RCFTs). These operators extend the previously studied Galois symmetry of the modular representation and fusion algebra of RCFTs to a relation between RCFT characters. We apply our results to derive a number of relations between characters of known RCFTs with different central charges and also explore the relation between Hecke operators and RCFT characters as solutions to modular linear differential equations.