

BI-CO MATHEMATICS COLLOQUIUM

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*“Topology, Algebra, and Sensor
Networks”*

Monday, April 16, 2007

Talk at 4:15 – Park 338
Tea at 3:30 – Park 355, Math Lounge

Abstract:

Recent advances in sensor micro-fabrication and ad hoc wireless networking portend a near-term future where roads, carpets, walls, and warehouses "wake up" and continuously sense their environs. One of the major concerns in this (and many other technological) fields is "Will the mathematics to utilize all this data exist when the data comes?"

I maintain that much of the mathematics already exists, but is largely obscured or forgotten. This talk will present some classical and simple ideas from algebraic topology recently applied to sensor network problems. The mathematical tools used range from the simple to the sublime. No/little background in either topology or sensor networks will be assumed.

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