Mailing list:

Members of the examination committee
Doctoral candidate   Munich, November 21, 2024

Invitation to the Oral Examination – Department CE

For the occasion of his examination for a Doctoral Degree,

Mr. Benedikt Leible

will present his dissertation entitled:

„Fiber-Optic Communication via the Nonlinear Fourier Transform "
(„Faseroptische Kommunikation Mittels der Nichtlinearen Fourier-Transformation ")

on

December 16th, 2024, at 14:00 PM

Attendance to the **presentation is open to the public** and will take place in **hybrid mode** (**Presence**: N1414 **and Zoom** – to receive the access data, please contact: schrag@tum.de).

The presentation will be in English.

The candidate, all members of the Examination Committee, and authorized examiners of the TUM School of CIT are invited to the presentation and subsequent oral examination.

Subsequent examination will take place **in presence** in room:

N1414, N4 (on the first floor), Theresienstr. 90, 80333 Munich (Professorship of Microsensors and Actuators).

Examination committee:

Chair: Prof. Dr. Gabriele Schrag
First Examiner: Prof. Dr.-Ing. Norbert Hanik
Second Examiner: Prof. Stephan ten Brink
Third Examiner: ---

Abstract:

„The nonlinear Fourier transform enables a representation of time-domain signals, propagating in nonlinear channels such as the nonlinear Schrödinger channel, in terms of their nonlinear Fourier spectra. In this new representation, modulated signal parameters propagate independently despite the interplay of nonlinearities and dispersion in the time domain. This thesis investigates the application of the nonlinear Fourier transform in the field of fiber optic communication systems. "