

CALL FOR BOOK CHAPTERS

“COGNITIVE VEHICULAR NETWORKS”

To be published by CRC Press Taylor & Francis Group
Chapter proposal/abstract submission due: October 31, 2014
Full chapter submission due: February 15, 2015

AIMS

The recent developments made in the field of vehicular networks have enabled a new class of on-board entertainment and safety systems, by exploiting opportunistic spectrum usage by means of cognitive radio (CR) technology. As a result, the Cognitive Vehicular Networks (CVNs) provide additional spectrum opportunities outside the well-known 5.9 GHz band of IEEE 802.11p standard.

The book focuses on a new class of mobile ad hoc networks, which exploits cognitive aspects applied to vehicular environments *i.e.*, Cognitive Vehicular Networks (CVNs). The book aims to provide a comprehensive guide to selected topics, both ongoing and emerging, in the area of CVNs, by using a treatment approach suitable for pedagogical purposes.

Contributions are expected coming from worldwide well-known and high profile researchers in their respective specialties. The book will be written to target both the student and the research community. It faces to post-graduate level students and professional researchers, working in the ICT domain and having extensive knowledge about many of the topics in the book, as well as people from industry, working on CR technologies applied to vehicular networks.

TOPICS OF INTERESTS

The book provides significant technical and practical insights in different aspects, starting from a basic background on CR, the inter-related technologies and application to vehicular networks, the technical challenges, implementation and future trends.

Selected topics that are covered in this book are related to: cognitive radio techniques, spectrum sensing approaches applied to vehicular networks, spectrum allocation techniques in CVNs, cognitive routing techniques in CVNs, data dissemination in CVNs, architectures for CVNs, as well as novel trends and challenges in CVNs.

TABLE OF CONTENTS

The following list collects the main (but not limited to) topics to be investigated in the book:

- Part I: Cognitive Radio
 - Introduction to Cognitive Radio Technologies
 - Spectrum sensing models in ad hoc networks
 - Security aspects in cognitive radio networks
 - Cooperative spectrum sensing

- Part II: Cognitive Radio for Vehicular Networks
 - Introduction to Cognitive Vehicular Networks (CVNs)
 - Spectrum allocation techniques in CVNs
 - Data dissemination in CVNs
 - Cognitive routing in CVNs
 - Mobility aspects in CVNs
 - Peer-to-peer architectures for CVNs

- Part III: Applications for CVNs
 - Social-based applications for CVNs
 - Infotainment in CVNs
 - Crowdsourcing applications for CVNs
 - Localization-based services in CVNs

KEYWORDS

Cognitive radio; vehicular ad hoc networks; intelligent transportation systems; spectrum sensing; spectral awareness

CHAPTER SUBMISSION

Chapter authors are invited to submit chapter proposals/abstracts (2 to 3 pages) to amvegni AT uniroma3.it. No specific page format is required for proposals/abstracts submission. Full chapters are required to follow CRC Taylor & Francis Group's style (LaTeX and MS Word). Each chapter is expected to spend 25 to 30 pages.

IMPORTANT DATES

Chapter proposal/abstract submission deadline: October 31, 2014

Proposal/abstract acceptance notification: November 15, 2014

Full chapter submission deadline: February 15, 2015

Chapter revisions: March 15, 2015

Revised chapter submission deadline: April 1, 2015

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