

## Colloquium

# Gasket symmetrie

主講人：**Prof. Russell Lodge**

Department of Math and Computer Science,  
Indiana State University

時 間：108 年 6 月 12 日(三) 14 : 30

地 點：應用數學系多媒體教室（理 408 室）

摘 要：

Symmetry computations have always been a major task of mathematicians. Prominent examples include the classical results on Euclidean symmetries of polyhedra and modern results on graph automorphisms. I will show how certain polyhedral graphs can be reflected to produce a gasket limit set, and then use elementary group theory and conformal geometry to compute its topological symmetry group. Remarkably, a theorem of W. Thurston guarantees that these limit sets are equivalent to certain Julia sets of rational maps, and in this way classical geometric methods can be used to compute symmetries of highly irregular "fractal" objects. This is joint work with M. Lyubich, S. Merenkov, and S. Mukherjee and is intended for a general mathematical audience.