



## Intelligent Vehicle Control Systems

Guest Editor:

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### Message from the Guest Editor

Millions of people suffer injuries in car crashes every year, about 94% of which are caused by careless driving. To solve this problem, adaptive cruise control (ACC) is available to advance driver-assistance systems (DASs) to enhance driving safety and riding comfort through adjusting driving velocity to maintain a safe distance from vehicles ahead. Considering the safety and real-time application of ACC, bionic optimizations are proposed to resolve challenges to enhancing safety and driving comfort. Firstly, according to the dynamics model, the fitness function is defined concerning driving safety, including the distance between intelligent vehicles and obstacles, and distance between intelligent vehicles and targets, and riding comfort. Secondly, the optimal driving parameters that minimize the fitness function can be found using bionic optimization algorithms. Finally, simulation results show that the optimization method and its fitness function can further enhance ACC performance and reliability in real time.

This Special Issue is devoted to the latest developments in bionic optimizations and controls for intelligent vehicles.

Prof. Dr. Chung-Neng Huang

*Guest Editor*





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