Nonlinear Effects in Multi-Core Fibers

Space-division multiplexing (SDM), which consists in exploiting multimode fibers (MMFs) or multicore fibers (MCFs) instead of single mode ones, is one of the future optical communications architectures to increase data rates and network planning flexibility. The nonlinear properties of MCFs are of primary interest in assessing the usefulness of SDM against the current network. With this thesis, the student has the chance to work on a state-of-the-art topic in the field of optical communication systems, and progress quickly thanks to a tight (if desired) supervision. Would you be curious to know more about it? If so, just get in touch with me at paolo.carniello@tum.de (personal page https://www.ce.cit.tum.de/int/mitarbeiter/doktoranden/carniello/).

Prerequisites

- some knowledge on optical communications systems (e.g., Optical Communication Systems or Simulation of Optical Communication Systems Lab)

- some knowledge about communications engineering topics

Contact

paolo.carniello@tum.de
See https://www.ce.cit.tum.de/int/mitarbeiter/doktoranden/carniello/ for more info on the supervisor.

Advisors

Paolo Carniello