



A PIIRS Research Community

# GLOBAL SYSTEMIC RISK

The PIIRS Research Community on Global Systemic Risk will pursue a multidisciplinary inquiry focusing on the robustness and fragility of global human-made organizational systems—energy exploration and production, electricity transmission, food and water supplies, and the financial system, among others—to better understand the nature of risk, the structure of increasingly fragile systems, and the ability to anticipate and prevent catastrophic consequences.

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## WHY INFRASTRUCTURE NEEDS TO BECOME MORE RESILIENT

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### Paul Larcey & Graham McShane

*The University of Cambridge*

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**Paul Larcey** studied engineering and materials science at the University of Oxford, received his Master's in construction engineering at the University of Cambridge, and holds an MBA in finance from Imperial College London. His early career was in the research of novel ceramic high temperature superconductivity and fluid mechanics/rheology, eventually moving into senior corporate management roles with global engineering and construction companies involved in the supply and provision of large scale infrastructure projects. His current research interests are related to the interactions between the risk perception of large project funding, network complexity, security, and the increasing role of resilience—physically, financially, and socially—in modern society.

**Graham McShane** is a University Lecturer in solid mechanics at University of Cambridge Engineering Department, and a Fellow of Queens' College. He studied mechanical engineering at Cambridge, followed by a PhD in the Cambridge Centre for Micromechanics. His postgraduate research focused on the response of light-weight materials to shock loading. After completing his PhD, he took up a faculty position within the Department of Engineering. His research is focused on the mechanics of light-weight, high-performance and multi-functional materials, such as cellular materials, hybrid materials, nano-composites, and aerogels. He is interested in material deformation and failure under extreme load cases (such as impact energy absorption), modeling strategies for capturing multi-scale phenomena, and the use of novel manufacturing processes (e.g., additive manufacturing) as a route to material optimisation.

4:30 PM  
THURSDAY, DECEMBER 4, 2014  
*Burr Hall, Room 219*



The Princeton Institute for  
International and Regional Studies

 PRINCETON UNIVERSITY

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