Associative Professorship of Line Transmission Technology
TUM Department of Electrical and Computer Engineering
Technical University of Munich

Ingenieurspraxis, Bachelor's Thesis

A Jupyter Notebook for Equalization Methods (LB)

Depending on the channel properties, the receive signal in a communication system can be severely distorted, causing inter-symbol interference. To mitigate these interferences, several approaches for equalization can be taken [1].

The students task is to implement a demonstration of several equalization schemes in Python [2] (Jupyter Notebook) and visualize the results. Additionally, the student also has to arrange code and surrounding text, such that the content becomes self-explanatory.

[1] Skript "Physical Layer Methods“

[2] "Python in 30 minutes" (https://www.programiz.com/python-programming/tutorial)

Prerequisites

Since the Jupyter Notebook is to be written in german language, the student should be able to write in german at least on a basic level.

While some basics in any programming language are beneficial, this is also a great opportunity for programming beginners, wishing to expand their programming skills.

This topic is only available for students of the "Lehramtsstudiengänge".

Advisors

Benedikt Leible