

SEMINARIO DE MATEMÁTICA APLICADA

Models for Critical Infrastructures and Methods to Measure their Robustness

Fecha: Miércoles 8 Junio de 2005

Hora: 12.00 horas

Lugar: Universidad Rey Juan Carlos , ESCET (Campus de
Móstoles) Departamental II, Seminario 003

Prof. Dr. Yvo Desmedt

BT Chair of Information Security. University College London

Abstract

The terrorist attacks of September 11, 2001 in the US and the attacks in Madrid on March 11, 2004 have demonstrated that our society is very vulnerable. Heuristics is one approach to analyze which infrastructures are critical and vulnerable. However, this may not be the best approach. Since new attack techniques may be invented and deployed, one could question the usefulness of the use of heuristics to study the vulnerability and robustness of our infrastructures. We survey

techniques that have been used in computer science, for example, in the design of communication networks. We conclude that the direct application of these techniques to analyze vulnerabilities and to design more robust infrastructures may not work. However, we will discuss how to adapt such methods to analyze this problem in a scientific way.

SHORT BIO:

Yvo Desmedt received his Ph.D. (Summa cum Laude) from the University of Leuven, Belgium (1984). He is presently the BT Chair of Information Security at University College London, Department of Computer Science, UK. He is also a courtesy professor at Florida State University. His interests include cryptography, network security and computer security. He has authored more than 100 papers in international conferences and journals. He was program chair of PKC (Public Key Cryptography) 2003, the 2002 ACM Workshop on Scientific Aspects of Cyber Terrorism and Crypto '94. He is Co-Program Chair of the 4th International Workshop on Cryptology and Network Security (2005). He is an editor of the Journal of Computer Security and of Information Processing Letters. Yvo Desmedt is ranked in the top 5 most prolific authors (out of 1245) in Crypto/Eurocrypt. He has given invited lectures at several conferences and workshop in 5 different continents and more than 100 invited lectures for industry and academia. He is a recipient of the Society of Worldwide Inter-bank Funds Transfer (SWIFT) award.