



# Navigating the Internet of Things: Architecture, Protocols, Value, and Beyond

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Room: XOD 02 (In the basement) – **B 107**

Location: <https://goo.gl/maps/fNWanm9Gk3PL5XTu7>

**Abstract:** This presentation delves into the dynamic world of the Internet of Things (IoT), offering a comprehensive exploration of its key aspects. We begin with Definitions, where we demystify IoT, breaking down its complex concepts into understandable terms. This sets the stage for a deep dive into IoT Architecture, illustrating how various IoT components interconnect to form sophisticated networks. Next, we address IoT Protocols, shedding light on the communication standards and protocols that are the backbone of IoT connectivity and functionality. This technical exploration leads us to real-world applications, where Application Examples will showcase diverse IoT implementations across industries, demonstrating its transformative potential. The heart of the presentation lies in discussing the Business Impact of IoT. Here, we explore how IoT is reshaping business models, driving innovation, and altering competitive landscapes. A special focus is given to Value Creation, where we dissect how IoT contributes to value generation, not just in economic terms but also in enhancing customer experiences and operational efficiencies. Finally, we tackle the Challenges facing IoT, from security and privacy concerns to technological and regulatory hurdles. This section aims to provide a balanced view of IoT's potential and limitations, preparing attendees for a future where IoT is ubiquitous.

**Biography:** **Dr. Vasos Vassiliou** is an Associate Professor of Computer Networks at the University of Cyprus and the Director of the Networks Research Laboratory. He is also a founding member of the CYENS Center of Excellence, where he leads the Smart Networked Systems Multidisciplinary Research Group. He did undergraduate studies at the Higher Technical Institute (HND Electrical Engineering, 1993) and the University of South Florida (B.Sc. in Electrical Engineering, 1997), and graduate studies at the Georgia Institute of Technology (GaTech, Atlanta, USA) (M.Sc., 1999 and Ph.D., 2002 in Electrical and Computer Engineering). He has published 125+ technical articles and scientific papers in the general area of Communications and Computer networks. He is particularly active in research on Secure, Reliable, and Performance-controlled IoT and IIoT networks. He and his team develop solutions for AI-based Intrusion and Anomaly Detection, Fault-tolerant and Decentralized (Blockchain) Control, and Autonomic Network Recovery and Reconfiguration. He is a Senior Member of IEEE and ACM, and participates in the Editorial Boards of several journals, including the Journal of Computer Communication (Elsevier) and the Technical Program Committees of several conferences, such as Globecom, ICC, WCNC, PIMRC, DCOSS and MedComNet.