

物理工学域セミナー

ダイヤモンドの研究で著名なウルム大学の Fedor Jelezko 教授 (Head of the Institute for Quantum Optics) にご講演をいただくことになりました。現在、世界的に注目を集めているダイヤモンドの点欠陥を利用した量子センサーについて、基礎から応用まで含めてお話頂く予定です。是非、ご出席ください。



日時：2月19日 17:00-18:00

場所：3F800

題名：Diamond quantum sensors

講演者：

Fedor Jelezko

Institute of Quantum optics, Ulm University, Germany Center for Integrated Quantum Science and Technology (IQst), Ulm University, Germany

アブストラクト

Diamond is not only the king gemstone, but also a promising material in quantum technologies. Optically active impurities (colour centers) in diamond show unique coherence properties under ambient conditions. Their quantum state can be readout and manipulated using a combination of single molecule spectroscopy and magnetic resonance techniques. In this talk it will be shown how engineered spins in diamond can be used for creation of non-classical (entangled) quantum states. I will also demonstrate the potential of atomic magnetometers based on single color centers for nanoscale sensing and imaging. New photoelectric detection technique allowing efficient readout of single color centers will be discussed

参考レビュー論文：

M. W. Doherty, F. Jelezko *et al.*, "The nitrogen-vacancy colour centre in diamond", arXiv:1302.3288v1. (attached)

研究室 HP

<https://www.uni-ulm.de/en/nawi/institute-for-quantum-optics/>

YouTube で IQOQI - Quantenoptik und Quanteninformation (オーストリア) でのご講演.

<https://www.youtube.com/watch?v=8UNJos05RC0>

世話人：磯谷順一, 上殿明良

主催：物理工学域, TREMS