

# 國立陽明交通大學應用數學系

## 學術演講公告

主講人：張育展 博士 (Emory University, Oxford College)

講 題：Some interplay between graphs and groups

時 間：110 年 11 月 9 日(星期二) 下午 14:00 –15:00

地 點：(光復校區) 科學一館 223 室

### Abstract

Many interesting groups are defined on graphs, and their algebraic structures can be detected from the combinatorics of graphs. For example, right-angled Artin groups (RAAGs) are defined on finite simple graphs, and two RAAGs are isomorphic if and only if their defining graphs are isomorphic. RAAGs appear as subgroups in some important groups, such as mapping class groups and right-angled Coxeter groups. On the other hand, RAAGs contain many interesting subgroups, including 3-manifold groups and graph braid groups. Bestvina–Brady groups (BBGs) are exotic subgroups of RAAGs and have connections with group theory and topology. In the former, BBGs provide examples of groups that satisfy certain finiteness properties but not others. In the latter, there are BBGs that are either counterexamples to the Eilenberg–Ganea Conjecture or the Whitehead Conjecture. In this talk, I will survey some interplay between the algebraic structures of RAAGs/BBGs and the combinatorics of the defining graphs. Along the way, I will discuss the Dehn functions of these groups. If time permits, I will talk about a similarity between BBGs and matroids. Most of the talk will be accessible to graduate students.

敬請公告 歡迎參加

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