

SEMINARS

Robustness Testing
Web Applications Security Assessment

10th June 2013 - 10.30 - 16.30

Aula Nettuno

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Robustness Testing - Robustness testing is an effective approach to characterize the behavior of a system in presence of erroneous input conditions. It has been used mainly to assess robustness of operating systems (OS) and OS kernels, but the concept of robustness testing can be applied to any kind of interface. Robustness tests stimulate the system under testing through its interfaces submitting erroneous input conditions that may trigger internal errors or may reveal vulnerabilities. This seminar will introduce the concept of robustness testing and highlight its applicability in state-of-the-art technology, including web services environments.

Marco Vieira is Assistant Professor at the Department of Informatics Engineering (DEI) of the University of Coimbra (UC), Portugal. He is also member of the Centre for Informatics and Systems of the University of Coimbra (CISUC) and of the Laboratory of Informatics and Systems (LIS) from Pedro Nunes Institute (IPN).

Web Applications Security Assessment - Developing non-vulnerable web applications is a difficult task. Field studies show that a large number of web applications and services are deployed with security flaws (e.g., having code vulnerabilities that may be exploited by hackers). Software faults (i.e., program defects or bugs) are recognized as the major cause of computer security failures. Interface faults, related to problems in the interaction among software components/modules, are particularly relevant in service-oriented environments. Different approaches and tools for the detection of security vulnerabilities in web applications and services, with special focus on testing, will be presented during this seminar. Several case studies will be presented and used to demonstrate the effectiveness of existing tools. The seminar will also feature up-and-coming tools for vulnerability detection. Future research opportunities will be identified and discussed.

Nuno Antunes is a Ph.D. student in Informatics Engineering at the University of Coimbra. Since 2008 he has been with the Software and Systems Engineering Group (SSE) of the Centre for Informatics and Systems of the University of Coimbra (CISUC), researching topics related to methodologies and tools for the development of non-vulnerable web services.