Symmetry problems in geometry and algebra

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008 Kemeny Hall, 4:00 pm

(Tea 3:30 pm 300 Kemeny Hall)

Abstract

I will discuss a few different problems in algebra and geometry that deal explicitly with or can be reduced to controlling symmetries. Inverse problems like the inverse Galois problem or inverse problems for isometry groups are simple, explicit examples. Congruence subgroup problems can also be viewed as symmetry problems. Likewise, some constructive problems often have unexpected symmetries as obstructions. The focus will be on basic examples and general methods for balancing the tension between too much or too little symmetry.

This talk should be accessible to graduate students.