



universität
uulm

Physikalisches Kolloquium
Einladung

Physics Colloquium
Invitation

Monday, 11 April 2022

Lecture Hall O25/H2, 16:15

Laser fabrication and ion implantation of quantum emitters in diamond

Dr. Shane Eaton

Politecnico Milano, IFN-CNR,
Milano/Italy

 www.fisi.polimi.it



Femtosecond laser writing shows great potential for novel 3D photonic architectures and high quality NV-quantum emitters in the bulk of diamond. However, the direct writing method cannot achieve nanometric placement of NV-centers near the surface of diamond, which is required for certain quantum sensing tasks. We will demonstrate a hybrid approach where the advantages of 3D optical waveguides by femtosecond laser writing and precise and shallow placement of NV-centers by ion implantation will be combined to form an integrated quantum sensor.