

Special Issue

High Definition Maps for Intelligent Transportation Applications

Message from the Guest Editors

Autonomous driving vehicles, or self-driving cars, have seen enormous progress in recent years. With advances in computing and sensor technologies, onboard systems can deal with a large amount of data and achieve real-time processes continuously and accurately. These systems also handle several specialized functional schemes such as positioning, mapping, perception, motion planning, and control. These key components are essential for the vehicle to achieve fully autonomous operation. In addition, high-definition (HD) maps provide detailed map information for navigating autonomous vehicles to ensure navigation safety to protect human lives. The map itself serves as an additional “pseudo sensor” of the car and significantly enhances the performance and accuracy of perception and positioning algorithms, which are necessary for the vehicle to drive autonomously. This Special Issue will cover relevant topics and trends in high-definition (HD) maps for intelligent transportation applications and also introduce the new tendencies of this new paradigm in geospatial science.

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Message from the Editor-in-Chief

Geomatics is the modern adaptation of traditional surveying, mapping, and their related skills. In geomatics, Information and Communication Technology (ICT) and digitization play a focal role. Geomatics is the discipline that integrates the tasks of gathering, storing, processing, modeling, analyzing, and delivering georeferenced information. Geomatics produces, validates, and represents georeferenced data that helps to provide services that meet the needs of society.

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