

Security Protocols for Wireless Networks and Internet of Things

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Projects and Requirements:

The security group at UH is interested at the issue of security and privacy in wireless networks and Internet of Things (IoT). We think that security should be embedded in the design of network protocols rather than being added on to network protocols. Therefore, we are looking for candidates to join our group in designing new security-embedded network protocols across the layers of network model in the setting of wireless networks and IoT. This could be a secure medium access control protocol, a secure routing protocol, a trust management model, or a user access control model. Performance of the proposed protocol should be compared with conventional protocols in wireless networks by simulation or experiments.

The prospective candidates should have a strong background in Computer Science or another relevant computational discipline. In particular, they should demonstrate very strong programming skills in one or more major computer languages. Ideally, they should have some background in the areas of computer networks and security but that is not a necessity. Candidates who have experiences in game theory are welcome.