



CLAREMONT CENTER
for MATHEMATICAL SCIENCES

CCMS COLLOQUIUM

ON GAP CONJECTURE FOR GROUP GROWTH AND RELATED TOPICS

by

Rostislav Grigorchuk

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Abstract: In this talk we will present a survey of results around the Gap Conjecture which was formulated by the speaker in 1989. The conjecture states that if growth of a finitely generated group is less than $e^{\sqrt{n}}$, then it is polynomial. If proved, it will be a far reaching improvement of the Gromov's remarkable theorem describing groups of polynomial growth as virtually nilpotent groups. Old and new results around conjecture and its weaker and stronger forms will be formulated and discussed.

About the speaker: Professor Grigorchuk received his undergraduate degree in 1975 and Ph.D. in 1978, both from Moscow State University, and a habilitation (Doctor of Science) degree in 1985 at the Steklov Institute of Mathematics in Moscow. During the 1980s and 1990s, Rostislav Grigorchuk held positions in Moscow, and in 2002 joined the faculty of Texas A&M University, where he is now a Distinguished Professor of Mathematics. Grigorchuk is especially famous for his celebrated construction of the first example of a finitely generated group of intermediate growth, thus answering an important problem posed by John Milnor in 1968. This group is now known as the Grigorchuk group, and is one of the important objects studied in geometric group theory. Grigorchuk has written over 100 research papers and monographs, had a number of Ph.D. students and postdocs, and serves on editorial boards of eight journals. He has given numerous talks and presentations, including an invited address at the 1990 International Congress of Mathematicians in Kyoto, an AMS Invited Address at the March 2004 meeting of the AMS in Athens, Ohio, and a plenary talk at the 2004 Winter Meeting of the Canadian Mathematical Society. In June 2003 an international group theory conference in honor of Grigorchuk's 50th birthday was held in Gaeta, Italy.

Wednesday, March 28, 2012, at 4:15pm

Freeburg Forum (Kravis Center, LC 62), Claremont McKenna College

Refreshments at 3:45 p.m. in Freeburg Forum Courtyard & wine and cheese after the talk in CMC Math Commons Room (Adams 208)

*The dinner will be hosted by Prof. Lenny Fukshansky.
Please contact Prof. Fukshansky if you are interested in attending the dinner.*