## Program at a glance

<table>
<thead>
<tr>
<th>Time/Day</th>
<th>Monday 17</th>
<th>Tuesday 18</th>
<th>Wednesday 19</th>
<th>Thursday 20</th>
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<tbody>
<tr>
<td></td>
<td>Registration: 8:30 - 8:50</td>
<td>Registration: 8:30 - 9:00</td>
<td>Registration: 8:30 - 9:00</td>
<td>Workshop 2: IoSEC 10:00 - 12:20</td>
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<tr>
<td>Morning</td>
<td>Opening: 8:50 - 9:00</td>
<td>Keynote 1: 9:00 - 10:00</td>
<td>Keynote 3: 9:00 - 10:00</td>
<td>Workshop 2: IoSEC 10:00 - 12:20</td>
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<td>Session 1: 10:20 - 12:00</td>
<td>Session 3: 10:20 - 12:00</td>
<td>Workshop 3: SCENE 15:00 - 16:45</td>
<td>Closing ceremony: 16:45 - 17:00</td>
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<td>Session 2: 12:00 - 13:00</td>
<td>Session 4: 12:00 - 13:00</td>
<td>Workshop 3: SCENE 15:00 - 16:45</td>
<td>Closing ceremony: 16:45 - 17:00</td>
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<tr>
<td></td>
<td>Lunch</td>
<td>Welcome Reception 19:00</td>
<td>Gala Dinner 20:00</td>
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### Detailed program

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<tr>
<th>Time/Day</th>
<th>Monday 17</th>
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<td>9:00-10:00</td>
<td>Keynote 1: Dominique Verchere Chair: Xavi Masip</td>
<td>Keynote 3: Matthias Gunkel. Chair: Dominic Schupke</td>
<td>Workshop 2: 4th International Workshop on Information &amp; Operational Technology (IT &amp; OT) Security (IOSEC)</td>
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<td>10:00-10:20</td>
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<td>10:20-12:00</td>
<td>Session 1: Applying ML towards Systems Reliability</td>
<td>Session 3: Network Reliability 1</td>
<td>FISHY Summer Camp</td>
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<td>12:00-12:30</td>
<td>Session 2: Routing Reliability</td>
<td>Session 4: Unmanned Aerial Vehicle</td>
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<td>13:00-14:00</td>
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<td>15:00-16:00</td>
<td>Workshop 1: 1st Workshop on Post-Quantum Cybersecurity (PQCyber)</td>
<td>Keynote 2: Oscar Carrasco Chair: Eva Rodríguez</td>
<td>Keynote 4: Francisco d'Andria Chair: Admela Jukan</td>
<td>Workshop 3: 1st International Workshop on Safeguarding Cybersecurity in Healthcare (SCENE)</td>
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<td>16:20-16:45</td>
<td>Panel: Reliability, are you for real?</td>
<td>Session 5: Network Reliability 2</td>
<td>Closing ceremony</td>
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Monday, 17 April

15:00-17:00 Workshop 1
1st Workshop on Post-Quantum Cybersecurity (PQCyber)
15:00 – 16:00 Workshop-1 Keynote
Chair: Pino Caballero-Gil

IBM Quantum safe and roadmap overview
Alberto García Fernandez (IBM Quantum Community, Engineer Lead)

16:00-17:00
Workshop presentations
Chair: Pino Caballero-Gil

McEliece Cryptosystem: Reducing the Key Size of QC-LDPC Codes
Paula Pérez-Pacheco and Pino Caballero-Gil (University of La Laguna, Spain)

Classical vs. Quantum Machine Learning for Breast Cancer Detection
Sonia Díaz-Santos and Daniel Escanez-Exposito (University of La Laguna, Spain)

Theoretical Analysis and Software Implementation of a Quantum Encryption Proposal
Daniel Escanez-Exposito and Pino Caballero-Gil (University of La Laguna, Spain)

Tuesday, 18 April

8:50-9:00 Opening session
9:00-10:00 Keynote 1
Chair: Xavi Masip

The rise of Open Programmable IP/Optical Networks at the Edges to deliver 6G Services
Dominique Verchere (Nokia Bell Labs, France)

10:20-12:00 Session 1: Applying ML towards Systems Reliability
Chair: Francesc Aguiló

Machine-Learning-Assisted Failure Prediction in Microwave Networks based on Equipment Alarms
Francesco Lateano (Politecnico di Milano, Italy)
Omran Ayoub (Scuola Universitaria Professionale Della Svizzera Italiana, Switzerland)
Francesco Musumeci (Politecnico di Milano, Italy)
Massimo Tornatore (Politecnico di Milano & University of California, Italy)

