

Topology Seminar

Fred Cohen

of University of Rochester will be speaking on

Generalized moment-angle complexes

on April 15 at 4:30 in
MIT Room 2-131

A second subspace of a product is the generalized moment-angle complex first defined in generality by Neil Strickland. Definitions, examples, as well as connections will be addressed.

One notable case is given by subspaces of products of infinite dimensional complex projective space 'indexed by a finite simplicial complex'. These spaces appearing in work of Goresky-MacPherson, Davis-Januskiewicz, Buchstaber-Panov-Ray, Denham-Suciu, Franz as well as many others encode information ranging from the structure of toric varieties in one guise, Stanley-Reisner rings, as well as 'motions of certain types of robotic legs' in another guise.

What do these spaces have to do with the motions of legs of a cockroach? This feature will be illustrated with slides.

Features of these spaces are developed within the context of classical homotopy theory based on joint work with A. Bahri, M. Bendersky, and S. Gitler.