Toward Future Cyber-Risk Management

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Aims: To encourage a deeper appreciation of the nature of risk, to develop approaches to its analysis and to assist organisations to improve the quality of decision-making and to manage risk and uncertainty.

People: 27 academic staffs, 1 EPSRC fellow, 4 research fellows, 35 PhDs in:
• Risk Management
• Decision Analysis
• Finance
• Information Systems
• Management Science
• Human Behaviour
• Strategy

Education:
• MSc in Risk Management
• MSc in Corporate Risk and Security Management (totally 52 students in 2012). Both MScs successfully established for over 8 years and attract students from worldwide
• MS.c in Risk and Cyber-Security (forthcoming in 2014)

Research Output:
Funding: 16 research grants (£1.8m in total from EPSRC, ESRC, TSB, and industrial organisations etc.)

Publications (2011-2012):
• 5 books, 14 chapters in edited volume
• 69 in international refereed journals
• 6 in professional journals
• 55 papers at international conferences
• 11 working papers
• 4 research reports

Consultancy Projects (2011-2012): Industry related consultancy on vicarious securities, risk related projects (e.g MoD, NHS, New York Police Dept., Netherlands Forensic Institute).

Selection of Industry Links:

Example Projects:
Project A: ESRC/TSB funded with London Capital Group Ltd. to develop a real-time risk model of financial trading, 2012-2014 (Cyber risk management in spread trading companies).

Project B: TSB funded with Star Financial Ltd. to develop a client profiling system for prediction of spread traders’ behaviour, 2012-13 (Cyber security for providers of trading systems to the financial sector).

Future Cyber-Risk Management

Vision and Impact: toward trustworthy and resilient cyber-systems

• Novel methods for cyber-risk identification, characterization, forecasting and management
• Effective risk-controlled cyber-system
• Verifiable risk management policies and decision-making techniques
• Interdisciplinary research collaboration and publications
• Industry collaboration and funding efforts

Cross-disciplinary collaboration on artificial intelligence, web/internet, complexity, risk perception/psychology, risk management/decision making and law/policy making are the keys to achieve future trustworthy and resilient cyber-systems.

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