



ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ
ΣΧΟΛΗ ΧΗΜΙΚΩΝ ΜΗΧΑΝΙΚΩΝ

ΕΠΙΤΡΟΠΗ ΣΕΜΙΝΑΡΙΩΝ, Καθηγητής Α. Κοκόσης

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ΣΕΜΙΝΑΡΙΟ ΧΗΜΙΚΗΣ ΜΗΧΑΝΙΚΗΣ

Πέμπτη 25 Νοεμβρίου 2010, 13:00

Κτίριο Διοίκησης «Αίθουσα Συγκλήτου»

Professor Patrick Linke
Chemical Engineering at Texas A&M University (Qatar)

Water and Energy Systems Engineering Research at
Texas A&M University – Qatar

The presentation will provide an overview over research within the water-energy nexus that is ongoing at the Qatar Sustainable Water and Energy Utilization Initiative (QWE), a center of excellence at Texas A&M University at Qatar. The focus will be on the process systems engineering aspects of research problems in environmental impact minimization, desalination design and energy management. A number of optimization approaches under development will be presented to enable

- Targeting and optimal design of waste heat recovery and reuse in industrial zones
- Optimal working fluid selection for Organic Rankine Cycles
- The optimal synthesis of membrane-based desalination networks

The talk will further outline the systems engineering dimensions and activities of a national mega-project currently, the Qatar National Food Security Programme, which will yield a holistic solution for the sustainable provision of food, sourced domestically and abroad and will result in large-scale renewable energy infrastructures to drive sea water desalination.

Profile

Dr. Patrick Linke is an Associate Professor of Chemical Engineering at Texas A&M University at Qatar. He received his PhD in Process Integration University of Manchester in the UK in 2001. Dr. Linke joined Texas A&M University at Qatar from the University of Surrey in 2007, where he was a Senior Lecturer in Process Systems Optimisation. He is a Founder and the Managing Director of the Qatar Sustainable Water and Energy Utilization Initiative (QWE), a centre of excellence for research and capacity building that works closely with stakeholders from government and industry. Dr. Linke currently leads research into the development of systematic approaches to the optimal design of integrated systems. His current application areas include innovating desalination process design, the optimal use of renewable forms of energy in desalination, water and energy infrastructure planning, energy efficiency in industrial zones, and the development of tools to minimize environmental impacts from industrial activities. Since late 2008, Dr. Linke has also been the Chief Engineer of the Qatar National Food Security Programme (QNFS) by the Office of the Heir Apparent of the State of Qatar.