

84th IFIP WG 10.4 Meeting Arcos de Valdevez, Portugal June 23 — 26, 2023

Business Meeting



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83rd WG Meeting – Participants

- 57 participants
 - Asia: 4
 - Australia: 3
 - Europe: 30
 - Middle East: 1
 - North America: 17
 - South America: 2
- 39 members
- 18 guests

Thanks everyone!

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Agenda

- DSN 2023
- Future DSN editions
- Related Conferences
- JCL Award 2023
- Future WG Meetings: Locations, Organizers & Topics
- Virtual Workshops

- Private Part: Members only!

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DSN 2023 @ Porto, Portugal

- *Palácio da Bolsa*, Porto, Portugal
- June 27th-30th

- General Co-Chairs:
 - Henrique Madeira (University of Coimbra, Portugal)
 - Marco Vieira (University of Coimbra, Portugal)

- PC Co-Chairs:
 - Onur Mutlu (ETH Zurich, Switzerland)
 - Xavier Défago (Tokyo Institute of Technology, Japan)

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DSN 2023 - Some numbers

- Papers submitted: 248
- Papers accepted: 47
- Acceptance ratio: 18.95%
- Participants (Jun. 25): 244
 - 112 authors
 - 83 non-authors
 - 34 workshop authors
 - 15 Student travel grants



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DSN 2023 - Program at a glance

- Workshops:
 - DSN Workshop on Data-Centric Dependability and Security
 - 9th Intl. Workshop on Safety and Security of Intelligent Vehicles
 - Dependable and Secure Machine Learning (DSML 2023)
 - 8th Workshop on Approximate Computing (AxC23)
 - 1st International Workshop on V&V of Dependable Cyber-Physical Systems
- 3 Keynotes:
 - Lionel C. Briand (University of Ottawa, University of Luxembourg)
 - Evgenia Smirni (William and Mary)
 - João C. Esteves (Critical TechWorks)

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DSN 2023 - Program at a glance

- Research Track – 16 sessions, 47 papers
- Industry Track – 4 sessions, 11 papers
- Disrupt23 – 4 sessions, 17 papers
- Best of SELSE – 1 session, 3 papers
- Doctoral Forum – 2 sessions, 15 papers
- 4 Tutorials

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DSN 2024 Brisbane, Australia

Dan Dongseong Kim

IFIP WG10.4 Meeting, June 2023

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DSN 2024

- Pullman hotel, Brisbane, Queensland, Australia
- 24-27 June 2024
- General Chairs:
 - Dan Dongseong Kim (University of Queensland, Australia)
 - Ryan Ko (University of Queensland, Australia)
- PC Chairs:
 - Marc C. Dacier (KAUST, Saudi Arabia)
 - Julia Lawall (Inria-Paris, France)
- Web: <https://www.cyber.uq.edu.au/dsn2024>

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Brisbane, Queensland, Australia



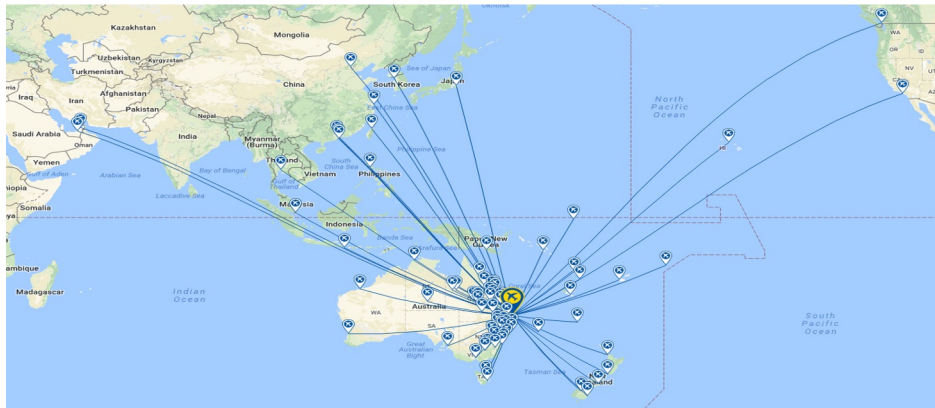
Temperature in June: 21° / 12° C
(High/low) (approx. 70° / 54° F)

Source: <https://www.4bc.com.au/brisbane-2032-how-the-olympics-could-change-the-city/>
<https://www.sunshinecoast-australia.com/australia-map.html>

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Accessible Brisbane



- Brisbane (BNE) Airport
 - an international airport of the third largest city in Australia.
 - services 31 airlines flying to 50 domestic and 29 international destinations
 - located about 15 km northeast from the Brisbane city centre.

