The past decade has witnessed radical advances in quantum computing and related quantum technologies – with the offerings of prototype quantum processors capable of handling 20 qubits (and more qubits to come) by multiple commercial entities, the realization of quantum advantage has steadily moved on towards engineered reality. These near-term quantum computers promise exciting applications ranging from designing exotic novel materials to discovering new drugs, and have made quantum computing and quantum machine learning extremely exciting and vibrant research fields.

The International Workshop on Quantum Computing, Information Processing and Machine Learning (IWQCIPML) will be held at the National Taiwan University (Taipei, Taiwan) during December 2-4, 2019. The Workshop aims to bring together world-leading academic researchers and experts to exchange and share their experiences in the fields of quantum computing, quantum information, artificial intelligence, and quantum machine learning. It also aims to provide a premier interdisciplinary platform for practitioners and educators to present and discuss the most recent discoveries, trends, and opportunities, as well as challenges and practical solutions in the fields. To this end, mini-school lectures on key concepts and aspects in quantum computing and quantum machine learning will be organized in the first day of the Workshop, followed by a two-full-day program of oral presentations and a poster session. We are confident that this International Workshop will be a significant step to advance our understandings and skills towards these forefront research fields.

Venue

R204, International Conference Hall,
Center for Condensed Matter Sciences (CCMS) & New Physics Building, National Taiwan University

Mini-School Lecturers

Alán Aspuru-Guzik
(University of Toronto)
Jerry Chow
(IBM)
Masoud Mohseni
(Google)
Francesco Petruccione
(Univ. of KwaZulu-Natal)
Barry Sanders
(Univ. of Calgary)
Nathan Wiebe
(Univ. of Washington & Google)
Peter Wittek
(Univ. of Toronto)

Invited Workshop Speakers

Alán Aspuru-Guzik	(University of Toronto, Canada)
Yueh-Nan Chen	(National Cheng Kung University, Taiwan)
Jerry Chow	(IBM T.J. Watson Research Center, USA)
Vedran Dunjko	(Leiden University, Netherlands)
Keisuke Fujii	(Osaka University, Japan)
Hsi-Sheng Goan	(National Taiwan University, Taiwan)
Alexey Gorshkov	(University of Maryland, USA & NIST, USA)
Tak-San Ho	(Princeton University, USA)
Min-Hsiu Hsieh	(University of Technology Sydney, Australia)
Masoud Mohseni	(Google Quantum AI, USA)
Francesco Petruccione	(University of KwaZulu-Natal, South Africa)
Barry Sanders	(University of Calgary, Canada)
Tomah Sogabe	(The University of Electro-Communications, Japan)
Nathan Wiebe	(University of Washington, USA & Google, USA)
Peter Wittek	(University of Toronto, Canada)
Naoki Yamamoto	(Keio University, Japan)

http://web.phys.ntu.edu.tw/~cqse/2019workshop

Important Dates

Early-bird registration ~15th Oct.
Final registration ~15th Nov.

Students & Postdoctors: FREE!

Come and Join us on Dec. 2~4, 2019
台大凝態物理館國際會議廳

SCAN ME

Organizing Committee

Shih-I Chu (Chair)	(NTU Physics)
Hsi-Sheng Goan (Co-Chair)	(NTU Physics)
Ching-Ray Chang	(NTU Physics)
Sy-Yen Kuo	(NTU Electrical Engineering)
Ying-Jer Kao	(NTU Physics)
Guang-Yu Guo	(NTU Physics)
Jeng-Da Chai	(NTU Physics)
Yuan-Chung Cheng	(NTU Chemistry)
Guin-Dar Lin	(NTU Physics)
Liang-Yan Hsu	(IAMS Academia Sinica)

Center for Quantum Science and Engineering 量子科學與工程研究中心
國立臺灣大學 National Taiwan University
MOST 科技部 Ministry of Science and Technology
IBM Hub at National Taiwan University
國立臺灣大學理學院 College of Science, National Taiwan University
國立臺灣大學 物理學系 Department of Physics, National Taiwan University
CTP Since 2006 Center for Theoretical Physics, National Taiwan University 臺大理論物理研究中心
Institute of Atomic and Molecular Sciences, Academia Sinica 中央研究院原子與分子科學研究所
CASTS 理論科學研究中心 Center for Advanced Study in Theoretical Sciences
NCTS QIS focus group