Department of Mathematics and Statistics

Special Colloquium

Curious Quandles

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Abstract: Motivated by questions arising in starkly different contexts, we'll experience firsthand how quandles have been discovered and rediscovered over the past century. The axioms defining a quandle, an analogue of a group, simultaneously encode the three Reidemeister moves from knot theory and capture the essential properties of conjugation in a group. Thus, on the one hand, quandles are a fruitful source of applications to knots and knotted surfaces; in particular they provide a complete invariant of knots. On the other, they inspire independent interest as algebraic structures; for instance, the set of homomorphisms from one quandle to another admits a natural quandle structure in a large class of cases. We will illustrate the history of this theory through numerous examples and survey recent developments.

Keywords: Algebra, Knot Theory

Tuesday, February 5, 12:05-12:50pm in 3-1616