



Cognitive Radio Networks and Blockchain

THEMATIC AREA: Blockchain

WEBINAR TITLE: Cognitive Radio Networks and Blockchain

DATE: Fri 06 November 2020

TIME: 12:00 – 13:00 GMT

DURATION: 1 Hour

VENUE: Online

CONTACT: blockchain-secretary@ieee-ukandireland.org

> WEBINAR HIGHLIGHTS

In this webinar, we discuss the need of cognitive radio networks (CRN) and dynamic spectrum management paradigm. CRNs are proposed and designed to meet the future wireless radio spectrum need of communications networks. With CRNs, the under utilized wireless radio spectrum can be efficiently utilized using spectrum related functionalities. This dynamic spectrum management has been done using databases, however, with the blockchain technology, new opportunities can be realized in the management of this wireless radio spectrum. Blockchain can in fact help in achieving trust among different stake holders involved within the complete life cycle of dynamic spectrum management. Moreover, the trading of this wireless radio spectrum can be performed efficiently using blockchain. This webinar will discuss all these aspects.

> WHO SHOULD ATTEND

This webinar is intended for everyone, from students already studying Cognitive Radio Networks and Blockchain to practitioners who work in the field, to people who consume or use services of mobile communication networks on a daily basis.

> WEBINAR OBJECTIVES

- Discuss the need of dynamic spectrum management and CRNs
- Present spectrum related functionalities such as spectrum sensing, spectrum sharing, spectrum mobility, and spectrum decision
- Discuss spectrum management stake holders and their roles
- Discuss blockchain and its applications in cognitive radio networks
- Present challenges and future research directions in blockchain enabled CRNs

> THE SPEAKER

Mubashir Husain Rehmani (M'14-SM'15) received the B.Eng. degree in computer systems engineering from Mehran University of Engineering and Technology, Jamshoro, Pakistan, in 2004, the M.S. degree from the University of Paris XI, Paris, France, in 2008, and the Ph.D. degree from the University Pierre and Marie Curie, Paris, in 2011. He is currently working as Assistant Lecturer in the Department of Computer Science, Cork Institute of Technology, Ireland.

He is serving as an Area Editor of the *IEEE Communications Surveys and Tutorials* and as Column Editor for Book Reviews in *IEEE Communications Magazine*. He is an Editor of the *IEEE Transactions on Green Communications and Networking*. He is the recipient of several Best Paper Awards.



> WEBINAR CONTENTS

1. Cognitive Radio Networks
2. Radio Environment Map
3. Spectrum Management
4. Blockchain and CRNs
5. Spectrum Auction
6. Spectrum Trading

> ACCREDITATION

This webinar is accredited by IEEE UK and Ireland Section.

> TRAINING WEBINAR STYLE

This training Webinar is practical, participatory and personal. We focus on real issues and help participants to benefit from the techniques covered, rather than just discuss them. A variety of learning methods are employed to stimulate interest and meet the differing needs of participants— including illustrated presentations, discussions, and case studies.

> REGISTRATION

Please fill in the form at <https://www.eventbrite.co.uk/e/cognitive-radio-networks-and-blockchain-tickets-125607985867> to book your seat for the webinar



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