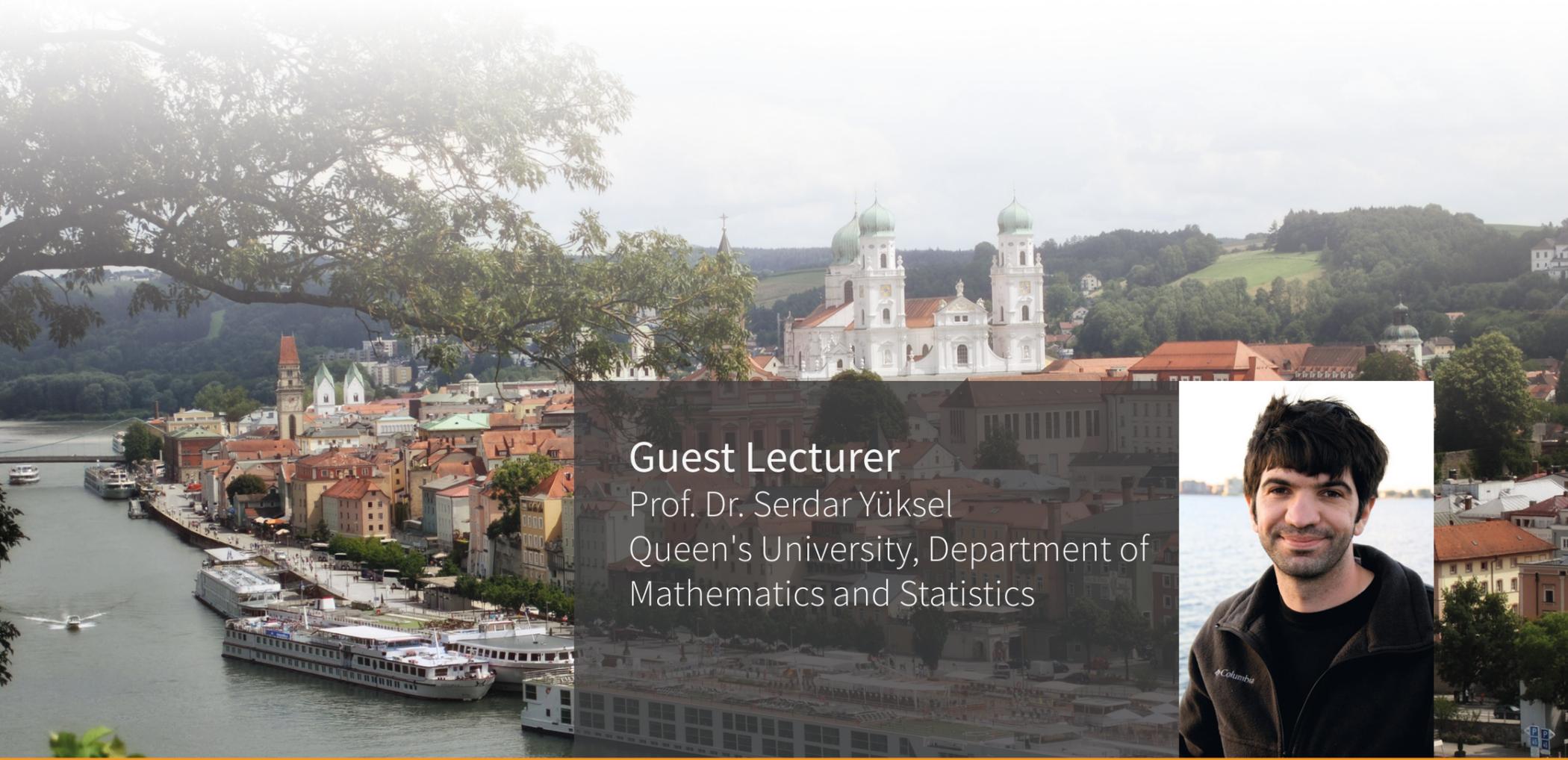


# Short Course: Control of Stochastic Systems

Friday and Saturday 20.-21.05.2016, 10:00-12:00 and 14:00-16:00, (IM) SR 033



## Guest Lecturer

Prof. Dr. Serdar Yüksel  
Queen's University, Department of  
Mathematics and Statistics



## The Content of this course

are the control, the stabilization and the optimization of dynamical systems under the influence of stochastic disturbances. The following topics are covered:

- Markov Chains, Martingales and Stochastic Stability
- Control Problems over Finite and Infinite Time and Dynamic Programming
- Partially Observed Models
- The Linear Quadratic Gaussian Problem and Kalman Filtering
- The Average Cost Problem
- Numerical Methods and Algorithms (Value/Policy Iteration, Linear Programming, Q-Learning) and Approximations

## Prof. Dr. Serdar Yüksel

is one of the leading experts in the field of stochastic control theory. The focus of his work lies at the intersection of stochastic control, information theory and probability theory, more precisely, at the interaction of these fields in the context of networked control systems. Together with Prof. Tamer Basar (University of Illinois) he authored the monograph 'Stochastic Networked Control Systems: Stabilization and Optimization under Information Constraints', which is one of the first monographs in the field of information-based control. Prof. Yüksel has received several awards for his research

