

# Quantum Key Distribution (QKD) and Cyber Security

4 SEPTEMBER, 2024

## AGENDA

### Programme of the 3rd Training Event on Quantum Key Distribution (QKD) and Cyber Security

09:00–09:15	<b>Registration</b>
09:15-09:20	<b>Opening Remarks</b>
09:20-09:25	<b>Overview of the Two-Day HellasQCI Training</b> Evangelos Markatos, FORTH
09:25-09:40	<b>Welcome Adress Speeches</b> <ul style="list-style-type: none"> <li>• Athanasios Paliatsos, Ministry of Digital Governance</li> <li>• Nektarios Tavernarakis, Chairman, Board of Directors, FORTH (TBC)</li> <li>• Dimitris Plexousakis, Vice-Chairman, Board of Directors, FORTH</li> </ul>
09:40-09:50	<b>Welcoming Remarks by the European Commission</b> Fabiana Da-PIEVE, European Commission
09:50-10:35	<b>Keynote speech</b> Hannes Hübel, AIT
10:35-10:45	<b>HellasQCI project overview and synergies with EuroQCI</b> Ilias Papastamatiou, GRNET
10:45–11:00	<b>Coffee Break</b>
11:00-11:20	<b>EuroQCI Projects</b> PETRUS Nostradamus
11:20-12:20	<b>National QCIs (panel)</b>  <b>Panel Theme:</b> What are the challenges ahead on the road to QKD?  <b>Moderator:</b> George Kanellos <ul style="list-style-type: none"> <li>• CYQCI, Cyprus Kyriacos Kalli / Konstantinos Katzis</li> <li>• PRISM, Malta, Noel Farrugia</li> <li>• PTQCI, Portugal, Catarina Bastos</li> <li>• RONAQCI, Romania, Alin Bogdan</li> </ul>
12:20- 12:40	<b>Why QKD?</b> Harry Manifavas, FORTH



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12:40-13:20	Lunch break
	<b>National QCIs (panel)</b>
	<b>Panel Theme:</b> What are the challenges ahead on the road to QKD?
	<b>Moderator:</b> Ilias Papastamatiou
13:20-14:10	<ul style="list-style-type: none"> <li>• QCI CAT, Austria, Sebastian Ramacher</li> <li>• EuroQCI, Spain, Andrea Gorni</li> <li>• LUX4QCI, Luxembourg, Junaid Ur Rehman</li> <li>• PIONIER-Q, Poland, Piotr Rydlichowski</li> <li>• QCIHungary, Hungary, János Mohácsi</li> </ul>
14:10-14:30	<b>QKD Architecture: Quantum Layer</b> Giannis Giannoulis, NTUA
14:30-14:50	<b>QKD Architecture: Key Management Layer</b> George Kanellos, NKUA
14:50-15:10	<b>QKD Architecture: Application Layer</b> Homer Papadopoulos, NCSR-D



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15:10-16:10	<p><b>Space session</b></p> <p><b>Space: the final frontier for QKD?</b></p> <p><b>Moderator:</b> Vasilis Charmandaris, FORTH</p> <ul style="list-style-type: none"> <li>• TBD, Ray metrics</li> <li>• Manolis Xilouris NOA</li> <li>• Menios Tsiganis AUTH</li> <li>• Kostantinos Katzis CYQCI</li> <li>• Giannis Gianoulis NTUA</li> </ul>
16:10-16:20	<p><b>Coffee Break</b></p>
16:20-17:20	<p><b>Business session / Commercial solutions</b></p> <p><b>Moderator:</b> Konstantinos Tsimvrakidis, Petros Papapetropoulos</p> <ul style="list-style-type: none"> <li>• ThinkQuantum, Simone Capeleto</li> <li>• ID Quantique, Pejman Panahi, Simon Patkovic</li> <li>• Single Quantum, Aliko Athanasiadou</li> </ul>
17:20	<p><b>End of day 1</b></p>



# Quantum Key Distribution (QKD) and Cyber Security

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## AGENDA

09:30–10:00	<b>Introduction to PQC, PQC Transition</b> Harry Manifavas, FORTH
10:00–10:30	<b>Authentication in QKD</b> Giorgos Nikolopoulos, FORTH
10:30–11:15	<b>“Demo of QKD Networks”</b> Giorgos Kanellos, NKUA (video)
11:15–11:30	<b>Coffee Break</b>
11:30–12:15	<b>Extracting and Managing Keys from QKD to Enhance Cryptographic Techniques for File Encryption (Lab)</b> Homer Papadopoulos, NCSRDI (hands on)
12:15–13:00	<b>QKD-PQC: Securing Key Transfers for Application Layer Utilization</b> Homer Papadopoulos, NCSRDI
13:00–14:00	<b>Lunch break</b>
14:00–14:45	<b>Experiment Polarisation-Encoded QKD in Lab</b> Aristeidis Stathis, NTUA Argiris Ntanos, NTUA Kostas Vyrsoinos, AUTH
14:45–15:05	<b>Demo of Polarisation-Encoded QKD in (Virtual) Lab</b> Aristeidis Stathis, NTUA Argiris Ntanos, NTUA Kostas Vyrsoinos, AUTH
15:05–15:50	<b>HellasQCI Use Cases / Cybersecurity</b> SPACE Hellas
15:50–16:00	<b>End of Day 2</b>