Impact of noise-aware routing on different multiplexing techniques in flexible optical networks

Optical core networks deploy fixed grid in order to accommodate their demands. The trend is however, migrate towards flexgrid networks able to use as much spectrum as required by the demand allowing a better use of the spectrum. However, the Routing and Wavelength Assignment (RWA) paradigm becomes more complex as it has to find the suitable spectrum of the demand.

This thesis will consider different multiplexing alternatives: space division, band division multiplexing, etc.

The objective is to compare the performance, throughput, BoM, etc. of the different alternatives for different networks and demand evolution matrices.

Prerequisites

Java programming skills

Basic knowledge of flexible optical networks

Advisors

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