Preface: Workshop "NGC of AV: Navigation, Guidance and Control of Autonomous Vehicles"

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Autonomous vehicles (AVs) promise to enhance safety, reduce emissions, and improve transportation system efficiency and reliability. The growing demand for AVs is shaping the future of the automotive industry by transforming the in-vehicle experience and paving the way for large-scale implementation of autonomous driving. The positioning, guidance, and control technologies for future Avs are rapidly advancing. They require on onboard intelligence relying on a suite of sensors and systems such as global navigation satellite systems (GNSS) receivers, mmWave wireless technology (5G/6G), vehicle motion sensors and remote sensing systems including cameras, light detection and ranging (LiDAR) and radar. AVs that can sense the environment and navigating without human input require robust advanced positioning, navigation, and guidance for efficient operation in all environments and weather conditions. The availability of the above sensors and systems in future AVs provides an attractive opportunity to advance the robustness and safety of autonomous driving. This workshop will seek original contributions covering advanced topics related to the state of the art and future trends of positioning and mapping as well as control and guidance technologies for autonomous vehicles and future self-driving.

The workshop will be part of the ISPRS Geospatial Week 2023 and is hosted the Arab Academy for Science, Technology, and Maritime Transport (AASTMT) in parallel with several related geospatial workshops.

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