

114 學年度第 1 學期工學院專題演講

時間：2025 年 12 月 11 日(四)

地點：I 棟 203 會議室

參加對象：資工系、電機系、電子系及任何有興趣師生

時間	項目	主持人
14:00-14:10	開場致詞	黃能富校長
14:10-15:10	講者：Abderrahim Benslimane 法國亞維農大學 Avignon University, France 計算機科學系教授 講題：Monitoring Internet of Things 物聯網監控技術與發展趨勢	黃能富校長
15:10-15:30	Q&A	黃能富校長

Title: Monitoring Internet of Things

Abstract:

To ensure robustness in wireless networks, monitoring the network state, performance and functioning of the nodes and links are crucial, especially for critical applications. Safety-critical applications, such as a distributed fire- or burglar-alarm system, require that all sensor nodes are up and functional. To that end, monitoring techniques for detecting, localizing and recovering network failures in IoT should be significantly developed.

There are several tools and methods to monitor fixed networks and even wireless sensor networks. However, there is a lack of solutions for the Internet of Things with its complexity and heterogeneity. Monitoring can be passive or active including using network tomography, using beacon placements and probes optimization, etc.

In this talk, we will introduce succinctly the Internet of Things, its challenges and the monitoring concept. We will present the Research motivations and objectives for the monitoring. After presenting the state-of-the-art research on monitoring, we will present our theoretical solutions for monitoring IoT.

We target the optimization of IoT and vehicular network monitoring for fault tolerance, security and quality of service purposes.



Abderrahim Benslimane is Full Professor of Computer-Science at the Avignon University/France since 2001. He is Former Vice Dean of the Faculty of Sciences and Technology and Former head of the master Degree SICOM. He has been nominated in 2020, 2022, and 2024 as IEEE VTS Distinguished Lecturer/Speaker. He is awarded the French award for Doctoral supervision and Research. He has been an International Expert at the French Ministry of Foreign and European affairs (2012-2016). He served as a Vice Dean of the Faculty of

Engineering and head of the Research Center in Informatics at the French University in Egypt. He was attributed the French award of Scientific Excellency (2011-2014). He has been as Associate Professor at the University of Technology of Belfort-Montbéliard since September 1994. He obtained the title to supervise researches (HDR 2000) from the University of Cergy-Pontoise, France. He received the PhD degree (1993), DEA (MS 1989) from the Franche-Comte University of Besançon, and BS (1987) from the University of Nancy, all in Computer Science.

He has been nominated Member of the IEEE VTS AdHoc Mission Critical Communications committee since 2025 and currently Vice-Chair, Secretary of the Steering Committee of the IEEE ComSoc Social Network Technical Committee 2024-2026, IEEE ComSoc Steering Chair of Multimedia Communications Technical Committee 2022-2024 and previously served as Vice Chair 2020-2022. He is past Chair of the ComSoc Technical Committee of Communication and Information Security 2017-2019. He is Area Editor specialist on Communications and Information Security of the IEEE Open Journal of the Communications Society, Advisory board member of IEEE IoT journal, Associate Editor of IEEE Transactions on Information Forensics and Security, IEEE Wireless Communication Magazine, IEEE Transactions on Vehicular Technology,

IEEE Transactions on Mobile Computing and Elsevier Ad Hoc Networks. He is co-founder and serves as General-Chair of the IEEE WiMob since 2005. He recently served as General Chair of IEEE CNS 2025 which has been hosted in Avignon, France during 8-11 September 2025. He served as Symposium Chair at ICCCN 2025, Track chair in IEEE WPMC'23, IEEE ICC 2023 and Conference Chair at ICNC'24 MCC, ICNS'25. He served as General Chair of IEEE CNS 2020, Executive Forum Co-Chair at IEEE Globecom 2020, Program vice Chair of IEEE TrustCom 2020, Program Chair of IEEE iThings 2020 and Symposium Co H Chair/leader in many IEEE international conferences such as ICC, Globecom, AINA and VTC. He served as Guest Editor of many special issues. He participates to the steering and the program committee of many IEEE international conferences. He was Board committee member, Vice-chair of Student activities of IEEE France section/Region 8; he was Publication Vice-chair and Conference Vice-Chair of the ComSoc TC of Communication and Information Security. He participates to the steering and the program committee of many IEEE international conferences. He has more than 320 refereed international publications (books, conference proceedings, journals and conferences) and more than 25 Special issues. He supervised more than 25 Ph.D thesis and more than 42 M.Sc. research thesis.

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