Introducing Complex Systems, Project Management and Humanitarian Engineering Education at the Faculty of Engineering and IT, University of Sydney

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The purpose of this session is to discuss novel approaches to engineering education and to introduce the experience of new engineering programs at the Faculty of Engineering and IT, University of Sydney. The faculty has provided a highly popular degree in Project Management in flexible delivery modes. The Faculty is further opening new unique specializations: Masters of Complex Systems and Humanitarian Engineering Major. The degree in Complex Systems will provide students with the expertise to model, analyse and design resilient technological, socio-economic and socio-ecological systems as well as develop strategies for crisis forecasting and management. The Humanitarian Engineering Major will help students develop the crucial skills to plan, implement, and maintain infrastructure in remote locations of developing countries, disadvantaged communities, fragile states, and communities in disaster recovery.

Dr. Petr Matouš began his studies in Civil Engineering at CTU in Prague and he obtained PhD in 2007 from the University of Tokyo. Currently, he is a faculty member of the Complex Systems Group at the University of Sydney, Faculty of Engineering and IT. Petr Matouš has been organising experimental interventions and social surveys in diverse communities across Asia and Africa to empirically elucidate the role of social networks in contexts constrained by limited resources or environmental disasters. Dr Matouš applies novel statistical methods to these unique data sets to model the mechanisms of dynamic interactions between interpersonal or inter-organisational networks and their technological and natural environment.