



PADERBORN PHOTONIC LECTURE

MITTWOCH, 29TH JUNE 2022

DR. SVEN BURGER

UPB, LECTURE HALL A.1 | 15:30H

Modeling, simulation and optimization of nanophotonic devices

In this lecture, numerical methods for the investigation of nanophotonic devices will be reviewed. The modeling part includes contour-integration methods for modal expansions of light fields in resonant systems, based on Riesz projections. Adaptive finite-element methods for error-controlled simulation of Maxwell's equations will be presented. Further, recent results on Bayesian optimization methods for parameter reconstruction and for design optimization will be discussed.

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