



IEEE International Conference  
on Quantum Computing  
and Engineering – QCE24



## 2024 IEEE Quantum Week

IEEE International Conference on Quantum Computing and Engineering (QCE24)

Palais des Congrès Montréal, Québec, Canada (Room 520A)

Wednesday September 18th, 2024

### Fifth Workshop on

### Quantum Computing Opportunities in Renewable Energy and Climate Change

Organizers: Annarita Giani (GE Vernova Advanced Research), Zhenyu (Henry) Huang (Argonne National Laboratory)

Times are given in Eastern Time (ET, UTC-5:00)

10:00-10:15 Welcome [Annarita Giani](#), [Zhenyu \(Henry\) Huang](#)

#### Session 1 (Keynotes + 1 Talk, 1.5 hours)

10:15-10:40 **Keynote:** [Harnessing the Power of Quantum for our Future](#) [Bill Foster](#), U.S. Congressman (20+5 virtual)

10:40-11:05 [Quantum Computing and Quantum Artificial Intelligence for Climate Change and Water Engineering](#) [Kin Tung Michael Ho](#), [Kuan-Cheng Chen](#), [Lily Lee](#), [Felix Burt](#), [Shang Yu](#), [Po-Heng Henry Lee](#), Imperial College London (25+5)

11:05-11:30 [Exploring Use Cases of Quantum Computing in the Alberta Energy Sector](#), [Adam Bene Watts](#) Univ of Calgary (20+5)

11:30 *Wrap up session 1* (*Annarita and Henry*)

11:30-13:00 Break

#### Session 2 (3 Talks, 1.5 hours)

13:00-13:30 **Keynote:** [Current and Future Quantum Applications for Energy at DOE](#), [Rima Oueid](#), U.S. Department of Energy (20+5)

13:30-14:00 [Quantum-Train Long Short-Term Memory: Application on Flood Prediction Problem](#), [Chu-Hsuan Abraham Lin](#), [Chen-Yu Liu](#), [Kuan-Cheng Chen](#), Imperial College London, and National Taiwan University (25+5)

14:00-14:30 [Quantum Computing for Modeling of Sustainable Materials](#) [Thomas Baker](#), University of Victoria(25+5)

14:30-15:15 Afternoon Break

#### Session 3 (Panel Discussion, 1.5 hours)

15:15-16:45 [Panel Discussion \(1.5 hours\)](#)

1. [Yan Li](#), Penn State University
2. [Clarence Chang](#), Argonne National Laboratory (Virtual)
3. [Juliette Peyronnet](#), Alice&Bob
4. [Masako Yamada](#), IonQ
5. [Peng Zhang](#), Stonybrook University
  - Presentations – 50 mins total (10 mins each)
  - Discussion/Questions from organizers - 20 mins
  - Questions from audience - 20 mins

16:45-16:45 *Workshop Wrap up* [Henry](#), [Annarita](#)