Workshop Proposal

- **Title:** Cooperative and Automated Driving

- **Contents**

**Motivation and objectives**
"Cooperative and Automated Driving" is a popular and much discussed topic in the ITS domain. The Workshop & Industry Panel on this subject received high attention and interest at previous IEEE ITSS flagship conferences. Therefore, we plan to maintain this tradition and organize it for the 11th time, in conjunction with the IEEE Intelligent Transportation Systems Conference (ITSC 2023) on September 24-28, 2023 in Bilbao, Bizkaia, Spain.

Recent developments in telecommunications, sensor, information processing and control technologies have enabled substantial progress in the domain of ITS. C-ITS (Cooperative Intelligent Transport Systems) is in a very early stage of deployment, as it is technologically achievable, but the deployment requires cooperation of multiple stakeholders. Automated driving is on the horizon, and will still need substantial and longer-term development and testing to make even the high automation levels a reality in complex situations, such as in urban environments, and in a transit period of only partial market penetration. Cooperative and automated transport are certainly complementary. They are expected to bring substantial benefits in terms of safety, comfort and (traffic and fuel) efficiency. Many challenges exist in this important domain.

The Workshop aims to further discuss cooperative and autonomous technologies for cooperative and automated driving. Similar to the past, the workshop also features an Industry Panel with experts from e.g. OEMs, Suppliers, Telecom and ICT, which will again foster the interactive exchange of academia and industry.

**Relevance to the ITS community**
Cooperative Intelligent Transport Systems as a precursor and enabler for high-level automated driving is currently one of the core topics in the ITS Community. The workshop intends to bring together high-level participants from industry in this domain. An up-to-date overview of the R&D on this topic is highly relevant for ITSC participants. The workshop organizer, chair and moderator are from industry, and it is expected that at least 50% of the speakers will be from industry. Therefore, the workshop will be very beneficial for ITSS and ITSC.
Topics of interest
The technical areas to be discussed include, but are not limited to the following:

<table>
<thead>
<tr>
<th>- Connected and Automated Vehicles</th>
<th>- 5G/6G research and testing</th>
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<td>- V2X communication technologies</td>
<td>- C-ITS Architecture</td>
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<td>- C-ITS deployment</td>
<td>- Impacts evaluation of cooperative and automated transport</td>
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<td>- Standardization</td>
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Dedicated website
We plan to use the ITSC 2023 website to publish the workshop information. No other website is planned.

Format:
One full day.

- **Organizers (names, affiliations, emails, and short bio):**
  
  Meng Lu, SWARCO PEEK, The Netherlands  
  Email: meng.lu @wklm.eu  
  Short bio (version 2022):  
  Dr. Meng Lu - Strategic Innovation Manager, SWARCO PEEK, The Netherlands. Member, Board of Governors of IEEE Intelligent Transportation Systems Society; Senior Editor of IEEE Transactions on Intelligent Transportation Systems; Member, Editorial Board of IET (Institution of Engineering and Technology) ITS. Previously, Program Manager at the Dutch Institute of Advanced Logistics, The Netherlands, and Visiting Professor at the National Laboratory for Automotive Safety and Energy, Tsinghua University, P.R. China. Active involvement in European research and innovation projects since 2005 in the domains of (C-)ITS, logistics, and (renewable) energy assessment. Involved for The Netherlands in ISO/TC 204 and CEN since 2016. Contribution to (pre-)standardization activities of IEEE, TISA and 5G PPP. PhD at LTH (Faculty of Engineering), Lund University, Sweden; Master's title and degree of Engineering in The Netherlands and P.R. China.

- **Potential contributors to the workshop (names, affiliations, contact information, abstracts (if available):**
  
  Chair/Moderator:  
  - Meng Lu, SWARCO PEEK, The Netherlands  
  - Tim Leinmüller, Denso, Germany

  Invited speakers:  
  Names: to be confirmed.  
  We have excellent cooperation with these organizations. And they have contributed to our previous Workshops in the past years (10 times).

- **Intended audience and expected attendance for the workshop (including a clear statement how interaction between presenters and attendance will be fostered):**
  
  The target and expected audience for the workshop is mainly from industry and academia, completed with experts (especially from industry) and Young Professionals. The workshop is expected to be very interactive, and will encourage technical debate. Participants will
have an excellent opportunity to discuss with and to challenge distinguished speakers and panelists.

- **Invited speakers (if any):**

Speakers are from Continental, Bosch, Denso, Toyota, Volkswagen, Audi, Ford, Intel, Ericsson, Huawei, Qualcomm, NTT Docomo, JRC, VTT, TNO, CERTH, TU Dresden, and/or TU Delft. We also plan to slot accepted papers in this one-day workshop, especially from Young Professionals, in order to bring in some fresh blood.

- **Materials and equipment needed for the workshop:**

The one-day workshop will be in person. 1 screen, 1 projector, 2 microphones, wifi code, and a good internet connection are needed.

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

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