

# Mathematics Department Colloquium

Organizer: Maciej Zworski

Thursdays, 4:10–5:00pm, 60 Evans

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April 14      **Steven Krantz**, Washington University and MSRI

*The dimensions of automorphism groups*

We study the group of biholomorphic self-mappings of a domain in  $\mathbf{C}^n$ . For a bounded domain, this group is a real Lie group (never a complex Lie group). One may ask these questions:

- a) Does the dimension of the automorphism group determine the domain, or at least imply interesting geometric properties of the domain?
- b) Does the algebraic structure of the automorphism group determine the domain, or at least imply interesting geometric properties of the domain?

We discuss both these questions, plus related ideas in the modern theory of automorphism groups.