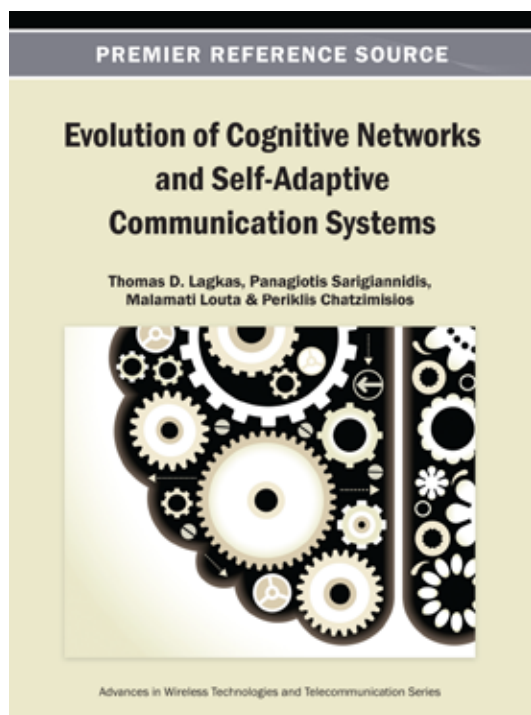


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## Evolution of Cognitive Networks and Self-Adaptive Communication Systems



Part of the Advances in Wireless Technologies and Telecommunication (AWTT) Book Series

Thomas D. Lagkas (University of Western Macedonia, Greece), Panagiotis Sarigiannidis (University of Western Macedonia, Greece), Malamati Louta (University of Western Macedonia, Greece), and Periklis Chatzimisios (Alexander TEI of Thessaloniki, Greece)

Cognitive networks can be crucial for the evolution of future communication systems; however, current trends have indicated major movement in other relevant fields towards the integration of different techniques for the realization of self-aware and self-adaptive communication systems.

**Evolution of Cognitive Networks and Self-Adaptive Communication Systems** overviews innovative technologies combined for the formation of self-aware, self-adaptive, and self-organizing networks. By aiming to inform the research community and the related industry of solutions for cognitive networks, this book is essential for researchers, instructors, and professionals interested in clarifying the latest trends resulting in a unified realization for cognitive networking and communication systems.

### Topics Covered:

- Cognitive Radio
- Cooperative Networks
- Energy Efficiency
- Mobility Management in Cognitive Networks
- Self-Adaptive Networks
- Self-Managing Networks
- Spectrum Management Issues

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**Thomas Lagkas** received the B.S. degree (with honors) in computer science from the Department of Informatics, Aristotle University, Thessaloniki, Greece. He received the PhD degree on "Wireless Communication Networks" from the same department, in 2006. During his PhD studies, he was awarded a PhD candidates' scholarship by the Research Committee of the Aristotle University. He has been an adjunct Lecturer at the Department of Informatics and Telecommunications Engineering, University of Western Macedonia, Greece, since 2007. He has been a Laboratory Associate at the Technological Educational Institute of Thessaloniki, since 2004, and a Scientific Associate, since 2008. He has been awarded a postdoctoral research scholarship by the State Scholarship Foundation. His interests are in the areas of wireless communication networks, medium access control, QoS provision and mobile multimedia communications with relevant publications at a number of widely recognized international scientific journals and conferences.

## Section 1: Physical Layer Issues in Cognitive Networks

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