
**Title:** Nonlinearity Mitigation for Millimeter Wave and Terahertz Communications

**Abstract:** As wireless communications continue to advance toward higher frequency bands, wider bandwidths, and more power-efficient transceivers, nonlinear distortions introduced by power amplifiers, mixers, analog-to-digital converters, and other hardware impairments become increasingly prominent. In the emerging sixth-generation (6G) landscape, characterized by high-speed, low-latency, and low-complexity millimeter wave (mm-wave) and terahertz (THz) systems, nonlinearity mitigation plays a central role. Techniques such as digital predistortion (DPD) at the transmitter and nonlinear equalization (NLE) at the receiver are essential for meeting stringent requirements on signal fidelity and spectral efficiency. In this presentation, the modelling of mm-wave and THz systems with practical impairments is firstly reviewed, and a new way to characterize nonlinear systems is introduced. The state-of-the-art iterative and non-iterative nonlinear equalization techniques are then discussed . Finally, machine-learning assisted nonlinearity mitigation is briefly mentioned as a future research direction.