Things to do in/around Brisbane

Lone Pine Koala Sanctuary



The World's First & Largest Koala Sanctuary

Moreton Island Day Trip



Glass House Mountains National Park



South bank, Brisbane



Whale Watching



Questions??

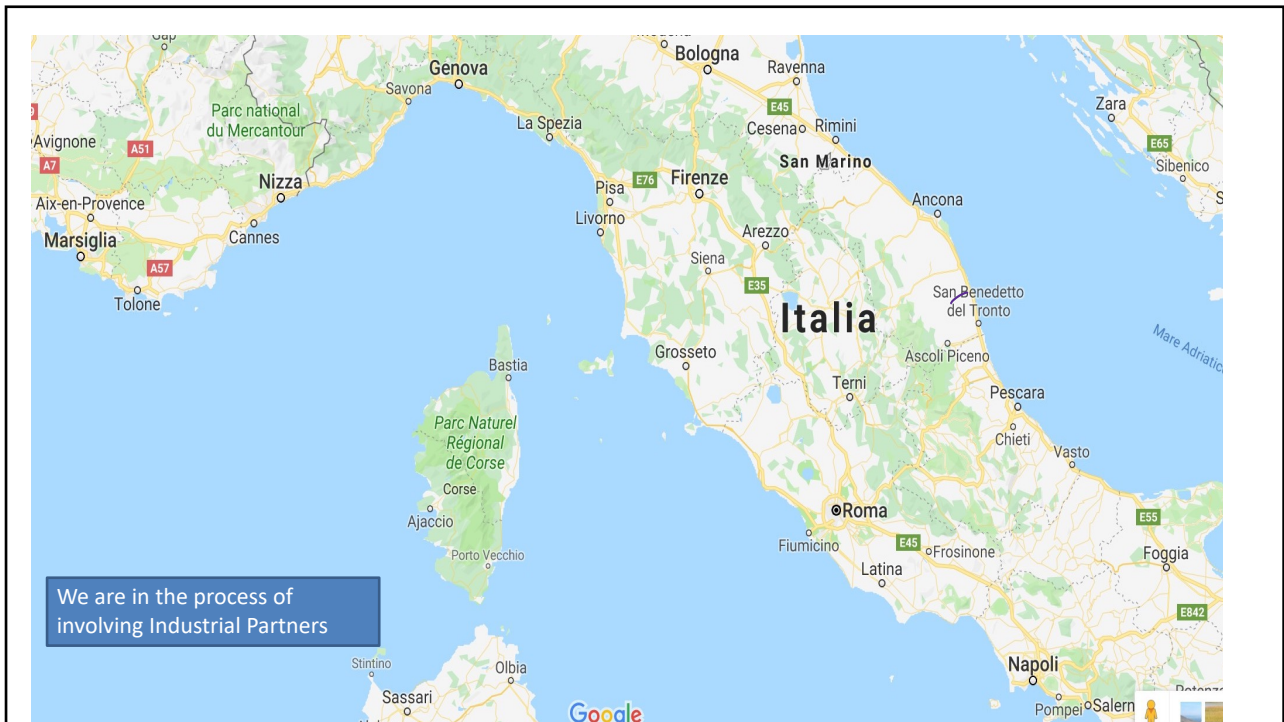
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DSN 2025 Naples, Italy

***Domenico Cotroneo,
Marcello Cinque,
Univ. Di Napoli Federico II***



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Tentative dates and travel

- 23-26 June 2025
- Many flight options to Naples International Airport through Rome, London, Paris, Munich, Amsterdam, and many others
- June is summer in Italy, with sunshine and warm weather
– bring the swimming suit!

