

DRCN 2023

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Program at a glance

Time/Day	Monday 17	Tuesday 18	Wednesday 19	Thursday 20
		Registration 8:30 - 8:50	Registration 8:30 - 9:00	Registration 8:30 - 9:00
Morning		Opening: 8:50 - 9:00		
		Keynote 1: 9:00 - 10:00	Keynote 3: 9:00 - 10:00	Workshop 2: IoSEC 9:00 - 10:00
		CB		
		Session 1: 10:20 - 12:00	Session 3: 10:20 - 12:00	Workshop 2: IOSEC 10:00 - 12:20
		Session 2: 12:00 - 13:00	Session 4: 12:00 - 13:00	FISHY Summer Camp 12:30 - 14:30
	Lunch			
Afternoon	Workshop 1: PQCyber 2023 15:00 - 17:00	Keynote 2: 15:00 - 16:00	Keynote 4: 15:00 - 16:00	Workshop 3: SCENE 15:00 - 16:45
		CB	CB	
		Panel: 16:20 - 18:00	Session 5: 16:20 - 18:00	Closing ceremony: 16:45 - 17:00
		Welcome Reception 19:00	Gala Dinner 20:00	

Detailed program

Time/Day	Monday 17	Tuesday 18	Wednesday 19	Thursday 20
8:30-8:50		Registration	Registration	Registration
8:50-9:00		Opening		
9:00-10:00		Keynote 1: Dominique Verchere Chair: Xavi Masip	Keynote 3: Matthias Gunkel. Chair: Dominic Schupke	Workshop 2: 4th International Workshop on Information & Operational Technology (IT & OT) Security (IOSEC)
10:00-10:20		CB		
10:20-12:00		Session 1: Applying ML towards Systems Reliability	Session 3: Network Reliability 1	
12:00-12:30		Session 2: Routing Reliability	Session 4: Unmanned Aerial Vehicle	
12:30-13:00				FISHY Summer Camp
13:00-14:00		Lunch		
14:00-15:00		Lunch		
15:00-16:00	Workshop 1: 1st Workshop on Post-Quantum Cybersecurity (PQCyber)	Keynote 2: Oscar Carrasco Chair: Eva Rodríguez	Keynote 4: Francisco d'Andria Chair: Admela Jukan	Workshop 3: 1st International Workshop on Safeguarding Cybersecurity in Healthcare (SCENE)
16:00-16:20		CB	CB	
16:20-16:45		Panel: Reliability, are you for real?	Session 5: Network Reliability 2	
16:45-17:00				
17:18:00				
18:00-18:20				
19:00		Welcome Reception		
20:00			Gala Dinner	

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)

Francesc Aguiló (CRAAX, UPC BarcelonaTech, Spain)
Ester Simo (CRAAX, UPC BarcelonaTech, Spain)
Eva Marín-Tordera (CRAAX, UPC BarcelonaTech, Spain)
Xavi Masip-Bruin (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 Spantideas (National and Kapodistrian University of Athens, Greece)
Nikolaos Nomikos (National and Kapodistrian University of Athens, Greece)
Alexandros Kalafatelis (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

Chair: Jordi Garcia

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

Chair: Eva Rodriguez

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 Verticale (Politecnico di Milano, Italy)

Optimum Network Slicing for Ultra-reliable Low Latency Communication (URLLC) Services in Campus Networks

Iulisoi 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