



Microwave Photonics: an introduction

a lecture series by

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ERC Starting Grant

Technical University of Berlin, Germany

Abstract – Microwave photonics aims at combining the best of the two worlds of microwaves and optics. Its main scope is to assist or enhance the performance of microwave systems using photonic circuits. In this series of seminars we will discuss the basics of microwave photonics, the fundamentals of microwave photonic links, and discuss some applications in microwave signal generation and filtering.

When & Where:

- **lecture 1** --> 13/12/2023, Wed., 8:30–11:30, Aula 8
- **lecture 2** --> 15/12/2023, Fri., 8:30–11:30, Lab. Multidisciplinare

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Biography



Maurizio Burla (S'08-M'12-SM'22) received his B.Sc. and M.Sc. degrees (cum laude) from the University of Perugia, Perugia, Italy, in 2005 and 2007, respectively, and his PhD degree (cum laude) from the University of Twente, Enschede, The Netherlands in 2013. From 2012 to 2015 he has been a FQRNT Research fellow at INRS-EMT, Montreal, Canada, working on integrated-waveguide technologies for ultrafast all-optical signal processing and microwave photonics. In 2015 he moved to the Institute of Electromagnetic Fields, ETH Zurich, Switzerland, to work on microwave plasmonics and THz wireless communications. From 2017 to 2021 he led an SNF Ambizione project at ETH during which he demonstrated plasmonic modulators with record bandwidth and used them to realize high-dynamic range analog optical links operating at sub-THz frequencies with bandwidths in excess of 100 GHz. Since 2022 he has been the Chair of the High Frequency Technologies and Photonics at TU Berlin, Berlin, Germany. Prof. Burla received several best paper awards at the IEEE International Topical Meeting on Microwave Photonics for his research contributions on programmable integrated photonic and plasmonic devices for sub-THz signal processing. He received an ERC Starting Grant to develop his vision on flexible THz signal processing using photonics integrated circuits at TU Berlin.