

The University of Alaska Fairbanks
Department of Computer Science
Presents



Computer Science

Matt Bishop

Tuesday, September 9 at 1 PM in Chapman 106

The Insider Problem Inside Out

Insiders have long been considered one of the most serious threats in computer security, and one of the most difficult to combat. But the problem has never been defined precisely, and that lack of precise definition inhibits solutions. This talk presents a precise definition of the insider and the insider threat, and shows how the definition enables an analysis of the set of problems traditionally lumped into "the insider threat". It introduces a hierarchy of policy abstractions, and argues that the "insider" is defined by discrepancies between the different layers of abstraction. It also presents a methodology for analyzing the threat based upon our definitions. In the process, we introduce Attribute-Based Group Access Control, a generalization of the Role-Based Access Control model that allows any attributes to define a group. We apply this to the insider threat by defining groups based on access capabilities, and using that to identify potential attackers and analyze the risks of such attacks.

* Matt Bishop is a computer science professor at the University of California at Davis. His main research area is the analysis of vulnerabilities in computer systems, including modeling them, building tools to detect vulnerabilities, and ameliorating or eliminating them. He is the author of the well known textbook, *Computer Security: Art and Science*.

This talk is the result of joint work with his is joint work with Carrie Gates (CA Labs, Inc.), Sophie Engle, Sean Peisert, and Sean Whalen (Dept. of Computer Science, UC Davis).