

## Emerging Technology Reliability Roundtable (ETR-RT24)



**May 21-22, 2024  
Altis Belem Hotel  
Lisbon, Portugal**

**ETR-RT**

# History and Background

- An IEEE ComSoc event organized by the Technical Committee on Communications Quality & Reliability (CQR)
- Established in 2014; the first ETR-RT was held in Tucson, AZ; this is the 8<sup>th</sup> year of the event (2020-2022 cancelled due to Covid)
- **ETR-RT Scope:** *Reliability*; added *Serviceability & Security* under the *Resilience* “umbrella”
- **ETR-RT24 Focus:** *AI Reliability and Responsibility, IoT Reliability,*
- For more information, please see <http://cqr.committees.comsoc.org/etr-rt-2024/>

# 2024 ETR-RT

## Participating Companies, Universities & Organizations

(In Alphabetical Order)

- 1) AT&T (USA)
- 2) Brighten (USA)
- 3) Czech Tech Univ. (Czech Republic)
- 4) EETT (Greece)
- 5) Google Research (USA)
- 6) Huawei (China)
- 7) INESC INOV-Lab (Portugal)
- 8) Local AI (Greece)
- 9) NOS Comunicações S.A. (Portugal)
- 10) Palindrome Technologies (USA)
- 11) RoadToAmherst (UK)
- 12) Telefónica (Spain)
- 13) Univ. of Delaware (USA)
- 14) Univ. of Illinois - UIUC (USA)
- 15) Univ. of Lisbon (Portugal)
- 16) Univ. of Oulu (Finland)

# 2024 ETR-RT Speakers - 1

(In Alphabetical Order)

- **John Burkey**, Founder, CEO/CTO Brighten AI, USA
- **Luis Correia**, Professor, University of Lisbon, Portugal
- **António Grilo**, Researcher, INESC INOV-Lab, Portugal
- **David Artuñedo Guillén**, Head of Future Networks, Telefónica, Spain
- **Chengqiang Huang**, Principal Engineer, Huawei, China
- **Pavel Kordík**, Associate Professor, Czech Technical Univ. in Prague, Czech Republic
- **Matti Latva-aho**, Director, 6G Flagship, University of Oulu, Finland
- **David Lu**, Vice President (Retired), Network Systems, AT&T, USA
- **Kathy Meier-Hellstern**, Principal Engineer and Director, Google Research, USA

**ETR-RT Technical Program Chair: Spilios Makris**, Director, Palindrome Technologies, USA

**ETR-RT General Chair: Chi-Ming Chen**, AT&T Labs (Retired), USA

**ET-RT Operations Chair: Luis Correia**, Professor, Univ. of Lisbon, Portugal

# 2024 ETR-RT Speakers - 2

(In Alphabetical Order)

- **Lily Prasad**, Assistant Vice President, AT&T Labs, USA
- **Luis Miguel Santo**, Head of Radio, NOS Comunicações S.A., Portugal
- **Peter Thermos**, President & CTO, Palindrome Technologies, USA
- **Kostas Vlahodimitropoulos**, COO, Local AI, Greece
- **Lynette Webb**, Co-founder, RoadToAmherst Consulting, UK
- **Jun Xu**, Associate Professor, University of Delaware, USA
- **Tianyin Xu**, Assistant Professor, Univ. of Illinois at Urbana-Champaign (UIUC), USA

**ETR-RT Technical Program Chair: Spilios Makris**, Director, Palindrome Technologies, USA

**ETR-RT General Chair: Chi-Ming Chen**, AT&T Labs (Retired), USA

**ET-RT24 Operations Chair: Luis Correia**, Professor, Univ. of Lisbon, Portugal

# 2024 ETR-RT Agenda

## Day 1

- 9:00 am – 9:10 am Welcome / Introduction by ETR-RT Technical Chair
- 9:10 am – 9:20 am Opening Remarks by David Lu
- 9:20 am – 11:00 am Responsible AI: Talks & Discussion  
➤ Lynette Webb, Kathy Meier-Hellstern, John Burkey
- 11:00 am – 11:15 am Coffee Break
- 11:15 am – 1:00 pm Responsible AI: Talks & Discussion  
➤ Kostas Vlahodimitropoulos, Antonio Grilo, Pavel Kordik
- 1:00 pm – 2:00 pm Lunch
- 2:00 pm – 3:45 pm 6G: Talks & Discussion  
➤ David Artuñedo Guillén, David Lu, Matti Latva-aho
- 3:45 pm – 4:00 pm Coffee Break
- 4:00 pm – 5:30 pm Resilience/Reliability: Talks and Q&A  
➤ Lily Prasad, Luis Miguel Santo, Chengqiang Huang