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Conference Center

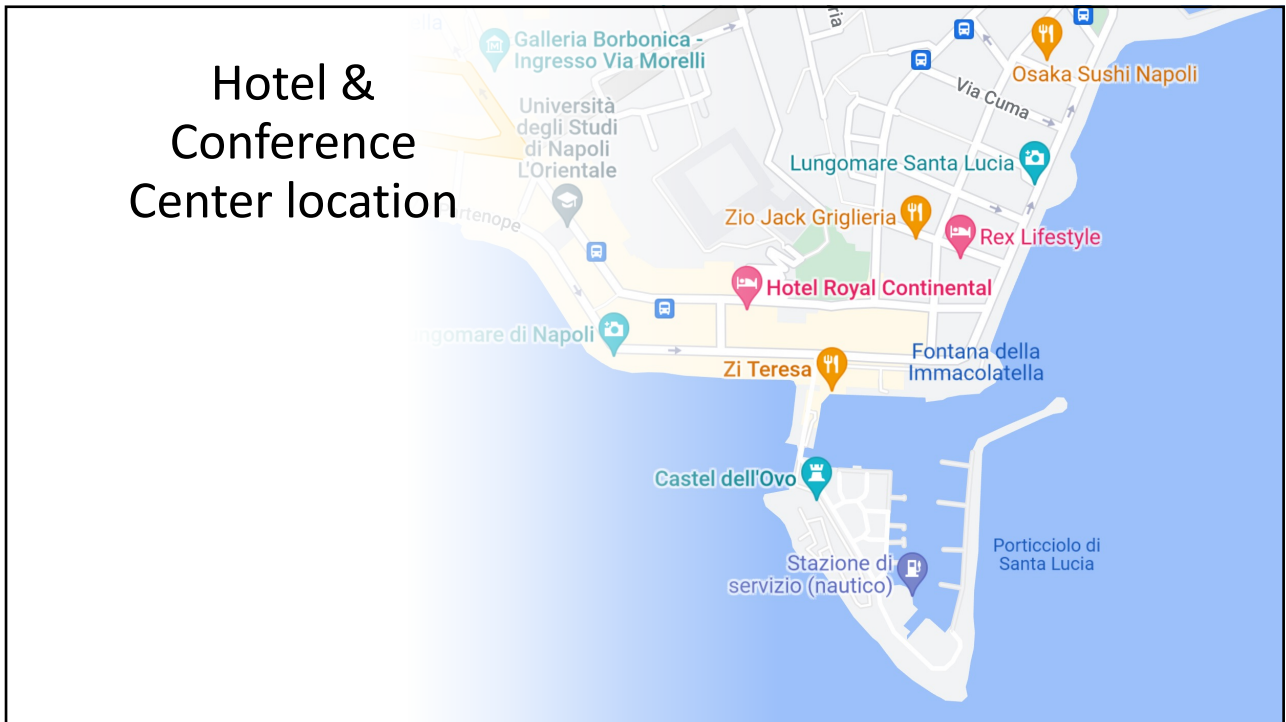


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Lunch & Breaks



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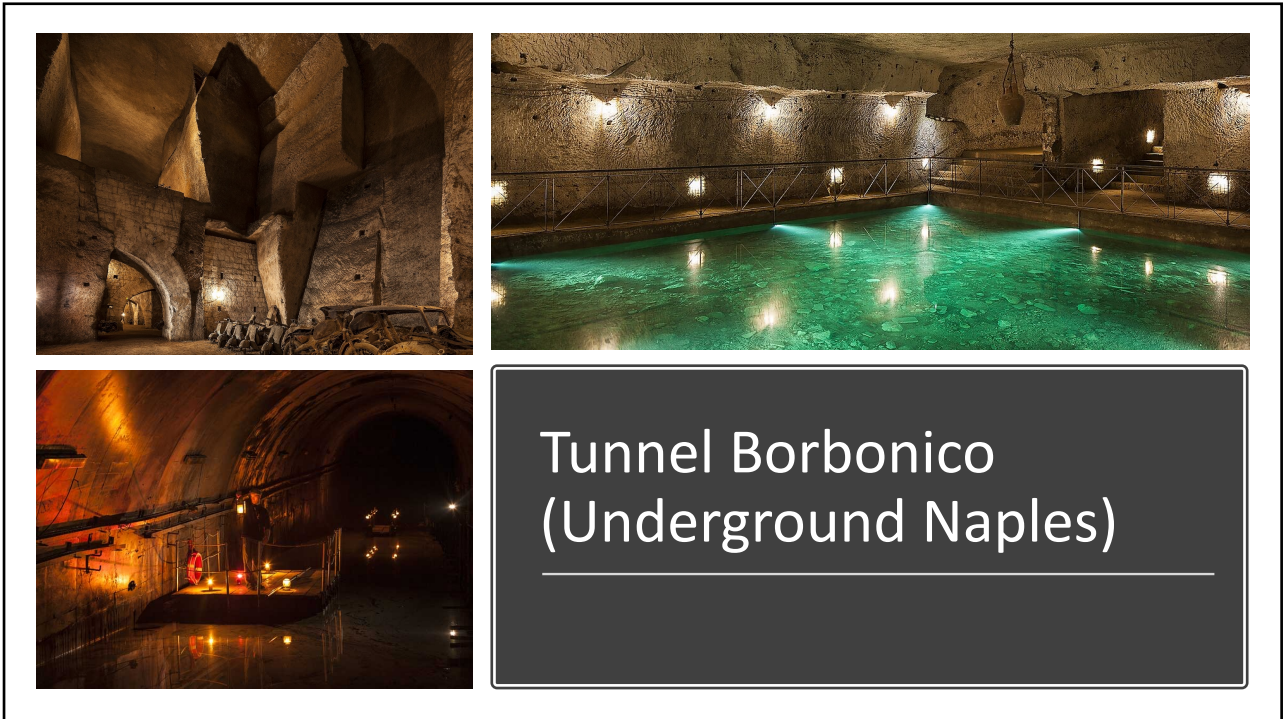


