

IMIA Operator Algebra Seminar
University of Wollongong

Title: Infinite Coxeter groups: growth and amenability

Speaker: Tommaso Terragni (University of Sydney)

Time and Dates: 3:30pm Thursday, 9 November 2012

Location: Room 15.113 (Access grid room)

Abstract: The class “Cox” of finitely generated Coxeter groups admits a natural partial order \leq , induced by the inclusion of parabolic subgroups. We show that the class of (Bourbaki-)hyperbolic Coxeter groups coincides with the minimal non-spherical, non-affine elements in (Cox, \leq) . This result follows from a purely combinatorial analysis of the Coxeter graphs, however it has some interesting group-theoretical consequences. Using some ideas about the growth of (finitely generated) groups, we give an elementary proof of an old result by P. De La Harpe on the amenability of Coxeter groups.