

3rd QST International Symposium "Quantum Life Science"

Nara, 4-5 December 2019

Day1: 04-Dec

All the titles are tentative.

Opening					(Period)	Lecture contents	
9:00	-	9:10	10	Opening Remarks	Toshio Hirano (QST)		
9:10	-	9:20	10	Greeting	TBD		
Session 1: Quantum Phenomena of Biological Systems-1					Chair: Kiminori Maeda (Saitama Univ., JPN)		
9:20	-	10:05	45	Special Lecture	Peter Hore (Univ. Oxford, UK)		Quantum biology, particularly in the radical-pair mechanism of magnetoreception
10:05	-	10:35	30		Toshiyuki Okano (Waseda Univ., JPN)		Biology responsible for cryptochrome of photo sensor in higher organisms
10:35	-	11:05	30		Robert J. Usselman (Florida Inst. Technol., USA)		The quantum biology of reactive oxygen species partitioning and related topics
Break							
11:05	-	11:20	15				
Session 1: Quantum Phenomena of Biological Systems-2					Chair: Peter Hore (Univ. Oxford, USA)		
11:20	-	11:50	30		Martin Plenio (Ulm Univ., GER)		Quantum biology in photosynthesis with quantum dynamical networks
11:50	-	12:20	30		Jose Onuchic (Rice Univ., USA)		Biological electron transfer with molecular dynamics simulations
Photoshoot, Lunch & Poster viewing							
12:20	-	14:00	100				
Session 2: Structural Analysis					Chair: Brant Gibson (RMIT Univ., AUS)		
14:00	-	14:30	30		Taro Tamada (QST)		Structural biology relating to electron transfer
14:30	-	15:00	30		Masato Kato (Univ. Texas Southwestern, USA)		Liquid-liquid phase separation as a target of quantum nano-technology
Poster presentation and Break							
15:00	-	16:20	80	odd number: 15:10-15:40 even number: 15:40-16:10			
Session 3: Quantum Cognitive Informatics					Chair: Makiko Yamada (QST)		
16:20	-	16:50	30		Jerome R Busemeyer (Indiana Univ., USA)		Quantum cognition, such as the quantum probability models of human decision making
16:50	-	17:20	30		Peter Bruza (Queensland Univ. Technol., AUS)		Quantum cognition, such as the contextuality of human information processing
Break							
17:20	-	17:40	20				
Performance: Noh "Japanese traditional performing art"					Toshiyuki Satoh: Holder of an Important Intangible Cultural Property		
17:40	-	18:30	50				
Congress Dinner							
18:30	-	18:40	10	Move to Reception Venue			
18:40	-	20:20	100				

Day2: 05-Dec

Keynote Lecture 1				Chair: Johnjoe McFadden (Univ. Surrey, UK)	Lecture contents
9:20	-	10:20	60	Luke Lee (UC Berkeley, USA)	Quantum nano-plasmonics
Break					
10:20	-	10:35	15		
Keynote Lecture 2				Chair: Yoichi Takakusagi (QST)	
10:35	-	11:35	60	Murali Krishna Cherukuri (NIH, USA)	The newest hyperpolarization technology and the biomedical applications. Also, we are very happy if you give us your future vision of the field.
Break					
11:35	-	11:50	15		
Session 4: Quantum Imaging				Chair: Ichio Aoki (QST)	
11:50	-	12:20	30	Hiroki Ueda (Univ. Tokyo / RIKEN, JPN)	Potential impact of "CUBIC" technology integrated with quantum imaging on systems biology
12:20	-	12:50	30	Tetsuya Ishikawa (RIKEN, JPN)	Advanced X-ray sources for biological applications
Lunch					
12:50	-	14:00	70		
Session 5: Quantum Nano Sensor				Chair: Luke Lee (UC Berkeley, USA)	
14:00	-	14:30	30	Clarice Aiello (UCLA, USA)	Quantum mechanical effects on biological systems in a "noisy, and room temperature" circumstance.
14:30	-	15:00	30	Ryuji Igarashi (QST)	Quantum sensing, Quantum nano sensor
15:00	-	15:30	30	Brant Gibson (RMIT Univ., AUS)	Biological applications of quantum nano-photonics
Closing Remarks					
15:30	-	15:50	20		