COMPUTER SCIENCE COLLOQUIUM
TWENTY SEVENTH SERIES – FALL 2007

Thursdays at 12:00 **Darwin Hall, Room 102**

SEPT 6 THE FREE SOFTWARE MOVEMENT AND THE GNU/LINUX OPERATING SYSTEM
Richard Stallman, Free Software Foundation. **Richard Stallman will speak about the goals and philosophy of the Free Software Movement, and the status and history the GNU operating system, which in combination with the kernel Linux is now used by tens of millions of users world-wide.**

SEPT 13 ATTACKS ON THE NETSCAPE BROWSER
Jim Roskind**. The Netscape Communicator client was deployed on millions of desktops. It was also subject to attacks that attempted to gain unauthorized access to data on the client's computers, if not complete control of the computer. This talk discusses a broad range of examples of attacks that have been proposed against the Communicator application along with ways that the application evolved to block them**

SEPT 20 BUILDING SECURE AND ROBUST ENTERPRISE WEB APPLICATIONS FOR THE DEPARTMENT OF DEFENSE
Christopher J. Randall, J CIV DMD C. **Building scalable and secure applications for the Department of Defense presents special challenges. Congressional requirements, budgetary constraints, and the changing landscape of government contracts all provide hurdles that make the jobs of developers, managers and technical architects difficult meeting the ever-increasing information technology needs of the Department. In this talk we'll look at doing software development and project management in this environment, and investigate some real-world success stories.**

SEPT 27 OPERATIONAL ISSUES IN MALWARE DETECTION AND ANALYSIS
Paul Vixie, Internet Systems Consortium**. Malicious software can result from a variety of sources, intentional and accidental, remote and local, caused by insiders and outsiders. This talk will discuss the risks, threats, and trends of malware, as well as approaches to detecting, analyzing, preventing, and removing malware.**

OCT 4 PROTECTING DATA IN A VIRTUALIZED ENVIRONMENT
Tom Hepner, IBM**. When clients use VMware "virtualization" to provide multiple operating systems, many questions arise about backing-up and management of "guest" data. Additional concerns come up with protecting the "guest" virtual machine. VMware users can protect both data and environment using Tivoli Storage Manager (TSM). Bare machine recovery generally includes the overhead of performing a re-installation of the virtual machine guest operating system. Using TSM on the host system, recovery of the virtual machine's operating system is possible without reinstallation. This talk explains backup methods for the complete restore of VMware virtual machines as well as individual "guest" data. It also covers implementation hints and new VMware utilities written to improve and expedite data and environment protection.**

OCT 11 EMERGING AUTHENTICATION SOLUTIONS
Louie Gasparini, RSA Security**. This talk is about authentication in the consumer and financial services industries, and how behavioral modeling using Bayesian and neural net models complement credentials for authentication decisions.**

OCT 18 VIRTUALIZATION
Maurice R. del Prado Jr., IBM**. Virtualization is defined, in simple terms, as the process of running multiple instances of an environment, such as an operating system and applications, on a single physical system. Server virtualization has gained widespread acceptance with many users, from large enterprises to small businesses, after a slow and rocky start. Today, VMWare, Xen and Microsoft Virtual Server are well-known virtualization products. Virtualization has many benefits but must be carefully planned, implemented and managed. This talk will provide an overview of virtualizations, how it impacts hardware and software, and how users are implementing it.**

OCT 25 ELEMENTS OF COMPUTER GAME DESIGN
Jason Shankel, Maxsi**. The art of computer game design is beginning to mature into a craft. This talk presents the key elements and emerging vocabulary of computer game design.**

NOV 01 WEB 2.0: A CONVERSATION
David Singer, IBM**. What is Web 2.0? A technology? A social concept? Is it even new? How is it being used by IBM and others?**

NOV 08 THE SIGNIFICANT-DIGIT PHENOMENON, OR BENFORD'S LAW
Ted Hill, Georgia Tech and Cal Poly SLO. **A century-old empirical observation now called Benford's Law says that the significant digits of many real datasets are logarithmically distributed, rather than uniformly distributed, as might be expected. New discoveries show that geometric Brownian motion (hence the stock market), and many algorithms including Newton's method also follow Benford's Law. This talk will briefly survey some of the colorful history of the problem, and applications to fraud detection, analysis of running times of algorithms, and diagnostic tests for mathematical models. The talk will include graphical heuristics, examples and open problems, and will be aimed for the non-specialist.**

NOV 15 ROBOETHICS, OR HOW TO SURVIVE THE RISE OF THE MACHINES
John Sullins, Philosophy Department, SSU**. Roboethics is the new field emerging around the rapid advances in robotics. How are we to program machines that are to interact with people in social settings? How can we make these machines behave ethically and in a manner sensitive to the humans they interact with. This talk will survey the current thoughts on this subject looking at the roboethics movements and initiatives in the EU, Korea and Japan and the surprising lack of Roboethics research found in America.**

NOV 22 THANKSGIVING – NO COLLOQUIUM

NOV 29 SHORT PRESENTATIONS OF RESEARCH CARRIED OUT BY SONOMA STATE COMPUTER SCIENCE STUDENTS

DEC 06 END-OF-SEMESTER CELEBRATION
AWARDS PRESENTED TO SONOMA STATE COMPUTER SCIENCE MAJORS

SONOMA STATE UNIVERSITY

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Parking is usually available in Lots "E" and "F" and costs $2.50.
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