

# Information Warfare

**Webcast Type:**

Tutorial

[2011 IEEE Global Communications Conference](#)**Webcast URL:**

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**Status:**

Free for Members

**Duration:**

189minutes

**Presentation Date:**

Mon, 12/05/2011

**Free to Members Date:**

Wed, 12/05/2012

**Abstract:**

The tutorial gives a technical overview of information warfare (or cyber warfare) to attendees familiar with networks. Information warfare is computer network attacks between nations for political or military reasons. The introduction covers the goals, actors, and targets of information warfare. A historical background is highlighted by example cases. The main part of the tutorial covers offensive and defensive techniques. Offensive techniques include espionage to reconnoiter networks; intrusions to compromise networks; stealth to evade detection; maintenance of persistent control; and service disruption by denial of service. Defense techniques include deterrence and prevention; detection and attribution; mitigation; and recovery. Finally, a comprehensive survey of open research issues points out several technical areas that need more work to find better solutions.

**Bio:**

Thomas M. Chen is a professor in networks in the College of Engineering at Swansea University, Wales, U.K. He joined Swansea in mid-2008 from Southern Methodist University in Dallas, Texas, where he was an associate professor in the Department of Electrical Engineering. Prior to SMU, he worked on high-speed networking research at Verizon Laboratories (formerly GTE) in Waltham, Massachusetts. He received the BS and MS degrees in electrical engineering from M.I.T., and the PhD in electrical engineering from University of California, Berkeley. He currently serves as editor-in-chief for IEEE Network, senior technical editor for IEEE Communications

Magazine, editor for J. of Security and Communication Networks, and editor for International J. on Security and Networks. He was formerly editor-in-chief of IEEE Communications Magazine and founding editor of IEEE Communications Surveys. He received the IEEE Communications Society's Fred Ellersick best paper award in 1996.

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