

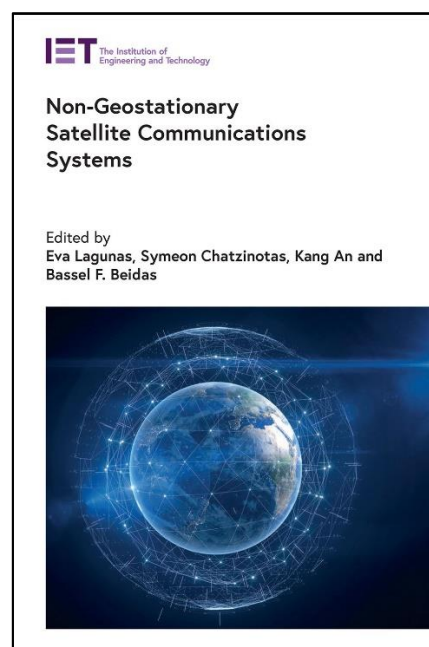
Non-Geostationary Satellite Communications Systems

Edited by: Eva Lagunas, Symeon Chatzinotas, Kang An and Bassel F. Beidas

Recent technological advances have made possible the creation of a chain of non-geostationary satellite orbit (NGSO) communications systems. Such systems offer the advantages of ubiquity, relatively low costs, and upgradable infrastructure that enables the use of innovative on-board technologies. This evolution opens up a plethora of opportunities for massive self-organized, reconfigurable and resilient NGSO satellite constellations, which can operate as a global network.

Ambitious low-orbit constellation types are currently being developed, motivated by advanced communication technologies and cheaper launch costs. These emerging architectures requires accurate system orchestration involving different research domains including wireless communications, spectrum management, dynamic antenna and tracking systems, inter-satellite links and routing strategies.

This edited book presents a broad overview of the research in NGSO constellations for future satellite communication network design including key technologies and architectures and specific use-case-oriented communications design and analysis. The book will be of interest to academic researchers and scientists, communication engineers and industrial actors in satcom, satellite networking and mobile and wireless communication. It will also serve as a useful reference for advanced students and postdocs and lecturers in satellite communication and networking and mobile and wireless communication.



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