

# Preface

World has already seen anytime, anywhere connectivity for communications because of advancement in wireless technologies and use of lightweight handheld devices. Furthermore, embedded systems, sensors and wireless networks provide the opportunities to bridge the physical components (vehicles, road) with cyber world (networking, computations) forming vehicular cyber-physical systems. Vehicular cyber-physical system needs real-time feedback through wireless communication for informing the drivers or controlling vehicles' functionality for both safety and infotainment applications. This book presents analysis and evaluation of adaptive connectivity and security in spectrum agile networks for vehicular cyber-physical systems.

This book is organized as follows:

- Chapter 1 presents overview of vehicular networks, vehicular cyber physical systems, and spectrum agile communications;
- Chapter 2 presents adaptive connectivity in vehicular ad hoc network for vehicular cyber-physical systems;
- Chapter 3 presents adaptive connectivity in fading channels for vehicular cyber-physical systems;
- Chapter 4 presents trust-based security in vehicular cyber-physical systems to detect malicious drivers/vehicles and discard the messages received from those drivers/vehicles; and
- Chapter 5 presents distributed computing for vehicular cyber-physical system using public cloud/Internet and private cluster of vehicles formed on the fly.

Washington, DC, USA  
Statesboro, GA, USA

Danda B. Rawat  
Chandra Bajracharya

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Rawat, D.B.; Bajracharya, C.  
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