

A PROPOSAL FOR PARTICIPATING IN WTST 2012 - SECURITY RELATED TESTING

JENS H. WEBER-JAHNKE
PROFESSOR AND DIRECTOR OF SOFTWARE ENGINEERING
FACULTY OF ENGINEERING
UNIVERSITY OF VICTORIA, BC, CANADA
JENS@ACM.ORG

I am a Professor and the Director of Software Engineering in the Faculty of Engineering, at the University of Victoria, British Columbia, Canada. I am also an Adjunct Professor in the University's School of Health Information Science. I received my Ph.D. degree (summa cum laude) in Computer Science from the University of Paderborn, Germany (1999) and an Ernst-Denert Award for Software Engineering in 2000. I have been an Industrial Research Fellow of the B.C. Innovation Council (formerly Advanced Systems Institute) since 2001. In 2005, I was appointed a Visiting Associate Professor at University of British Columbia, Vancouver.

My research interests include security and privacy, data & knowledge engineering and reverse engineering applied to sensitive domains such as medical applications and health information systems.

I am a Fellow of the IBM Centre of Advanced Studies, a senior member of the IEEE Computer Society, a senior member of the Association for Computing Machinery (ACM) and a member of the American Medical Informatics Association (AMIA).

I am licensed as a Professional Engineering (PEng) in the Province of British Columbia.

I have strong teaching interests in the area of software security and security engineering. At UVic, I have developed a course in this area (entitled SENG 360 - Security Engineering) and I have been teaching it for the last five years¹. SENG 360 is a mandatory course in the accredited Bachelor of Software Engineering (BSEng) degree program, which I direct. Security-related testing is part of the learning objectives for this course. I have also taught more specialized courses in the area, such as a topics course on software security evaluation and assurance. I have participated in regional round tables of software security educators to discuss ethical dimensions of teaching security testing.

¹see the following link for a course outline: <http://web.uvic.ca/calendar2011/CDs/SENG/360.html>

Over the years of teaching SENG 360 (and several topics courses), I have made experiences with different approaches to teaching security testing. I would like to share these experiences with the workshop participants and learn from their insight to better improve the effectiveness of security education at UVic and in Canada. I propose to give a short presentation on the current format of SENG 360 and the role and format of security testing within this course. I have been using a combination of problem-based learning and peer-to-peer teaching as a driver for motivating students to become active learners in this area. Moreover, the systems we are testing have a significant role in our society and students understand their testing work not only as an educational exercise but also as a service to society (which is in tune with the general engineering spirit and mandate).

As security testing is only one of many topics in SENG 360, I am interested in understanding better what should be the *core* body of knowledge to be taught in such a more general course on security engineering. I have some thought on this topic which I would be happy to share, and I would be very interested in hearing the opinions of other workshop participants on this matter.

Another educational interest of mine is on finding effective ways to combine technical lessons on security testing techniques with the application of security-related standards, such as ISO 15408 - The Common Criteria, and the concerns of assurance and certification. I would be happy to share my experience in this area with the workshop participants and learn from their insights.

Finally, I am very interested in relating the security-related testing efforts taught in class to concrete legal frameworks that particular software companies have to abide to in their jurisdictions. An increasing number of software systems and jurisdictions are subject to strict legal policies that should effectively direct security testing (assurance and certification) efforts. I have not had much experience with moving the legal perspective of security testing into my educational courses but intend to do so and would appreciate discussing this topic at the workshop.

If I am invited and asked to give a presentation, I will not need any special equipment but would use a video data projector if available.