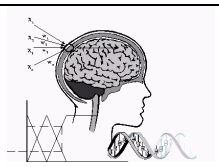
International
Innovation in Knowledge Based and Intelligent Engineering Systems



## INVITED SESSION SUMMARY

**Title of Session:**
Quantum-Enabled Intelligence for Transportation and Mobility Systems

**Name, Title and Affiliation of Chair:**

1. Zahid Khan, Senior Researcher & Faculty Member, Robotics and Internet-of-Things (RIOTU) Lab, Prince Sultan University, Saudi Arabia
2. Donghong Cai, Associate Professor, Jinan University, Guangzhou, China; Email: dhcai@jnu.edu.cn
3. Fang Fang, Assistant Professor, Western University, Canada, Email: fang.fang@uwo.ca

**Details of Session (including aim and scope):**

### Aim & Scope:

Transportation is becoming highly connected and data-driven, while quantum computing is moving from theory to early practical experiments. This invited session brings these two directions together. We invite papers that investigate how quantum computing and quantum-inspired methods can improve the way we model, optimize, and secure intelligent transportation and smart mobility. The session is open to both methodological contributions (new models/algorithms) and application-driven studies (clear mobility use cases), especially where authors provide transparent assumptions, strong baselines, and reproducible evaluation. We also welcome contributions on quantum-safe security and reliable communication for mobility data, including practical perspectives on post-quantum cryptography, crypto-agility, and (where relevant) QKD-inspired security concepts.

### Typical topics:

- Hybrid quantum–classical approaches for mobility optimization (routing, dispatching, scheduling, charging, traffic signal control)
- Quantum machine learning for prediction, detection, and decision support in mobility operations
- Quantum-inspired heuristics for large transportation graphs and network-level problems
- Quantum-safe security for transportation platforms (post-quantum cryptography, crypto-agility, key management, secure data exchange)

- Reliability and trust in quantum-assisted decision making (robustness, uncertainty, verification/validation, safety aspects)
- Benchmarks, datasets, simulators, and reproducible experimental workflows for quantum mobility research

**Positioning line:**

A meeting point for quantum computing, AI, and transportation engineering—focused on measurable gains and reproducible results.

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):**

**Website URL of Call for Papers (if any):**

https://ric.psu.edu.sa/riotu/conferences.html

**Email & Contact Details:**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