**The Lynne and William Frankel Center
for Computer Science
Department of Computer Science
Ben Gurion University of the Negev**
Tel: 08-6428032
fradmin@cs.bgu.ac.il

Distinguished Lecturer Series

Supported by Jeffrey & Holly Ullman

Prof. Barton P. Miller

**University of Wisconsin-Madison
Chief Scientist, DHS Software Assurance Marketplace Research Facility**

Why Johnny and Janie Can't Code Safely:
Bringing Software Assurance to the Masses

Abstract: While we're all furiously working on new techniques to automate the finding of weaknesses and even vulnerabilities in software, relatively few programmers in the real world are benefiting from our work. The reasons for this situation are myriad, ranging from lack of training, awareness, and economic incentives on the part of the users; complex and only partially useful tools on the part of the assurance tool developers; legal barriers to open reporting of software problems; a confusing regulatory landscape with few standards; and a lack of effective curriculum at most universities for students learning software skills.
As a step towards improving the state of software assurance tools and increasing the adoption of software assurance practices by programmers, the U.S. Department of Homeland Security establish the Software Assurance Marketplace (SWAMP). The core service of the SWAMP is an open facility where programmers can bring their software to be run against a large suite of both commercial and open source assessment tools. In addition, tool developers can use the SWAMP-developed resources to speed their tool developments, making it easier to compete with established research projects and commercial products. The SWAMP also serves as a resource for classroom instructors and for researchers studying the software assurance process.
I will discuss our experiences in trying make an impact on the adoption of software assurance practices, the obstacles to making such an impact, and how we can make this mission more effective.

Bio: Barton Miller is Professor of Computer Sciences at the University of Wisconsin. He is also Chief Scientist for the DHS Software Assurance Marketplace (SWAMP) research facility, leads the software assurance effort for the NSF Cybersecurity Center of Excellence. He also leads the Paradyn Parallel Tool project. His research interests include systems security, binary and malicious code analysis and instrumentation extreme scale systems, parallel and distributed program measurement and debugging, and mobile computing.
In 1988, Miller founded the field of Fuzz random software testing, which is the foundation of many security and software engineering disciplines. In 1992, Miller (working with his then-student, Prof. Jeff Hollingsworth), founded the field of dynamic binary code instrumentation and coined the term "dynamic instrumentation". Dynamic instrumentation forms the basis for his current efforts in malware analysis and instrumentation . Miller has been on the U.S. Secret Service Electronic Crimes Task Force and is a Fellow of the ACM.

11:00 – 12:00 on Wednesday November 2, 2016 — Room 202, Alon Building (37/202)
12:00 – 11:00 יום ד' 2 נובמבר 2016 – בחדר 202 בבניין אלון (202/37)