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- Some ideas about excursion/banquet

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Reggia di Caserta

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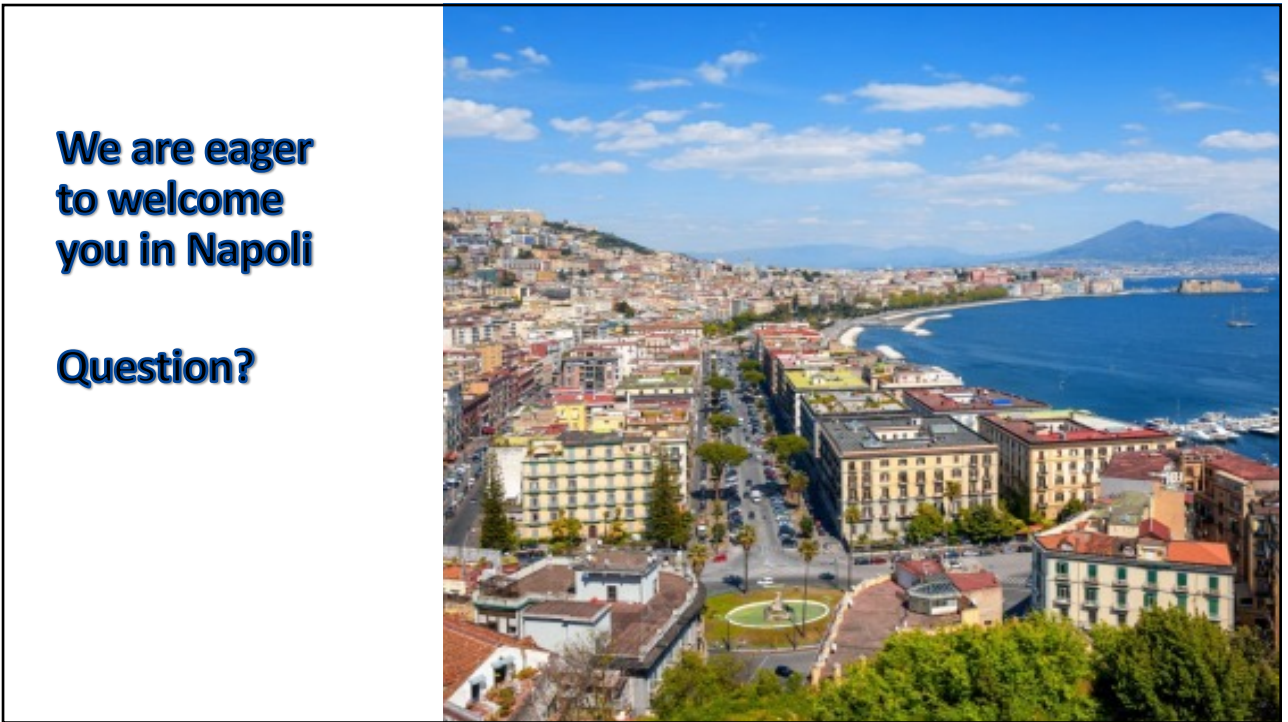


