# SEMINAR I (1 ECTS)

Speaker:
Roberto Di Pietro

Title:
Unattended Wireless Sensors Networks: Security threats and countermeasures

Abstract:
In this series of lectures the speaker will first introduce the Unattended Wireless Sensor Networks (UWSNs) model, later he will highlight some of the security threats this model is subject to (e.g. data authentication and survivability), as well as associated countermeasures. How to achieve self-healing in front of node compromising is also discussed.
This newly introduced model (UWSNs) can be considered still in its infancy, and smart (or smarter) solutions on these and close problems are still on call.

When and Where:
14-02-2012, h. 13:00-14:00; Room 2.1.C19
15-02-2012, h. 11:00-14:00; Room 2.1.C19
16-02-2012, h. 11:00-14:00; Room 2.1.C17

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Short Bio:
Roberto Di Pietro is currently an Assistant Professor at the Department of Mathematics of Università di Roma Tre - Roma, Italy.
He is the PI of the SPRINGeR research group at the same University.
He received the Ph.D. in Computer Science from the Università di Roma "La Sapienza", Italy, in 2004.
In 2004 he also received from the Department of Statistics of the same University a Specialization Diploma in Operation Research and Strategic Decisions.
He received the B.Sc. and M.Sc. degree in Computer Science from the Università di Pisa, Italy, in 1994.
His main research interests include: security and privacy for mobile, ad-hoc, and wireless networks; Data Mining; Secure Virtualization; security and privacy for distributed systems (e.g. Cloud); secure broadcast; applied cryptography; and, computer forensics.
More information at:
http:://ricerca.mat.uniroma3.it/users/dipietro/

Suggested readings:

Roberto Di Pietro and Di Ma and Claudio Soriente and Gene Tsudik.
“Self-Healing in Unattended Wireless Sensor Networks”.
In ACM Transactions on Sensor Networks, in press.

http://ricerca.mat.uniroma3.it/users/dipietro/publications/self_healing_tosn_camera_ready.pdf

Mauro Conti, Roberto Di Pietro, Luigi V. Mancini, and Alessandro Mei.
“Distributed Detection of Clone Attacks in Wireless Sensor Networks”.
In IEEE Transactions on Dependable and Secure Computing (TDSC).
http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5539762

Roberto Di Pietro, Luigi V. Mancini, Claudio Soriente, Angelo Spognardi, and Gene Tsudik.
“Data Security in Unattended Wireless Sensor Networks”.
In IEEE Transactions on Computers (TC) - Special Issue on Autonomic Network Computing -, vol. 58(11), pages 1500-1511, November 2009.
http://ricerca.mat.uniroma3.it/users/dipietro/publications/toc_camera_ready.pdf

Roberto Di Pietro, Luigi V. Mancini, Claudio Soriente, Angelo Spognardi, and Gene Tsudik.
“Playing Hide-and-Seek with a Focused Mobile Adversary in Unattended Wireless Sensor Networks”.
In Journal of Ad Hoc Networks (Elsevier) - Special Issue on Privacy and Security in Wireless Sensor and Ad Hoc Networks -, vol. 7(8), pages 1463-1475, November 2009.
http://ricerca.mat.uniroma3.it/users/dipietro/publications/11002109361505340.pdf

Assignments:
Will be exposed during the lectures.