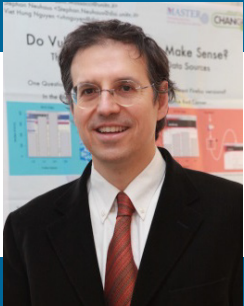




Tuesday, August 26, 2014 (Full-day)

TUTORIAL ANNOUNCEMENT

22nd IEEE International Requirements Engineering Conference
(RE'14) – Karlskrona, Sweden – <http://www.re14.org>



**Fabio
Massacci**

T11 – How to empirically evaluate your pet (security but not only) requirements engineering method

Running empirical experiments is not so simple. It takes months to prepare, conduct and analyze experiments properly. In this tutorial we will provide hands-on insights on how to run an empirical experiments for comparing RE methods based on our experience gained over the past 4 years in evaluating and comparing security requirements engineering methods during the E-RISE challenge.

In the first part of the tutorial, we will introduce a general experimental protocol to perform empirical evaluations of (security) RE methods. Then, we will illustrate it with examples of solutions that worked out either in our controlled experiments and in other experiments from the key literature on evaluating RE methods. We will also share lessons learned during the execution of our experiments, as there are many pitfalls and traps and they are simply not written in research papers reporting empirical experiments.

In the second part, in order to show participants how the guidelines can be put into practice, we will engage them in a short experiment to evaluate the effectiveness of a security requirement elicitation method. At the end of the experiment we will look back at the experiment just run and reflect with the audience on what really happened behind the scenes and how different choices could have lead to different experiments or outright failure. This tutorial should then be of interest of graduate students, academic and industrial researchers who want to learn how to conduct controlled experiments to evaluate their favorite RE methods and techniques.



**Federica
Paci**



**Katsiaryna
Labunets**

BIOGRAPHIES

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BIOGRAPHIES

Fabio Massacci is full professor at the University of Trento. He received a M.Eng. in 1993 and Ph.D. in Computer Science and Engineering at University of Rome La Sapienza in 1998. He visited Cambridge University in 1996-97 and was visiting researcher at IRIT Toulouse in 2000. He joined the University of Siena as Assistant Professor in 1999, and in 2001 he went to Trento where he is now full professor. His research interests are in malware analysis, security economics, empirical validation of risk and security requirements methods, and predictive models for vulnerabilities. With W. Joosen he co-founded the ESSOS, Engineering Secure Software and Systems Symposium which aims at bringing together Requirements and Software Engineers and Security experts. In the last four years he has lead the E-RISE Challenge.

Federica Paci is a post doctoral fellow in the Security Group at the Department of Information Engineering and Computer Science of the University of Trento. She recently received the Italian National Scientific Qualification as Associate Professor in Informatics and Information Processing Systems. In February 2008, she received the PhD in Information Technology from the University of Milan with a thesis on access control in service-oriented architectures. From February 2008 to March 2009, she has been a post-doctoral fellow at Computer Science Department of Purdue University under the supervision of prof. Elisa Bertino. In the last four years, Federica has co-organized with F. Massacci the E-RISE challenge.

Katsiaryna Labunets is a PhD candidate at the University of Trento. She works in the Security Group under the supervision of Prof. Fabio Massacci. In 2010, she received the MSc degree in Mathematics from the Belarusian State University in Minsk, Belarus. She participated to organization of E-RISE challenge. She was also involved in organization of controlled experiments conducted as a part of Security Engineering course at the University of Trento in Fall 2012 and 2013 and during the EIT Winter School in Trento in February 2014. Her research interests include empirical evaluation and validation of security requirements and risk analysis methods, and success criteria of security risk assessment methods.

