

# **RSRP: Risk Sensitive Routing Protocol in Wireless Sensor Networks**

M Karakaya<sup>1</sup>

<sup>1</sup> Department of Computer Engineering, Atilim University,

Incek, Ankara, TURKEY

[<sup>1</sup>murat.karakaya@atilim.edu.tr](mailto:murat.karakaya@atilim.edu.tr)

## **ABSTRACT**

In Wireless Sensor Networks (WSN), data communication is mostly implemented by multi-hop transfers of the messages among sensor nodes and the sink. However, due to the nature of wireless communications, WSNs are subject to various malicious attacks. There are various proposals to assess the risk of the network links. In this paper we propose an routing algorithm to exploit the risk assessment of the links to create risk sensitive routes. We have implemented the proposed solution adapting the Ant Colony Optimization method. The simulation results support the success of the proposed method under different network conditions.

**Keywords** – Security, Wireless Sensor Networks, routing, Ant Colony Optimization