

Communication**I**nformation**L**earning**Q**uantum
Faculty Seminar

Monday Oct. 7, 2019
4-5pm
EEB 248

Speaker:

Andreas Molisch (USC)

Title:

MM-wave propagation channels and their impact on 5G system design

Abstract:

Communication in the mm-wave band is an essential part of 5G, allowing us to reach the ambitious data rate and throughput goals of IMT-2020. In order to design systems that will work in practice, a thorough understanding of mm-wave propagation channels is required. This must be based on measurements in real-world channels. This talk provides an overview of such research. After a brief introduction of suitable channel sounders, the talk will concentrate on (i) requirements for street-by-street pathloss models, (ii) dynamics of angular statistics, (iii) outdoor-to-indoor propagation in mm-wave bands, and (iv) spatial consistency and the change of second-order channel statistics. The impact of these channel effects on system design and deployment planning will be elaborated.