The Math Colloquium
Department of Mathematics
San José State University

Tim Roughgarden

Stanford Univ.

Selfish Routing and the Price of Anarchy

November 2, 2011, MH320

Abstract: What route should you take to work tomorrow? As any morning commuter knows, the length of time required to travel along a given route depends crucially on the number of other commuters who choose interfering routes. In selecting a path to travel from home to work, almost certainly you choose your route selfishly, aiming to get to work as quickly as possible, without regard to the consequences your choice has for others. But what if everyone cooperated by coordinating routes? Is it possible to limit the interference among routes, thereby improving commute times? If so, by how much? This talk surveys the state of the art on this question.

Background: Students should know calculus. A little exposure to graph theory and game theory would also be helpful.

About the speaker: Tim Roughgarden received his PhD from Cornell and is an Associate Professor in the Computer Science Department at Stanford University. When not collecting records, he does research on the interface of computer science and economics, especially as applied to networks and auctions.

Snacks in MH331B at 2:30 pm
Talk starts at 3 pm

For more information, see our full schedule at:

`http://www.math.sjsu.edu/~hsu/colloq/`