### EVENING EVENT

6:30 pm – 9:30 pm Tour & Dinner in the Historic Lisbon

# 2024 ETR-RT Agenda

## Day 2

- 9:00 am – 11:00 am    Resilience/Reliability: Talks and Q&A  
    ➤ David Lu, Jun Xu, Tianyin Xu, John Burkey
- 11:00 am – 11:15 am    Coffee Break
- 11:15 am – 11:45 am    Security/Reliability: Talks and Q&A  
    ➤ Peter Thermos
- 11:45 am – 12:00 pm    Hosting ETR-RT 2025 in Prague & Wrap-up
- 12:00 pm – 1:00 pm    Roundtable Discussion – Reliability/Resilience/Security:  
Identify potential directions for resolving identified issues and  
propose possible solutions (All)
- 1:00 pm – 2:00 pm    Lunch
- 2:00 pm – 3:00 pm    Roundtable Discussion – Responsible AI:  
Identify potential directions for resolving identified issues and  
propose possible solutions (All)

### **EVENING EVENT**

3:30 pm – 10:30 pm    Trip to Sintra and Cascais

# Day 1

## Topics – Session 1 (Morning)

(In Presentation Order )

- **David Lu**
  - Opening Remarks: Reliability/Resiliency/AI: “Food for Thought” Questions
- **Lynette Webb**
  - Update on AI Regulation
- **Kathy Meier-Hellstern**
  - Scaling Responsible AI for Generative Models
- **John Burkey**
  - Unleashing Potential: Scaling AI for Impact, Safety, and Global Change



# Day 1

## Topics – Session 2 (Morning)

(In Presentation Order )

- **Kostas Vlahodimitropoulos**
  - AI for Energy Sustainability-Promoting Green Energy Through AI
- **António Grilo**
  - AI for Communication Networks, Communication Networks for AI
- **Pavel Kordík**
  - Latest AI Developments Explained (OpenAI SORA, World Models, Q\*)

# Day 1

## Topics – Session 3 (Afternoon)

(In Presentation Order)

- **David Artuñedo Guillén**
  - AI-empowered Cloud Continuum for Mobile Networks
- **David Lu**
  - Disruptive Impact of 6G to Global Technology, Humanity, and Reliability
- **Matti Latva-aho**
  - 6G Metaverse and Resilience – Friends or Foes?

# Day 1

## Topics – Session 4 (Afternoon)

(In Presentation Order)

- **Lily Prasad**
  - Building a Climate-Change Resilient Network
- **Luis Miguel Santo**
  - Green Networks - Maximizing Performance while Minimizing Energy Consumption with AI/ML in 4G/5G Mobile Networks
- **Chengqiang Huang**
  - Design for Dependability and its Challenges

## Day 2

# Topics – Session 5 (Morning)

(In Presentation Order)

- **David Lu**
  - Risk & Opportunity of Large-scale Network Outages & Data Breach
- **Jun Xu**
  - Understanding Battery Safety and Durability Issues from a  
Physics-Informed Data-Driven Modeling
- **Tianyin Xu**
  - Kubernetes Reliability & an Avenue to Reliable Cloud Infrastructures
- **John Burkey**
  - Harmonizing Realms: Embracing Ethical Multi-Modal  
AI's Awakening

## Day 2

# Topics – Session 6 (Morning)

(In Presentation Order)

- **Peter Thermos**
  - Security & Reliability in Heterogeneous Networks
- **David Lu**
  - Hosting ETR-RT25 in Prague, Czech Republic
- **All Participants – A Roundtable Discussion**
  - Reliability/Serviceability/Security

# Day 2

## Topics – Session 7 (Afternoon)

(In Presentation Order)

- **All Participants – A Roundtable Discussion**
  - Responsible AI
- **Technical Chair**
  - Closing Remarks

# ETR-RT 2014 (Tucson, AZ)



# ETR-RT 2015 (Charleston, NC)





# ETR-RT 2016 (Stevenson, WA)



# ETR-RT 2017 (Bologna, Italy)



# ETR-RT 2018 (Austin, TX)



# ETR-RT 2019 (Masala, Finland)



# ETR-RT 2023 (Athens, Greece)



# ETR-RT 2024 (Lisbon, Portugal)

