

# Program of Workshop on “Strongly Coupled Light-Matter Interactions: Models and Applications”

**Conference venue: 3016, physics department building (格致楼)**

7 July, Saturday		
Time	Content	Chairman
14:30-20:00	Registration: At the Lobby of Tsuiying Hotel	
8 July, Sunday		
Time	Content	Chairman
8:30-8:40	Opening remark	
8:40-9:20	<b>Murray Batchelor</b> Level statistics in the quantum Rabi model and the magic of strong coupling	Chen Qing-Hu
9:20-10:00	<b>Simone Felicetti</b> Ultrastrong coupling regime of two-photon interactions	
10:00-10:30	Tea break and photo	
10:30-11:10	<b>Chen Qing-Hu</b> Solutions to the mixed quantum Rabi model	Murray Batchelor
11:10-11:50	<b>Hans-Peter Eckle</b> The quantum Rabi-Stark model: exact solution and spectral properties	
12:00	Lunch	
14:00-14:40	<b>Liu Yongchun</b> Hybrid microcavities for strong-coupling cavity QED	Hans-Peter Eckle
14:40-15:20	<b>Elinor Irish</b> Bridging the gap between the quantum and semiclassical Rabi models	
15:20-16:00	<b>Shen Zhen</b> Optomechanically induced non-reciprocity	
16:00-16:20	Tea break	
16:20-17:00	<b>Lv Xinyou</b> Single-Photon-Triggered Quantum Critical Physics	Elinor Irish
17:00-17:40	<b>Wang Zhihai</b> Metrology and detection based on Rabi model	
17:40-18:00	<b>Guan Kai-Long</b> The asymmetric quantum Rabi model and generalised Poschl-Teller potentials	
18:00-20:00	Reception banquet	

9 July, Monday		
Time	Content	Chairman
8:30-9:10	<b>Cristiano Ciuti</b> Vacuum-dressed cavity magnetotransport of a 2D electron gas	Simone Felicetti
9:10-9:50	<b>Masao Hirokawa</b> Approximated Eigenstates of Generalized Quantum Rabi Model with $A^2$ -Term in Deep-Strong Coupling Regime	
9:50-10:30	<b>Philipp Schneeweiss</b> Experimental exploration of extreme regimes of the quantum Rabi model using trapped cold atoms	
10:30-10:50	Tea break	
10:50-11:30	<b>Liao Jie-Qiao</b> Manipulating counter-rotating interactions in the quantum Rabi model via qubit frequency modulation	Masao Hirokawa
11:30-12:10	<b>Cid Reyes-Bustos</b> Spectral crossings of the asymmetric quantum Rabi model	
12:10	Lunch	
14:00-14:40	<b>Wang Yimin</b> State engineering and quantum criticality with quantum Rabi model	Cristiano Ciuti
14:40-15:20	<b>Zhang Yuyu</b> Generalized squeezing rotating-wave approximation to the isotropic and anisotropic Rabi model in the nonperturbative deep-strong-coupling regime	
15:20-16:00	<b>An Jun-Hong</b> Novel signature of quantized coupling between quantum emitters and surface plasmons	
16:00-16:20	Tea break	
16:20-17:00	<b>Zhang Jianqi</b> Ramsey Interferometry based on the stimulated Brillouin scattering	An Jun-Hong
17:00-17:40	<b>Cong Lei</b> Polaron picture for quantum Rabi model and two-photon quantum Rabi model	
17:40-18:00	Closing remark	
18:00	Dinner	