Souslin Trees in Topology, Forcing and Algebra

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I will describe the role of Souslin trees in the three areas mentioned in the title. In topology, the existence of Souslin trees is equivalent to the failure of Souslin's hypothesis, i.e., to the existence of complete, dense linear orders which satisfy the countable chain condition but are not separable. Rigidity properties of the trees correspond to rigidity properties of the associated lines. The study of strong rigidity degrees of Souslin trees gives rise to subtle forcing techniques for adding automorphisms of trees with minimal disturbance of the universe. If time permits, I will sketch an application of these techniques in the context of the automorphism tower problem from algebra.

Monday, February 25th, 2008
3:40PM
MG 107
Refreshments: 3:15 pm in MG226