

Between September 9 and 13, 2024, the TÜBİTAK Research Institute of Fundamental Sciences (TBAE) will organize the "Programmable Quantum Photonic Computers Fall School 2024 (TBAE PPQC'24)." This school aims to provide the necessary theoretical and experimental background for students aspiring to pursue postgraduate studies in quantum photonic computation, as well as for those already actively working in this field. The fall school will cover fundamental theoretical and experimental courses on a range of topics, including Quantum Optics, Components of Photonic Computers, Quantum Information Theory, Interferometers and Single Photon Sources, Quantum States and Measurements, Quantum Algorithms, Photodetectors and Quantum State Detection, Quantum Error Correction, Linear Optical Quantum Computing, Quantum Communication and Entanglement, Measurement-Based Quantum Computing, Programmable Photonic Quantum Computers (PQCs), Design and Simulation Steps of PQCs, Photonic Integrated Circuits (PICs), Nonlinear Optical Effects in PICs, Quantum Interconnects and Networks, and Techniques for Characterizing PICs. These courses will be given by leading instructors from various universities, both domestic and international. You can apply to the TBAE PPQC'24 Fall School for either Face-to-Face (F2F, limited to 50 people selected from the pool of applicants) or Online participation via Zoom.

### Scientific Committee:

Orkun Hasekioğlu (TBAE)  
Özgür Müstecaplıoğlu (KU)  
Sabieh Anwar (LUMS)  
Ceyhun Bulutay (BU)  
Uğur Teğın (KU)

### Organization Committee:

Orkun Hasekioğlu (TBAE)  
Atilla Hasekioğlu (BİLGEM)  
Özgür Müstecaplıoğlu (KU)  
Rasim Ayar (TBAE)  
Ekrem Oğuzhan Angüner (TBAE)  
Erbil Can Artun (TBAE)

### Lecturers:

Sabieh Anwar (LUMS)  
Özgür Müstecaplıoğlu (KU)  
Ceyhun Bulutay (BU)  
Uğur Teğın (KU)  
Oğuz Gülseren (Bilkent)  
M. Suhail Zubairy (Texas A&M)  
Serkan Ateş (İYTE)  
Zafer Gedik (SU)  
Ataul Haq (Photonic Inc.)  
Ali Bozbey (TOBB ETU)  
Mehmet Emre Taşgin (HU)  
Ozan Arı (HU)  
Manzoor Ikram (NILOP)  
Mohammad Imran (NILOP)

### Date & Location:

09 - 13 September 2024  
TÜBİTAK Gebze Yerleşkesi,  
Temel Bilimler Araştırma Enstitüsü  
Barış Mah. Dr. Zeki Acar Cad.  
No:1 P.K. 21, 41470 Gebze / Kocaeli

### Application Requirements:

M.Sc. & Ph.D. students, post-doctoral researches in related fields are strongly encouraged to apply and will be given priority for the F2F participation.

- Approval requires a transcript (M.Sc & Ph.D.).

For senior undergraduate students (F2F):

- Minimum number of semesters completed: 6

- Minimum GPA : 2.50

- Proven record of successfully taken courses:

Quantum Physics & Electromagnetic Theory

- Approval requires a transcript.

Online participation is possible via Zoom.

- No prerequisites needed

Please visit the application web page for further details and school conditions.

### Application Web Page:

<https://tbae.tubitak.gov.tr/en/haber/fall-school-programmable-photonic-quantum-computers>