

**The Faculty of Management
The Department of Knowledge and Information Management
Invites you to attend a seminar**

Dynamic Resilience of Complex Networks

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**Monday, December 4th at 12:00 pm
Jacobs Building, room no. 506**

Abstract

Resilience, a system's ability to retain functionality under errors, failures and environmental perturbation, is a defining property of many complex systems. Yet, despite its widespread consequences for human health, the economy and the environment, events leading to loss of resilience - from cascading failures in technological systems to mass extinctions in ecological networks - are rarely predictable and are often irreversible. This lacuna is rooted in a deep theoretical gap: the current analytical framework of resilience is designed to treat low-dimensional models with a few interacting components, overlooking the complex multi-dimensional nature of most real social, biological and technological systems. How then do we predict and influence the resilience of a complex networked system? To achieve this we will expose the natural control parameters of network resilience, providing us with a universal framework to understand, predict and ultimately influence the resilience of complex networks.

Along the way, we will also learn why your friends have more friends than you do...

For more details see:

Universal resilience patterns in complex networks, Nature 530, 307–312 (2016)

All Are Welcome

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