Workshop Proposal

- **Title:**
  
  IEEE 2023 ITSC Workshop on Mobility 5.0

- **Modality:**

  Half-day

- **Scope (no longer than 4 pages), including the following sections:**

  New mobility paradigm, Mobility 5.0, has been made possible by the fast development of intelligent transportation system (ITS) technologies, such as social sensing and computing, big data and big models, connected and automated vehicles (CAVs), digital twin, and parallel intelligence.

  Mobility 5.0, an emerging arena of transportation research and applications, is based on Cyber-Physical-Social Systems (CPSS) where people, devices, infrastructure, and services are connected and interact with each other simultaneously in three spaces, known as cyber, physical, and social spaces. Mobility 5.0 aims to shape the transportation system, including both passenger and freight transport towards a ‘6S’ paradigm, that is a paradigm embodying Safety, Security, Sustainability, Sensitivity, Service and Smartness using CPSS concepts and techniques.

  The goal of this workshop is to encourage researchers, innovators, and practitioners from academic, industry, and public sectors to exchange ideas, discuss solutions, and share experiences on how CPSS can be adopted to pursue and achieve Mobility 5.0 and a better society that embodies ‘6S’. The topics include but are not limited to:
  - Mobility as a service
  - Shared mobility
  - Passenger transportation systems
  - Freight transportation systems
  - Software defined transportation systems
  - Travel and freight demand modeling
  - Blockchain and Decentralized Autonomous Organizations and Operations (DAOs) for smart mobility
  - Application of digital twin and parallel intelligence to traffic management
  - Transportation analysis using big data and social signals
  - Crowdsourcing for passenger and freight information collection and analysis
  - Dynamic guidance of multi-mode travel behavior
- **Organizers (names, affiliations, emails, and short bio):**
  Lingxi Li (Indiana University-Purdue University Indianapolis (IUPUI), USA, LL7@iupui.edu)
  David Cebon, (University of Cambridge, dc29@cam.ac.uk)

- **Intended audience and expected attendance of the special session:**
  Researchers, innovators and practitioners in the field of CPSS and ITS

- **Materials and equipment needed for the workshop:**
  N/A

- **Contact details of the proposers (email, postal address, etc):**

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