An NIDS for Known and Zero-Day Anomalies
Ayaz Hussain (CRAAX, UPC BarcelonaTech, Spain)
Learning to Fulfill the User Demands in 5G-enabled Wireless Networks through Power Allocation: a Reinforcement Learning approach
Anastasios E. Giannopoulos (National and Kapodistrian University of Athens, Greece)
Sotirios Spantides (National and Kapodistrian University of Athens, Greece)
Nikolaos Nomikos (National and Kapodistrian University of Athens, Greece)
Alexandros Kalafatelas (Four Dot Infinity, Greece)
Panagiotis Trakadas (National and Kapodistrian University of Athens, Greece)

Risk Assessment on Hardware Offloading Architecture of Network Security Protocols with Linux-based Control Plane
Oscar Gotor Bermejo (Comcores ApS, Denmark)
Daniel Dik (Technical University of Denmark (DTU), Denmark)
Michael S. Berger (Technical University of Denmark, Denmark)

Blockchain-based Self- Sovereign Identity Solution for Vehicular Networks
Engin Zeydan (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain)
Josep Mangues-Bafalluy (Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Spain)
Suayb S. Arslan (Massachusetts Institute of Technology & TUBITAK, USA)
Yekta Turk (Aselsan, Turkey)

12:00-13:00 Session 2: Routing Reliability

Safe Routing in Energy-aware IP networks
Youcef Magnouche (Huawei, France)
Jeremie Leguay (Huawei Technologies, France Research Center, France)
Feng Zeng (Huawei, China)

Performance Evaluation of TI-LFA in Traffic-Engineered Segment Routing-Based Networks
Liesbeth Roelens (Telefonica, Spain)
Oscar González de Dios (Telefonica I+D, Spain)
Ignacio de Miguel (Universidad de Valladolid, Spain)
Edward Echeverry (Telefónica SA, Spain)
Ramón J. Durán Barroso (Universidad de Valladolid, Spain)

Routing protocols exploiting queue information for deterministic networks
Jakob Miserez (Ghent University, Belgium)
Gourav Prateek Sharma (KTH, Royal Institute of Technology, Sweden)
Wouter Tavernier (Ghent University - imec, Belgium)

15:00-16:00 Keynote 2

Security and Resilience in Containerized 5G Radio Access Networks
Oscar Carrasco (Casa-systems, Spain)

16:20 – 18:00 Industrial Panel
Chair: Xavi Masip

Reliability, are you for real?
Pino Caballero, Universidad de la Laguna
Oscar Carrasco, Casa-systems
Rodrigo Diaz, Atos
Alberto Garcia, IBM
Matthias Gunkel, DT
Admela Jukan, TUBS
Xavi Masip, UPC
Dominic Schupke, Airbus

Wednesday, 19 April

9:00-10:00 Keynote 3
Chair: Dominic Schupke

Quantum Key Distribution Network Design – what makes it different to classical network design?
Matthias Gunkel (Deutsche Telekom, Germany)

10:20-12:00 Session 3: Network Reliability 1
Chair: Adrià Asensio

Towards Optimal Path Allocation for Unreliable Reconfigurable Intelligent Surfaces
Mounir Bensalem (Technical University of Braunschweig, Germany)
Anna Engelmann (Technical University of Braunschweig, Germany)
Admela Jukan (Technical University of Braunschweig, Germany)

Measuring and Modeling ICAO's PBCS Performance Metrics
Markus Klügel (Airbus, Germany)
Dominic A. Schupke (Airbus, Germany)

Distributed Management of Dynamic Reliability in Beyond 5G Industrial Environments for Extreme Low Latency Communication
Davide Borsatti (University of Bologna, Italy)
Gianluca Davoli (University of Bologna, Italy)
Walter Cerroni (University of Bologna, Italy)
Carla Raffaelli (University of Bologna, Italy)
Wint Yi Poe (Huawei Technologies - European Research Center, Germany)
Riccardo Trivisonno (Huawei Technologies, Germany)
Raffaele Bolla (University of Genoa, Italy)

A distributed network-aware TSCH scheduling
Ivanilson F Vieira, Junior (University of Coimbra, Portugal & IFRN, Brazil)  
Jorge Granjal (University of Coimbra, Portugal)  
Marilia Curado (University of Coimbra, Portugal)  

Age of Information Resilience with a Strategic Out-of-Band Relay  
Leonardo Badia (Università degli Studi di Padova, Italy)  
Federico Chiariotti (Università degli Studi di Padova, Italy)  

12:00 – 13:00 Session 4: Unmanned Aerial Vehicle  
Chair: Panos Trakadas  

Uplink NOMA for UAV-Aided Maritime Internet-of-Things  
Nikolaos Nomikos (National and Kapodistrian University of Athens, Greece)  
Anastasios E. Giannopoulos (National and Kapodistrian University of Athens, Greece & National Technical University of Athens, Greece)  
Panagiotis Trakadas (University of Athens, Greece)  
George K. Karagiannidis (Aristotle University of Thessaloniki, Greece)  

