

中德量子信息技术研讨会

Workshop on Quantum Information Technology

2019年5月23日-24日

议题：量子信息技术（拓扑量子计算、量子材料与器件等）

超导与生物电子

日程：

5月23日	09:00-12:30	量子信息技术	3号楼3楼会议室
5月24日	09:00-13:00	量子信息技术	3号楼3楼会议室
		超导与生物电子	3号楼315会议室
	14:00-18:00	量子信息技术	3号楼3楼会议室

联合主席：中方 谢晓明研究员

德方 Andreas Offenhausser 教授

主办：中科院上海微系统与信息技术研究所

德国于利希研究中心

承办：中科院上海微系统与信息技术研究所科研部

信息功能材料国家重点实验室

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Program for the Workshop on Quantum Information Technology
Shanghai, May 23 to 24, 2019

Thursday, May 23, 2019		
Session 1: Quantum Information Technology Sunken Meeting Room F3 Bldg. 3		
Time	Content	Chair
09:00-09:10	Welcome Prof. Yuehui YU	Prof. Xiaoming XIE
09:10-09:20	Overview of research on QIT at JÜLICH <i>Thomas Schäpers, JÜLICH</i>	
09:20-09:30	Overview of research on QIT at SIMIT <i>Xiaoming XIE, SIMIT</i>	
09:30-10:00	Majorana zero mode in the vortex <i>Jinfeng JIA, Shanghai Jiaotong Univ.</i>	
10:00-10:30	Towards semiconductor-superconductor hybrid qubits based on InAs nanowires comprising an in-situ Al shell <i>Thomas Schäpers, JÜLICH</i>	
10:30-11:00	Coffee break	
11:00-11:30	Experimental realization of the Fu-Kane proposal for topological quantum computation <i>Li LV, Inst. of Physics, CAS</i>	Prof. Thomas Schäpers
11:30-12:00	Topological matter for high-performance qubits <i>Peter Schüffelgen, JÜLICH</i>	
12:00-12:30	Topological insulator-based magnetic heterostructures towards room temperature <i>Xufeng KOU, ShanghaiTech. Univ.</i>	

12:30-14:00	Lunch	
14:00-14:20	Prize awarding and agreement signing @ Meeting room F3, Bldg. 3	Prof. Xiaoming XIE
14:20-14:30	Group photo	
14:45-16:15	BOD meeting @Meeting room F2, Bldg. 8	Prof. Andreas Offenhäusser
	Lab tours, technical exchanges, etc.	
17:30-19:30	Dinner	
Friday, May 24, 2019		
Session 1: Quantum Information Technology Meeting Room F3 Bldg. 3		
09:00-09:30	Demonstration of non-stochastic Hamiltonian in coupled superconducting flux qubits <i>Chunqing DENG, Alibaba Quantum Lab</i>	Prof. Zhen WANG
09:30-10:00	Topological Josephson Junctions in superconducting quantum circuits <i>Tobias Schmitt, JÜLICH</i>	
10:00-10:30	Quantum measurement using superconducting quantum circuits <i>Zhirong LIN, SIMIT</i>	
10:30-11:00	Majorana zero modes in hybrid networks of 3D topological insulators and s-wave superconductors <i>Michael Schleenvoigt, JÜLICH</i>	
11:00-11:30	Coffee break	
11:30-12:00	Proximity coupling in superconductor-graphene nanostructures <i>Haomin Wang, SIMIT</i>	Prof. Jinfeng JIA
12:00-12:30	Phase-coherent loops in topological insulator nanoribbons <i>Jonas Kölzer, JÜLICH</i>	
12:30-13:00	Superconductor-insulator quantum phase transition in Sn-arrays/Bi ₂ Se ₃ heterostructure <i>Tao HU, SIMIT</i>	
13:00-14:00	Lunch	
Session 1: Superconductivity and Bioelectronics Meeting Room 315, F3 Bldg. 3		
09:00-09:30	Advancing electronic devices for in-vitro and in-vivo recordings from neurons <i>Andreas Offenhäusser, JÜLICH</i>	Prof. Hu TAO (Tiger)

09:30-10:00	Bioresorbable transient electronics, optics and photonics <i>Hu TAO (Tiger), SIMIT</i>	
10:00-10:30	Advanced chip technologies for life sciences <i>Chang CHEN, Shanghai Industrial μTechnology Research Inst.</i>	
10:30-11:00	Nano-biosensor combined with microfluidic technology for cancer liquid biopsy <i>Xianqiang MI, SIMIT</i>	
11:00-11:30	Coffee break	
11:30-12:00	Frequency mixing magnetic detection (FMMD) for immunoassay applications and for characterization of magnetic nanoparticles <i>Hans-Joachim Krause, JÜLICH</i>	Prof. Andreas Offenhäusser
12:00-12:30	Low-Tc SQUID based ultra-low field magnetic resonance imaging: system and applications <i>Hui DONG, SIMIT</i>	
12:30-12:50	Ultra-low field magnetic resonance imaging based on hyperpolarized Xe-129 <i>Xiaolei HUANG, JÜLICH</i>	
12:50-13:00	Closing	
13:00-14:00	Lunch	
	Session 2: Quantum Information Technology Meeting Room F3 Bldg. 3	
14:00-14:30	Superconducting single-photon detector for quantum information <i>Lixing You, SIMIT</i>	Prof. Qing-Tai ZHAO
14:30-15:00	Feasibility of the solar-blind SPD based on III-nitride compounds <i>Li Zheng, SIMIT</i>	
15:00-15:30	Generation of polarization entangled photons by self-assembled quantum dots and their possible integration with topological photonic circuits <i>Jiaxiang Zhang, SIMIT</i>	
15:30-16:00	MBE growth of InAs 1.3 um quantum dot lasers on Germanium <i>Qian Gong, SIMIT</i>	
16:00-16:30	Coffee break	
16:30-17:00	Cryogenic CMOS for quantum computing <i>Qing-Tai ZHAO, JÜLICH</i>	Prof. Li LV
17:00-17:30	Manipulating electronic structure of novel correlated materials by tailoring superlattices <i>Dawei SHEN, SIMIT</i>	

17:30-18:00	Quantum spin Hall state in monolayer 1T'-TMDCs <i>Shujie TANG, SIMIT</i>	
18:00-18:10	Closing	