Pompei

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DSN 2026 Charlotte, NC, US

Bojan Cukic

IFIP WG10.4 Meeting, June 2023

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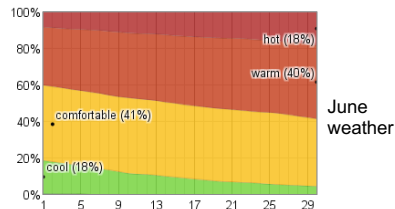
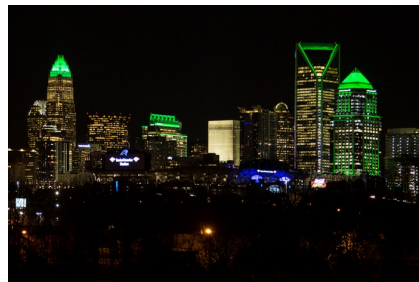
Facts about Charlotte, NC

Large (1M city, 2.6M region)

2nd banking center in US

University of North Carolina at Charlotte

Airport hub



June weather

The Charlotte Region's		FORTUNE 500	
35	Lowe's	155	Truist
36	Bank of America	300	Sonic Automotive
98	Nucor	405	CommScope Holding
105	Honeywell	468	Brighthouse Financial
145	Duke Energy		

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The University of North Carolina at Charlotte



- North Carolina’s urban research university
- 30,000+ students, 170 bachelor’s, master’s and doctoral programs

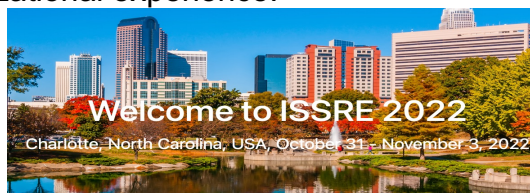


UNIVERSITY OF NORTH CAROLINA
CHARLOTTE
 COLLEGE OF COMPUTING AND INFORMATICS
 Office of the Dean

Bojan Cukic, Professor and Chair, <http://cs.uncc.edu>

DSN proposal - Background

- Organizational experience:



- Annual Charlotte Cyber Security Symposium

- <https://cybersecuritysymposium.uncc.edu/archives/archives/2020-symposium>

- 700+ attendees

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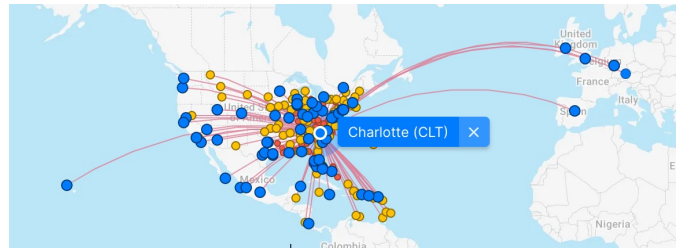
jan Cukic, <http://cci.uncc.edu>

Charlotte - Transportation

- [Charlotte Douglas Airport](#)
 - Sixth-busiest in the world
 - 543,944 takeoffs and landings
 - 50+ million passengers per year
- Light rail connects Uptown Charlotte with UNC Charlotte Campus.



Direct flights



Organization

- Local:
 - UNC Charlotte Marriott Hotel and Conference Center
 - Fully utilize the campus
 - 30+ nearby hotels
- Link to NC Research Triangle
 - Duke, UNC Chapel Hill, NC State
 - Cisco, NVIDIA, Apple, Red Hat, Microsoft, IBM, SAS, etc.
- Event: NASCAR Hall of Fame



Summary

- Charlotte is easy to reach, safe and pleasant city.
 - Moderately priced / low priced in international comparisons.
- Significant experience of the organizers, team to expand
- Develop organizational collaboration with NC Research Triangle (Duke, UNC, NC State, R&D tech)
- Support from UNC Charlotte
 - ~90 full-time faculty in the College of Computing, 20+ new position in trustworthy AI, NSF [Center for Cybersecurity Analytics and Automation](#) (Director: Sushil Jojodia), NSF ERC - PreMiEr.
 - Conference organization office support

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Questions??

