

# **2021 IEEE International Workshop Technical Committee on Communications Quality and Reliability (CQR 2021)**

**Virtual Conference  
13 May 2021**



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# All times listed are in Coordinated Universal Time (UTC).

Thursday, May 13 14:00 - 14:10

## Welcome

**Pasi Hurri & Brett Brock**

Thursday, May 13 14:10 - 14:40

## Technical Paper Session 1

Chair: Vijay K Gurbani (Vail Systems, Inc. & Illinois Institute of Technology, USA)

***eMBB-URLLC Multiplexing: A Preference-Based Method of Ensuring eMBB Reliability and Improving Users' Satisfaction.....1***

Mengge Li, Jiarong Du and Liang Wang (Shaanxi Normal University, China)

***Millimeter-Wave Blockage Modeling and Mitigation.....7***

Mohammadreza Robaei and Robert Akl (University of North Texas, USA)

Thursday, May 13 14:45 - 15:50

## Session 1

Reachability: Evolving Access Technologies

**Chair: Robert Lesnewich, Perspecta Labs**

Thursday, May 13 16:00 - 16:30

## Morning Keynote

**Dan Sjöblom, Director General of the Swedish Post and Telecom Authority (PTS)**

Thursday, May 13 16:30 - 17:30

## Session 2

Equity: User Experience

**Chair: Vijay Gurbani, Illinois Institute of Technology/Vail Systems**

Thursday, May 13 17:50 - 18:25

## Technical Paper Session 2

Chair: Vijay K Gurbani (Vail Systems, Inc. & Illinois Institute of Technology, USA)

***Outage Probability Analysis to Address Interference Vulnerabilities in Digital Mobile Radio Networks.....13***

Hossein Ghannadrezai and Jean-Francois Bousquet (Dalhousie University, Canada); James Craig (Rimot Inc., Canada)

***Modulation-Based Physical Layer Security via Gray Code Hopping.....19***

Michael Cribbs, Ric Romero and Tri Ha (Naval Postgraduate School, USA)

Thursday, May 13 18:30 - 19:15

## Panel Discussion

Panelists: Nicol Turner-Lee, Bhushan Joshi, Ericsson, and Eric Burger, Georgetown University (former FCC CTO)

**Moderator: Kelly Krick**

Panel intro: Connecting solutions to policies

Thursday, May 13 19:30 - 20:30

### Session 3

Extensibility: Innovative Solutions

**Chair: Carol Davids, Illinois Institute of Technology**

Thursday, May 13 20:30 - 21:00

### Afternoon Keynote

**Edward "Smitty" Smith, II**

Thursday, May 13 21:15 - 22:20

### Technical Paper Session 3

Chair: Kazuhiko Kinoshita (Tokushima University, Japan)

***Proposal of Keyword-Based Information-Centric Delay-Tolerant Network.....25***

Ryo Nakamura (Fukuoka University, Japan); Noriaki Kamiyama (Ritsumeikan University, Japan)

***Advancing User Quality of Experience Using Viewport Archives in Viewport-Aware Tile-Based 360-Degree Video Streaming.....32***

Kiana Dziubinski and Masaki Bandai (Sophia University, Japan)

***Extension of ITU-T P.1204.3 Model to Tile-Based VR Streaming Services.....38***

Masanori Koike, Yuichiro Urata, Noritsugu Egi and Kazuhisa Yamagishi (NTT, Japan)

***Refining Calculation Algorithm for Packet Pacing Rate of BBR.....44***

Satoshi Utsumi (Fukushima University, Japan); Go Hasegawa (Tohoku University, Japan)

Thursday, May 13 22:20 - 22:30

Closing Remarks

**Pasi Hurri and Brett Brock**