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TNO-DSS uses knowledge about system architectures, advanced control systems, systems/software engineering and AI for civil and defense projects. The ultimate automation is found in autonomous systems, where our experience with control and AI methods is thoroughly useful. Finally we contribute to a diverse portfolio of research programs, including robot teleoperation, autonomous swarms, IED detection and control of quantum computers. As a rule our results are not limited to solid reports and recommendations, but include demonstrations, prototypes or fully developed products. Our work. Platform signatures. Solar and infrastructure. Outdoor test facility for BIPV(T). Solar-powered cars. Autonomous vehicle (AV) is regarded as the ultimate solution to future automotive engineering; however, safety still remains the key challenge for the development and commercialization of the AVs. The autonomous technology employed in transportation systems brings opportunities to mitigate or even solve transportation-related economic and environmental issues, and therefore, the autonomous vehicle has been actively studied recently [6]. AV techniques are capable of changing the traditional means of transportation by (i) improving road safety, where human errors account for 94% of the total accidents [7], (ii) enhancing the. The former requires advanced highway infrastructure systems to guide the vehicles, whereas the latter one does not. View program details for SPIE Defense + Commercial Sensing conference on Autonomous Systems: Sensors, Processing and Security for Vehicles & Infrastructure 2020. Session 2: Applications for Autonomous Systems in National Security and Emergency Response. Tuesday 28 April 2020 10:30 AM - 12:40 PM Location: Conv. Ctr. In autonomous vehicle systems whether ground or aerial vehicles and infrastructure-level units communicate among each other continually to ensure safe and efficient autonomous operations. However, different attack scenarios might arise in such environments when a device in the network cannot physically pinpoint the actual transmitter of a certain message. For example, a compromised or a malicious vehicle could send a message with a fabricated location to appear as if it is in the location of another legitimate vehicle, or fabricate multiple messages with fake identities to alter the behavi...