

# Future Internet Architectures, Blockchain, and AI in the IoT Era: Research challenges

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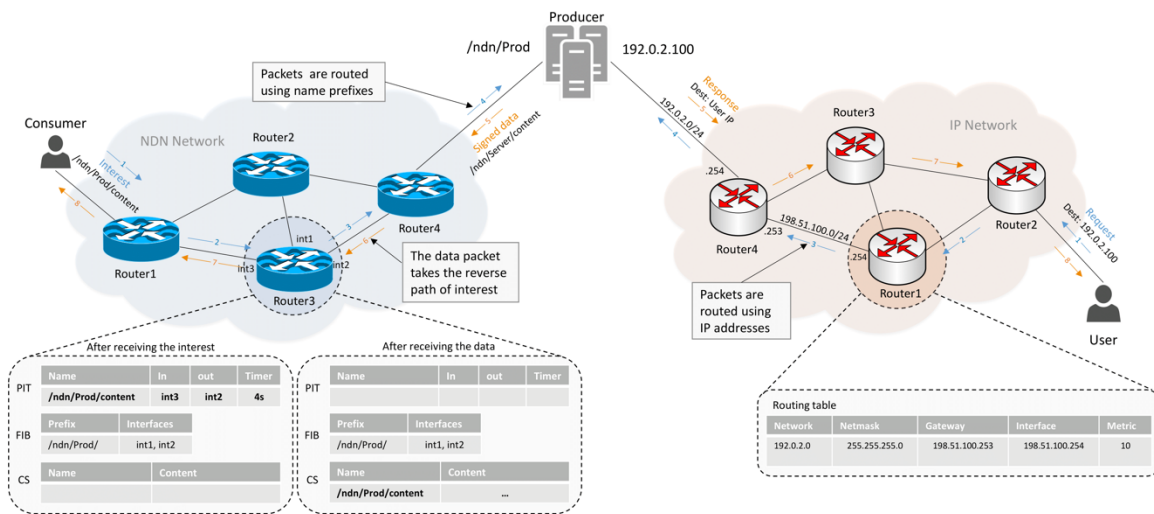
University of Laghouat, Algeria

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Organizer: Prof. Anna Maria Vegni

Course: Wireless Networking and IoT

**Abstract:** Named Data Networking (NDN) is a data-centric Internet architecture designed to replace the host-centric TCP/IP architecture. NDN falls under the umbrella of Information Centric Networking (ICN), where the focus is on the data rather than its location. NDN defines two entities: Producer and Consumer. Producers generate and offer content for the consumers to request. The first part of the talk will briefly illustrating the differences between TCP/IP and NDN as well as how the different advantages of each. Besides, the 5th revolution of the industrial era – or Industry 5.0 – is the new industry trend that defines the smart factory concept. This concept is based on emerging technologies, such as 5G/6G communications, fog computing, drones, cloud computing, blockchain, artificial intelligence, deep learning, etc. To allow optimization of operations and reduced costs, these technologies are employed to establish a connection between machines and the Internet, through the Internet of Things, and to collect information in the cloud and edge and then process them using artificial intelligence algorithms which will be the purpose of the second part of the talk.



**Short biography:** Chaker Abdelaziz Kerrache is an associate professor at the Department of Computer Science, University of Laghouat, Algeria. He is currently the head of the Informatics and Mathematics Laboratory (LIM) at the University of Laghouat. He received his MSc. degree in Computer Science in 2012, and his Ph.D. degree in computer science in 2017, both at the University of Laghouat, Algeria. In 2013, he joined the Informatics and Mathematics Laboratory (LIM) as a research assistant and the Computer Networks Group (GRC) in 2015 in a Ph.D scholarship program. His research activity is related to trust and risk management, secure multi-hop communications, vehicular networks, Named Data Networking (NDN), Brain-to-Computer Interface, and UAVs.