

# Universidad Carlos III de Madrid – Banco de Santander Excellence Chair Seminar Talk

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Thursday, October 24<sup>th</sup>, 2019, 12:00-13:30 PM

Room 1.2.C16 (sala Adoración de Miguel)

## The Tactile Internet: Where Do We Go From Here?

### Abstract

The Internet has been constantly evolving from the mobile Internet to the Internet of Things (IoT) and future Tactile Internet. This talk will shed some light on the emerging Tactile Internet as one of the most interesting 5G low-latency applications for creating novel immersive experiences. There is a significant overlap among 5G, IoT, and the Tactile Internet in that they share various important design goals, including ultra-high reliability and low-latency communication (URLLC). By boosting access networks' redundancy and diversity, so-called FiWi enhanced 4G LTE-A HetNets with AI embedded multi-access edge computing (MEC) hold great promise to meet the stringent latency and reliability requirements of immersive Tactile Internet applications. Beside URLLC, however, other concepts such as spreading ownership, human-agent-robot teamwork (HART) membership, and decentralization via Ethereum blockchain technologies, most notably decentralized autonomous organization (DAO), will be instrumental in ushering in new ideas and concepts to facilitate local human-machine coactivity clusters in order to realize future techno-social systems that by design still require heavy involvement from humans at the network edge instead of automating them away.

### Biography



MARTIN MAIER is a full professor with the Institut National de la Recherche Scientifique (INRS), Montréal, Canada. He was educated at the Technical University of Berlin, Germany, and received M.Sc. and Ph.D. degrees (summa cum laude) in 1998 and 2003, respectively. In the summer of 2003 he was a postdoc fellow at the Massachusetts Institute of Technology (MIT), Cambridge. He was a visiting professor at Stanford University, Stanford, from October

2006 through March 2007. Further, he was a co-recipient of the 2009 IEEE Communications Society Best Tutorial Paper Award. He was a Marie Curie IIF Fellow of the European Commission from March 2014 through February 2015. In March 2017, he received the Friedrich Wilhelm Bessel Research Award from the Alexander von Humboldt (AvH) Foundation in recognition of his accomplishments in research on FiWi enhanced networks. In May 2017, he was named one of the three most promising scientists in the category "Contribution to a better society" of the Marie Skłodowska-Curie Actions (MSCA) 2017 Prize Award of the European Commission. He is the founder and creative director of the Optical Zeitgeist Laboratory ([www.zeitgeistlab.ca](http://www.zeitgeistlab.ca)).