Assoc. Prof. Salabat Khan

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Bio: Dr. Salabat Khan received his Ph.D. in computer science and technology from the Beijing Institute of Technology, Beijing, China. He works as an Associate Professor (Research) in the College of Computer Science and Software Engineering, Shenzhen University, Shenzhen, P.R. China. He has published over 35 research articles in various highly reputed journals, such as IEEE Communications Surveys and Tutorials, IEEE Transactions on Vehicular Technology, Vehicular Communication Journal, and IEEE Transactions on Mobile Computing. His research interests include security and privacy, VPKI, PKIX, cryptographic algorithms, blockchain, and distributed ledger technologies.

Speech Title: Securing the Roads of Tomorrow: Advancing Vehicular Public Key Infrastructure for Safer and Smarter Intelligent Transportation Systems

Speech Abstract:

This talk focuses on the critical role of Vehicular Public Key Infrastructure (VPKI) in enhancing the security and safety of Intelligent Transportation Systems (ITS). As the world moves towards increasingly interconnected and automated ITS, the surface of cyberattacks on interconnected devices widens. Therefore, the need for robust and strong security measures to counter various cyberattacks become a top priority. This talk will explore how VPKI, a vital component of ITS, can be used to ensure the security of vehicle-to-everything (V2X) in communications.

The talk will start by providing an overview of a generic PKI and generic VPKI along with a discussion on the European and American adopted VPKI standards. It will then shed light on the privacy, scalability issues, and revocation process issues of VPKI frameworks. It will also discuss future research directions and development, such as the utilization of blockchain for a decentralized VPKI framework. By the end of the talk, attendees will gain a comprehensive understanding of VPKI, standardization, privacy issues, current challenges, and future potential in the realization of safer and smarter ITS.