

## MAC for Internet of Things (IoT)

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Internet of Things (IoT) networks are expected to consist of a large number of resource constrained devices that gather data by sensing their environment and communicate dynamically with access points or neighboring devices to communicate these small amount of location specific delay-sensitive data. A IoT MAC protocol must be able to support the high-intensity and short-lived demands of these IoT networks. The basic design questions to be addressed are, one, why endure a high-overhead and large-delay MAC protocol in IoT networks when only a few intermittent packets need to be sent and received? Two, how to ensure energy efficiency even when energy harvesting is available? Three, what kind of access technique should be employed; grant based or grant free? In this talk, we take a look at how existing wireless MAC protocols are being adapted to cater to the specific needs of IoT networks which is imperative to address the basic design questions. Recent research proposals for IoT MAC protocols that endeavor to address the needs shall also be examined for their efficacy and promise.

### Biography

Prof Shekhar Verma has received his BTech, MTech and PhD from Indian Institute of Technology (IIT) BHU, Varanasi. He is currently working as professor in Information Technology at Indian Institute of Information Technology Allahabad. He has published more than 100 research papers in reputed refereed International Journals and more than 80 papers in international conferences. He has supervised more than 20 PhD scholars and handled many R&D projects. He is a member of the "Machine Learning and Optimization Group" at IIIT Allahabad. His research interests include Wireless Sensor Networks, Manifold regularization, Privacy Preserving Machine Learning and Deep Learning techniques.