Stuttgarter Physikalisches Kolloquium

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

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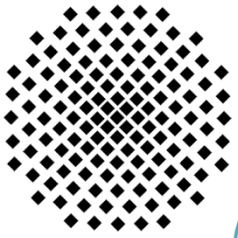

Dienstag, 11. Juni 2024	16:15 Uhr	V57.02

Universität Stuttgart, Pfaffenwaldring 57, 70569 Stuttgart-Vaihingen

Gastgeber: Prof. Dr. Harald Gießen, Universität Stuttgart, Telefon: 0711 - 685-65111

How Physics helps Neurosurgery in daily life

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Abstract

Over the last decades several key developments in medical technology have helped to improve diagnostics and therapy in clinical medicine. In the neurosurgical field various technologies have been successfully employed to optimize the treatment outcome. Examples are structural and functional imaging modalities for preoperative planning as well as intraoperative navigation and surgical dissection.

The operating microscope as the pivotal instrument for the microsurgical technique has been augmented with fluorescence imaging and integration of the digital image processing chain. In this colloquium, certain key assistance technologies in daily neurosurgical use are presented and discussed from a clinical standpoint including the underlying physical mechanisms.