

Universität Stuttgart

Institut für Robuste Leistungshalbleitersysteme

M.Sc. Laura Manoliu laura.manoliu@ilh.uni-stuttgart.de

31.01.2020

Prior work:

- ILH has developed a high performance E-Band wireless transceivers and demonstrated state-ofthe art simplex transmission of up to 7 Gbit/s over 37 km terrestrial distances
- ILH is developing the high speed downlink for the EIVE satellite mission, to demonstrate the feasibility of the E-Band satellite communication systems

Goal:

Implementation and characterization of an outdoor E-Band wireless duplex data transmission link (71-86 GHz and 81-86 GHz) using multi-Gigabit Modems

Bachelorarbeit or Forschungsarbeit

> Investigation and Implementation of an E-Band Duplex Link







- Set-up and integration of the E-Band transceivers for different modulation formats and data rates
- Comparison of different modulation techniques, performances and transmission quality as function of atmospheric effects and path loss
- System-Level Simulation with Matlab and/or SystemVue
- Live duplex E-Band data transmission over more than 1km for a long-term link stability analysis



Contact: Laura Manoliu, M.Sc. Pfaffenwaldring 32, Interimsgebäude 1 70569 Stuttgart +49 711 685-61685 laura.manoliu@ilh.uni-stuttgart.de

