# Computational Intelligence in Vehicle and Transportation Systems

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## Scope and Goals

Recently, the study of computational intelligence has received a huge success, which promoted the rapid development of intelligent vehicle and transportation system. Computational intelligence such as machine learning, big data engineering, cloud computing and computer vision has become practical to build intelligent transportation systems. For example, computational intelligence currently used in vehicle technologies such as environmental awareness, identification, behavioral decision-making systems and so on. Specifically, including lane identification, vehicle pedestrian recognition, traffic sign detection, inter-vehicular networks, anomaly and intrusion detection, collision warning and avoidance, power management and navigation, driver alertness monitoring etc.

This special session aims to present and highlight the latest developments and emerging research in computational intelligence technologies with applications to developing all aspects of intelligent vehicle systems. Specific topics for the special session include, but are not limited to:

## Topics of Interest

Computer vision for vehicle system

Big data engineering for vehicle system

Traffic flow prediction

Vehicles energy management

Traffic lane/sign detection and recognition

Cloud aided driving control

Intelligent wireless communication in vehicles

Automated vehicles with/without pilot/driver

Advanced driver assistance systems

Vehicle dynamics and control

Advanced sensing and recognition

Navigation and localization systems

Artificial intelligence technologies in intelligent vehicles

Vehicle on-board diagnostics

Inter-vehicular networks

## Submitted papers:

Paper 1: An Adaptive Iteratively Weighted Regularized Algorithm for Compressive Recovery in Vehicular Systems
Authors: Yunyi Li

Paper 2: Computer Vision based Land Detection Algorithms for Unmanned Vehicular Systems
Authors: Jian Xiong

Paper 3: Deep Learning based Navigation Systems in Smart Cities
Authors: Hao Huang

Paper 4: Adaptive filtering algorithms for identifying Complicate Vehicular Systems
Authors: Jie Wang

Paper 5: Deep Reinforcement Learning based Vehicles Energy Management Strategy
Authors: Miao Liu