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JCL Award 2023

Model-checking algorithms for continuous-time Markov chains

Christel Baier, Boudewijn Haverkort, Holger Hermanns, Joost-Pieter Katoen
 IEEE Transactions on Software Engineering, June 2003

- 8 nominations
- Chair: Zbigniew Kalbarczyk, Univ. of Illinois at Urbana-Champaign, US
- Committee:
 - Felicita Di Giandomenico, ISTI-CNR, Italy
 - Mootaz Elnozahy, KAUST, Saudi Arabia
 - Matti Hiltunen, AT&T Labs – Research, US
 - Michael Lyu, Chinese University of Hong Kong in Shatin, Hong Kong
 - Henrique Madeira, University of Coimbra, Portugal
 - Timothy Tsai, NVIDIA, US

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Related Conferences

- ISSRE 2023
 - Florence, Italy
 - October 9-12, 2023
- EDCC
 - No edition in 2023
 - KU Leuven, Belgium
 - April 8-11, 2024
 - [Deadline: October 6th](#)
- SAFECOMP 2023
 - Toulouse, France
 - Sep. 19-22, 2023
- PRDC 2023
 - Singapore
 - Oct. 24-27, 2023
- LADC 2023
 - La Paz, Bolivia
 - October 16-20, 2023

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WG Meetings: Locations & Organizers

- Winter 2024 – Georgia, US – two potential locations
 - Jekyll Island & Saint Simon's Island
 - Doug Blough, Georgia Tech, US
- Summer 2024 – Brisbane, Australia (together with DSN 2024)
 - Dan Dongseong Kim, Univ. of Queensland, Australia
- Winter 2025 – one option being explored – Brazil (**no proposal yet**)
 - Andrey Brito, UFCG, Brazil
 - Elias Duarte, UFPR, Brazil
 - Lelio Di Martino, Nokia Bell Labs, US
- Summer 2025 – Naples, Italy (together with DSN 2025)
 - Domenico Cotroneo, University of Naples Federico II, Italy

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WG Meetings: Technical Topics

- As usual, we are short on proposals for technical topics!
- Winter 2024
 - **Proposal:** Trustworthy AI-Enabled Cyber-Physical Systems
- Summer 2024
 - **Proposal:** Trustworthy AI Systems and Networks
- Volunteers are always welcome

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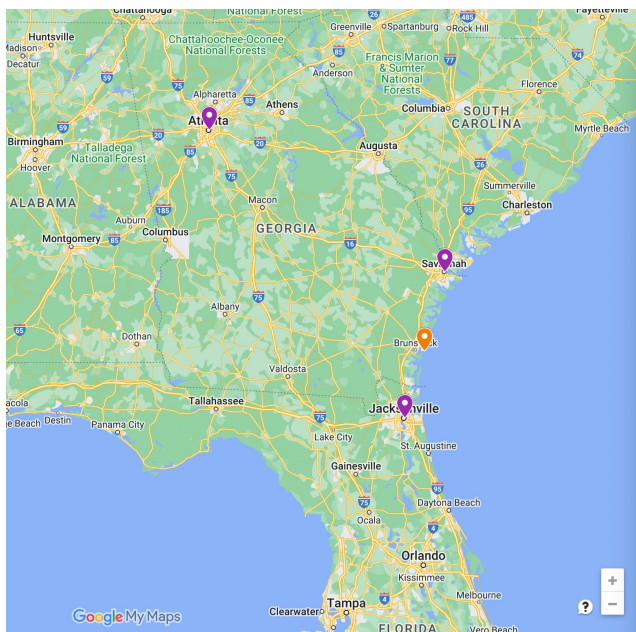
IFIP WG 10.4 Winter 2024 Meeting Saint Simon's Island, Georgia, USA