UAV-assisted Multiband WSN Coverage Evaluation  
Sven Pullwitt (Technische Universität Braunschweig, Germany)  
Jan Schlichter (Technische Universität Braunschweig, Germany)  
Lars C Wolf (Technische Universität Braunschweig, Germany)  

Sum Rate Maximization of Uplink Active RIS and UAV-assisted THz Mobile Communications  
Sara Farrag (German University in Cairo, Egypt)  
Engy Aly Maher (German University in Cairo, Egypt)  
Ahmed E. El-Mahdy (German University in Cairo, Egypt)  
Falko Dressler (TU Berlin, Germany)  

15:00-16:00 Keynote 4  
Chair: Admela Jukan  

Interoperable, Efficient and Cognitive Data-driven Continuum Management Strategy  
Francesco d’Andria (ATOS, Spain)  

16:20-18:00 Session 5: Network Reliability 2  
Chair: Eva Marín  

Automated Fault Detection Framework for Reliable Provision of IoT Applications in Agriculture  
Shadi Attarha and Saurabh Band (University of Bremen, Germany)  
Anna Förster (ComNets, University of Bremen, Germany)  

Availability and Throughput Evaluation of Optical Based High Throughput Satellite Networks  
Mario Wenning (ADVA Optical Networking & Technical University of Munich, Germany)  
Carmen Mas-Machuca (Technical University of Munich, Germany)
Achim Autenrieth (ADVA, Germany)
Jörg-Peter Elbers (ADVA Optical Networking SE, Germany)

Quantum Key Distribution with Trusted Relay using an ETSI-compliant Software-Defined Controller
Riccardo Bassi (Politecnico di Milano, Italy)
Qiaolun Zhang (Politecnico di Milano, Italy)
Alberto Gatto (Politecnico di Milano, Italy)
Massimo Tornatore (Politecnico di Milano & University of California, Davis, Italy)
Giacomo Vercalle (Politecnico di Milano, Italy)

Optimum Network Slicing for Ultra-reliable Low Latency Communication (URLLC) Services in Campus Networks
Iulisloi Zacarias (TU Braunschweig & Institute for Computer and Network Engineering, Germany)
Francisco Carpio (Technische Universität Braunschweig, Germany)
André C Drummond (University of Brasilia, Brazil)
Admela Jukan (Technische Universität Braunschweig, Germany)

Dependability: Enablers in 5G Campus Networks for Industry 4.0
Ahmad Khalil, Benjamin Becker (Technical University of Darmstadt, Germany)
Lisa Wernet and Ralf Kundel (Technical University of Darmstadt, Germany)
Björn Richerzhagen (Siemens AG, Germany)
Tobias Meuser (Technical University of Darmstadt, Germany)
Ralf Steinmetz (Technische Universität Darmstadt, Germany)

Thursday, 20 April
8:55 - 9:05 IOSEC & SCENE Welcome

9:00-12:00 Workshop 2
4th International Workshop on Information & Operational Technology (IT & OT) Security (IOSEC)

9:00 - 11:40 Workshop presentations

9:05 – 9:30
A Moving Target Defense Security Solution for IoT Applications

9:35 - 10:00
Runtime Security Monitoring by an Interplay Between Rule Matching and Deep Learning-Based Anomaly Detection on Logs

10:20 - 10:45
Towards the Forensic Investigation on the Hadoop Distributed File System Using RAM Analysis

10:45 - 11:10
A Machine Learning-Driven Threat Hunting Architecture for Protecting Critical Infrastructure
11:10 - 11:35

A Holistic Framework for Safeguarding of SMEs: A Case Study

11:40 - 12:20 Workshop Keynote – IOSEC & SCENE Workshops
RATs and InfoStealers: Mission Spain and Catalonia
Jose Luis Sánchez Martínez (BlackBerry Cylance, Senior Threat Researcher)

12:30 – 14:30
FISHY Summer Camp
12:30-12:45
Raising cybersecurity awareness: practical examples [ATOS]
12:45-13:20
Workshop on next-generation secured communications: Secure Infrastructure Abstraction [TID, UC3M]
13:20-13:55
Workshop on Intent-based networking and practical application [TUBS]
13:55-14:30
Workshop on Wazuh monitoring and detection tool [XLAB]

15:00 – 16:45 Workshop 3
1st International Workshop on Safeguarding Cybersecurity in Healthcare (SCENE)
15:00 – 15:05 Welcome

15:05-16:45 Workshop presentations
15:05 - 15:30
Pseudonymisation in the Context of GDPR-Compliant Medical Research
15:30 - 15:55
A Swarm Artificial Intelligence Approach for Effective Treatment of Chronic Conditions
15:55 - 16:20
Security Shortcomings in Healthcare: A Preliminary Investigation of Data Protection Authorities' Decisions
16:20 - 16:45
Information Sharing for Creating Awareness for Securing Healthcare Ecosystem
MAIN CONFERENCE

16:45 – 17:00 Closing Ceremony