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| 1. Record Nr.           | UNINA9910337467703321  |
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| Titolo                  | Learning-based VANET Communication and Security Techniques // by<br>Liang Xiao, Weihua Zhuang, Sheng Zhou, Cailian Chen  |
| Pubbl/distr/stampa      | Cham : , : Springer International Publishing : , : Imprint : Springer, ,<br>2019   |
| ISBN                    | 3-030-01731-1  |
| Edizione                | [1st ed. 2019.]  |
| Descrizione fisica      | 1 online resource (140 pages)  |
| Collana                 | Wireless Networks, , 2366-1445   |
| Disciplina              | 004.6  |
| Soggetti                | Wireless communication systems<br>Mobile communication systems<br>Data protection<br>Artificial intelligence<br>Telecommunication<br>Wireless and Mobile Communication<br>Data and Information Security<br>Artificial Intelligence<br>Communications Engineering, Networks   |
| Lingua di pubblicazione | Inglese  |
| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Monografia   |
| Nota di contenuto       | 1 Introduction -- 2 Learning-based Rogue Edge Detection in VANETs<br>with Ambient Radio Signals -- 3 Learning While Offloading: Multi-<br>armed Bandit Based Task Offloading in Vehicular Edge Computing<br>Networks -- 4 Intelligent Network Access System for Vehicular Real-<br>time Service Provisioning -- 5 UAV Relay in VANETs Against Smart<br>Jamming with Reinforcement Learning -- 6 Conclusion and Future<br>Work.   |
| Sommario/riassunto      | This timely book provides broad coverage of vehicular ad-hoc network<br>(VANET) issues, such as security, and network selection. Machine<br>learning based methods are applied to solve these issues. This book<br>also includes four rigorously refereed chapters from prominent<br>international researchers working in this subject area. The material<br>serves as a useful reference for researchers, graduate students, and<br>practitioners seeking solutions to VANET communication and security |

related issues. This book will also help readers understand how to use machine learning to address the security and communication challenges in VANETs. Vehicular ad-hoc networks (VANETs) support vehicle-to-vehicle communications and vehicle-to-infrastructure communications to improve the transmission security, help build unmanned-driving, and support booming applications of onboard units (OBUs). The high mobility of OBUs and the large-scale dynamic network with fixed roadside units (RSUs) make the VANET vulnerable to jamming. The anti-jamming communication of VANETs can be significantly improved by using unmanned aerial vehicles (UAVs) to relay the OBU message. UAVs help relay the OBU message to improve the signal-to-interference-plus-noise-ratio of the OBU signals, and thus reduce the bit-error-rate of the OBU message, especially if the serving RSUs are blocked by jammers and/or interference, which is also demonstrated in this book. This book serves as a useful reference for researchers, graduate students, and practitioners seeking solutions to VANET communication and security related issues.

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