Doug Blough

IFIP WG10.4 Meeting, June 2023

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Location



Average high temperature
in February: 62°F (17°C)

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Meeting Info

- Dates: Feb. 2-5, 2024
- Reception on evening of Feb. 1
- Venue: King and Prince Resort, Saint Simon's Island
- Hotel room rates
 - \$199/night, non-ocean view
 - \$229/night, ocean view
- Travel
 - Fly to Savannah or Jacksonville, ~1 hour drive
 - Take commuter flight from Atlanta to Brunswick, 15 min. from hotel
- TBD: Excursion, registration fee

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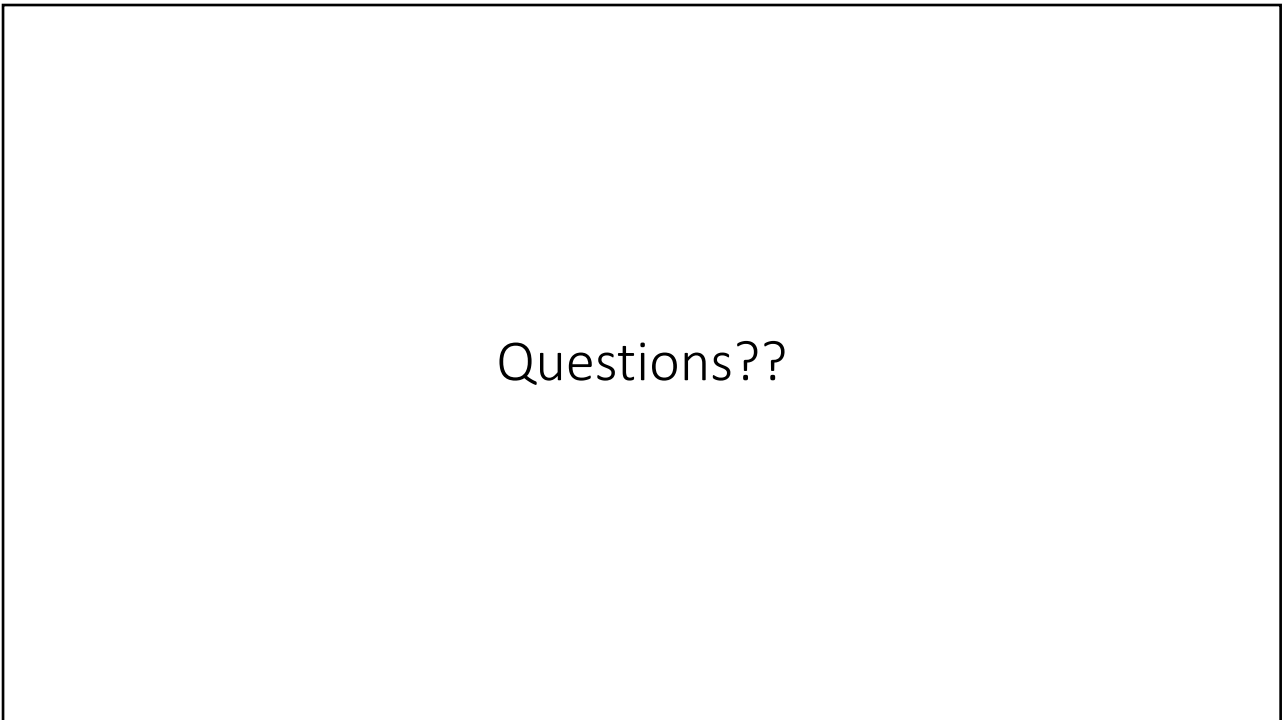
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IFIP WG 10.4 Winter'24 Workshop on Trustworthy AI-Enabled Cyber-Physical Systems

**Co-Chairs: Homa Alemzadeh (University of Virginia)
Saman Zonouz (Georgia Tech)**

Dates: February 2-5, 2024
Place: St. Simons Island, GA USA



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Motivation

- Ubiquitous deployment of CPS in **safety-critical domains**
 - Energy, transportation, manufacturing, health, ...
- Closed-loop **control systems with ML/AI components**
 - Tight integration of humans with cyber-physical components
 - ML/AI for perception, control, and decision making
 - Human control, supervision and collaboration
- Challenges in design, validation, and resilience
 - **Increasing complexity**
 - System and model state explosion
 - **Environment modeling**
 - Unpredictable environment, humans and physical dynamics
 - **Threats to safety**
 - Accidental and adversarial faults and human errors
 - Generalization of ML/AI
 - **Timing and resource constraints**
 - Embedded MCU-based controllers



