

# The 7th QST International Symposium

## “Quantum Technologies towards Harmonious Future”

Dates: 24-25 July, 2024      Venue: G MESSE GUNMA

### Program (Tentative)

#### Day 1 (Wednesday, 24 July)

9:00 ~ 10:00		REGISTRATION		
<b>Opening</b>				
10:00 ~ 10:03	Opening Remarks	KAWACHI Tetsuya	Chair of Organizing Committee	
10:03 ~ 10:10	Opening Remarks	KOYASU Shigeo	President of QST	
10:10 ~ 10:14	Greetings	TBD	Ministry of Education, Culture, Sports, Science and Technology (MEXT)	
10:14 ~ 10:18	Greetings	TBD	Gunma Prefectural Government	
10:18 ~ 10:22	Greetings	TOMIOKA Kenji	Mayor of Takasaki City	
<b>Plenary Session</b>		Chair: OHSHIMA Takeshi (QST, Japan)		
10:30 ~ 11:15 Plenary	"Title Undecided"	Jörg WRACHTRUP (University of Stuttgart, Germany)		
11:15 ~ 12:00 Plenary	"Title Undecided"	David AWSCHALOM (The University of Chicago, USA)		
12:00 ~ 12:15	Photo-Session			
12:15 ~ 13:45		LUNCH		
<b>Session 1 : Quantum Sensing</b>		Chair: SATO Shin-ichiro (QST, Japan)		
13:45 ~ 14:15 Invited	"Optically Pumped Solid State Quantum Magnetometers for Space Application"	Andreas GOTTSCHOLL (NASA Jet Propulsion Laboratory, USA)		
14:15 ~ 14:45 Invited	"Electrically Detected NV Quantum Sensors"	MORISHITA Hiroki (Tohoku University, Japan)		
14:45 ~ 15:15 Invited	"Improvement in Sensitivity in Diamond-based Magnetometry for Biomagnetic Sensing"	SEKIGUCHI Naota (Tokyo Institute of Technology, Japan)		
15:15 ~ 15:35	"Quantum Sensing Technology for SiC Device Diagnostics"	YAMAZAKI Yuichi (QST, Japan)		
15:35 ~ 16:00		BREAK		
<b>Session 2 : Quantum Computer &amp; ICT</b>		Chair: NARUMI Kazumasa (QST, Japan)		
16:15 ~ 16:30 Invited	"A Silicon Vacancy based Distributed Quantum Computing Network in 4H-SiC"	Roland NAGY (Friedrich-Alexander-University Erlangen-Nuremberg, Germany)		
16:30 ~ 17:00 Invited	"Diamond-Interfaced Quantum Computing Networks"	KOSAKA Hideo (Yokohama National University, Japan)		
17:00 ~ 17:30 Invited	"Towards Photonic Interconnects between Ion Trap Quantum Computers"	TAKAHASHI Hiroki (Okinawa Institute of Science and Technology Graduate University, Japan)		
17:30 ~ 17:50	"Quantum Circuit Search using Deep Reinforcement Learning"	DAIMON Shunsuke (QST, Japan)		
<b>Poster Session with "Dinner Reception"</b>				
18:00 ~ 20:00	Poster Presentations Light snacks & drinks are available after 18:30.			

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### Day 2 (Thursday, 25 July)

<b>Session 3 : Quantum Material</b>		Chair: SAKAI Seiji (QST, Japan)
10:00 ~ 10:30 Invited	"Quantum Photonics in SiC: Scalable Architectures, Multi-Emitter Interactions, and New Hamiltonians"	Daniil LUKIN (Stanford University, USA)
10:30 ~ 11:00 Invited	"Title Undecided"	Invited speaker is currently being arranged.
11:00 ~ 11:30 Invited	"Room Temperature Operation of Opto-Spintronic Devices based on III-V Semiconductor Nanostructures"	HIURA Satoshi (Hokkaido University, Japan)
11:30 ~ 11:50	"SALMON and its Applications: First-Principles Computation for Real-Time Electron Dynamics in Quantum Materials"	YAMADA Shunsuke (QST, Japan)
11:50 ~ 13:05	LUNCH	
<b>Session 4 : Quantum Life Science</b>		Chair: KONO Hidetoshi (QST, Japan)
13:05 ~ 13:50 Plenary	"Quantum Sensing using Hybrid Diamond Materials"	Brant GIBSON (RMIT University, Australia)
13:50 ~ 14:20 Invited	"Quantum Biology Phenomena from the Spin-Anisotropic Effect"	KOBORI Yasuhiro (Kobe University, Japan)
14:20 ~ 14:50 Invited	"Title Undecided"	YASUI Takao (Tokyo Institute of Technology, Japan)
14:50 ~ 15:10	"Femtosecond exciton dynamics in light-harvesting chromoproteins of cyanobacteria: energy transfer and quantum coherence"	TSUBOUCHI Masaaki (QST, Japan)
15:10 ~ 15:30	BREAK	
<b>Session 5 : Panel discussion about "Quantum Technologies for Future"</b>		Chair: TBD
15:30 ~ 16:10	Panelists, discussion topics, etc. are currently being adjusted.	
<b>Closing</b>		
16:15 ~ 16:30	Closing Remarks	HOSHINO Toshihiko      Executive Director of QST