JIUYA WANG, Duke University
On Induced Characters with Positivity

Classical result on induced characters shows that for non-cyclic groups any character can be decomposed into rational linear combinations of induced trivial representations from its subgroups. Motivated by recent progress in bounding ℓ-torsion in class groups of number fields, we are led to ask a similar question, but with the extra positivity constraints for the rational coefficients. We will give a full answer towards this question for regular representations, and we will also introduce its application in studying class groups. This is a joint work of Cui, Fleischer, Gu and Liu.