

MARTIN COMPACTIFICATIONS OF AFFINE BUILDINGS II

BARTOSZ TROJAN

ABSTRACT

Affine buildings are non-Archimedean analogues of Riemannian symmetric spaces. They were invented by F. Bruhat and J. Tits to study semisimple algebraic groups over non-Archimedean local fields, e.g. $SL(n, \mathbb{Q}_p)$ where \mathbb{Q}_p denote p -adic numbers. For example affine buildings corresponding to real hyperbolic spaces are semihomogeneous trees. However, there are low rank buildings with small group of automorphisms. For this reason we take purely geometric approach to compactifications. In the talk we briefly discuss some classical compactification procedures (i.e. Gromov, Caprace–Lecureux, Furstenberg). Then we introduce the class of random walks for which I have obtained Green functions estimates. The latter are the analytic inputs in the second part of the talk where we describe Martin compactifications.

Joint work with Bertrand Rémy

IMPAN

E-mail address: btrojan@impan.pl