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Vision and Objectives

- Identify the grand research challenges in establishing guarantees of reliability, security, safety, and robustness for CPS that incorporate increasingly complex machine learning models and artificial intelligence techniques
- Determine whether/how learning-enabled CPS can comply with requirements set by regulations and standards for safety-critical systems
- Identify research challenges for the community at the intersection of CPS, machine learning, and dependable and secure computing

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Tentative Agenda

- Duration: 1.5 days
 - Talks by external and internal speakers
 - Panel discussion
- Potential Topics of Interest:
 - Safe autonomy
 - Human-in-the-loop or Semi-autonomous CPS
 - Neuro-Symbolic and Physics-informed ML/AI
 - Verified Artificial Intelligence
 - Adversarial Machine Learning
 - Reliability of Hardware Accelerators
 - Transparency and Explainability for Safety

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Questions??

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IFIP WG 10.4 Summer 2024 Meeting Brisbane, Australia

Dan Dongseong Kim

IFIP WG10.4 Meeting, June 2023

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The 86th IFIP WG 10.4 Meeting and Workshop

- Venue: TBD, near Brisbane, Australia (after the DSN 2024 conference).
- Dates: 27-30 June 2024
- Tentative agenda of the meeting:
 - 27 June 2024 (Thu): DSN to the workshop venue; welcome reception at 19:00
 - 28 June 2024 (Fri): Workshop Day
 - 29 June 2024 (Sat): Workshop Day
 - 30 June 2024 (Sun): Research reports presentations (half day); meeting ends after lunch

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Technical Program

- Tentative Topic: Trustworthy AI Systems and Networks
- Organizers:
 - Dan Dongseong Kim (The University of Queensland, Australia)
 - TBD (one or two organizers will be added; volunteers?).
- Brief summary:
 - AI techniques have been applied to a variety domains and applications including image and audio processing, computer vision, cybersecurity, network managements, etc. over the last couple of years. However, there are emerging threats to Machine Learning and Deep Learning algorithms and systems and networks adopting AI techniques. This workshop will discuss the state-of-the art attacks and defenses in AI systems and networks.
- Tentative Plan:
 - 8 speakers will be invited. This can be more or less.
 - 3 or 4 speakers from Australia (Universities, research institutes, industry); other speakers from outside Australia
 - Some speakers from DSN conferences/workshops, IFIP WG 10.4 (members or frequent guests)
 - It would be great to have some speakers from Europe.

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Questions??

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Virtual Workshops 2023

- Spring 2023 – May 4th
 - Organized by Marcus Voelp, University of Luxemburg, Luxemburg
 - Two talks: Wolfgang Kunz (Rheinland-Pfälzische Technische Universität, Germany) & Thomas Mikolajick (TU Dresden, Germany)
 - > 25 attendees
- Fall 2023 – Oct.
 - Organized by Andrea Ceccarelli, University of Florence, Italy
- Call for Spring 2024 (April) will be sent out soon!

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Communications and Outreach

Andrea Ceccarelli

IFIP WG10.4 Meeting, June 2023

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Communications and Outreach

- Chair: Chuck Weinstock (SEI, USA)
- Members:
 - Rick Schlichting (U.S. Naval Academy, USA)
 - Homa Alemzadeh (University of Virginia, USA)
 - Andrea Ceccarelli (University of Florence, Italy)

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Communications and Outreach – Status

- Website:
 - Integrated with IEEE TC
 - Recently updated, moved to the cloud, WordPress based
- LinkedIn Group
 - Activated in Dec. 2022 - 33 members so far... short!
 - Not restricted to the WG
- IFIP News & Insights
 - Attempt to increase our participation!
- Other kinds of dissemination
 - Committee is open to ideas

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Questions??

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**Best regards
to friends
of IFIP WG 10.4
from Alain COSTES**

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**84th IFIP WG 10.4 Meeting
Arcos de Valdevez, PT**

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Members Only!

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