Stuttgarter Physikalisches Kolloquium

Fachbereich Physik, Universität Stuttgart
Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme

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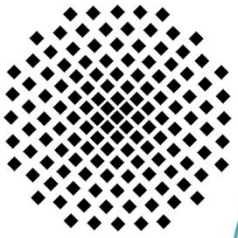

Dienstag, 12. Januar 2021	16:15 Uhr	Online-Vortrag

Universität Stuttgart, Pfaffenwaldring 57, 70569 Stuttgart-Vaihingen

Gastgeber: Prof. Dr. Peter Michler / Dr. Simone Portalupi, Universität Stuttgart, Telefon: 0711 - 685-65226

Metasurfaces for sensing and imaging

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Abstract

Recent developments in metasurfaces, including the phenomenon of bound states in the continuum (BIC) have injected a new dynamics into the paradigm of guided mode resonances for sensing and imaging applications. We will discuss and compare the various geometries, both dielectric and plasmonic, introduce our silicon nanohole approach and demonstrate its superiority compared to other modalities. Highlights include the detection of very low (pg/ml) concentrations of markers for infection, even with low-cost components suitable for handheld operation, and the resonant imaging of protein secretion from cells that allows us to better understand cell signalling.