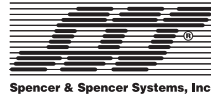Spencer & Spencer Systems, Inc. (SSS) was founded in 1980 by Robert W. and Linda S. Spencer. The firm produced software for Fortune 500 companies in St. Louis, Kansas City, Indianapolis and Cincinnati. By 1995 SSS grew to an organization of over 175 employees and yearly sales of $14 million. SSS was acquired by CIBER Inc. in 1995, and the former SSS branches now function as branches in CIBER's national organization.

Spencer & Spencer Systems, Inc.

15th Annual
Spencer & Spencer Systems
Mathematics & Computer Science Lecture

7:00 p.m.
Wednesday, April 25, 2012

Featuring:
HAL BERGHEL
"Cyber Warfare: Stuxnet and Beyond"

UMSL

15th Annual
Spencer & Spencer Systems

MATHEMATICS & COMPUTER SCIENCE LECTURE

UMSL

The Department of Mathematics
and Computer Science

presents

HAL BERGHEL

"Cyber Warfare:
Stuxnet and Beyond"

Wednesday, April 25, 2012
7:00 p.m.
Social Sciences Building 118

A reception will follow the lecture.
Admission is free, but reservations are requested.
Please call 314-516-6355 or email traoregressr@umsl.edu.
Parking available in West Drive Parking South and Lot N.

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Special thanks to Robert Spencer (B.A. Mathematics, '72)
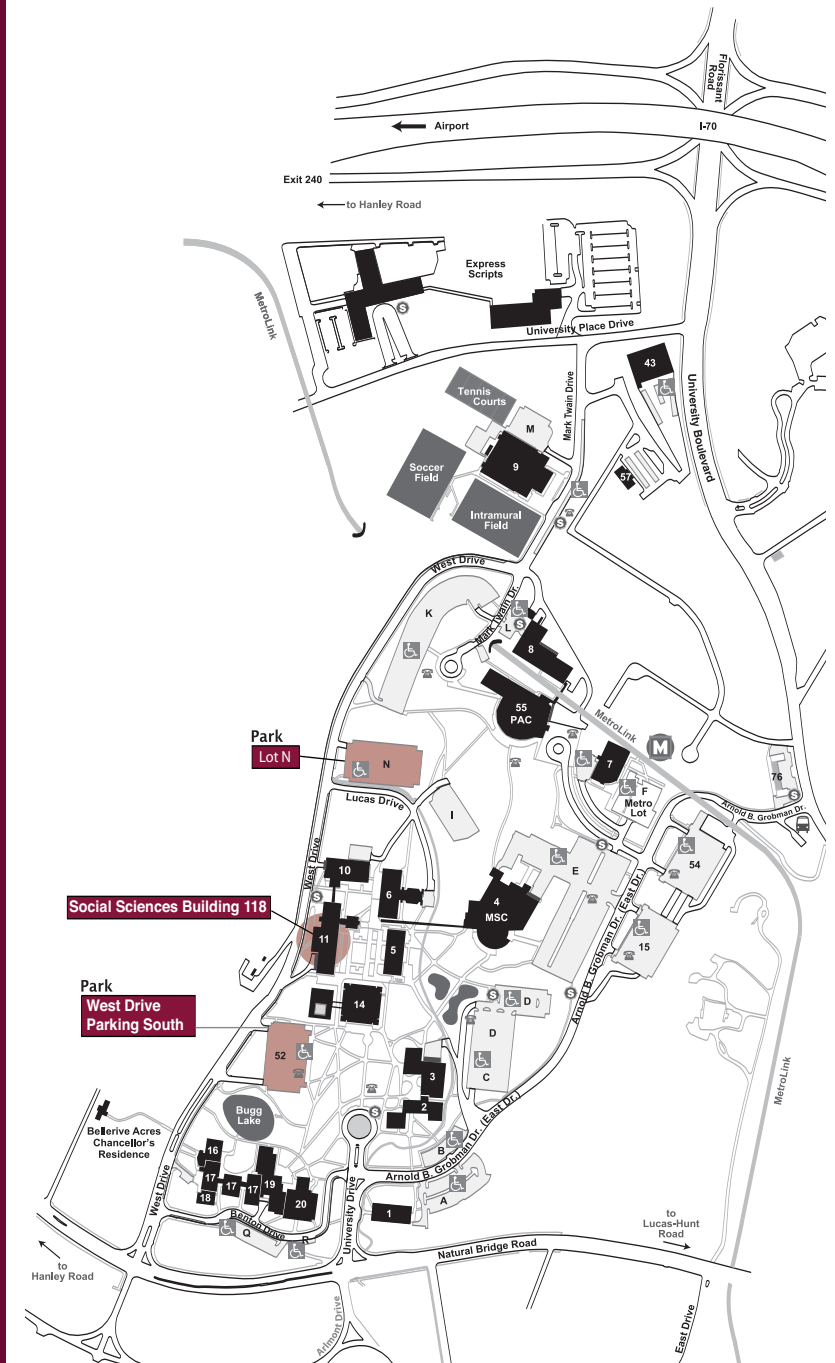*whose gift made this annual lecture possible.*

Hal Berghel

Abstract:

It is now understood by most world powers that future wars will all take place in part in cyberspace. It is also widely agreed that most of the cyber warfare technology that will be used will have descended from the research facilities of the United States and its western allies. What is not as obvious is who the ultimate victors will be. One of life's ironies is the countries that lead the way in developing cyber-technology are not the ones that are taking the best advantage from it. Within the past five years, DDOS attacks against Estonia, Georgia, South Korea, and the U.S. have made it abundantly clear that other non-Western nation-states have offensive capabilities that exceed the defensive abilities of the U.S. and its allies.

This talk will present an overview of Cyber Warfare from both technical and cultural perspectives. Several existing CW threat vectors will be discussed, including the most effective and complete Cyber-attack yet launched: Stuxnet. The talk will then turn to several new threat vectors that have recently been identified and conclude with an open discussion.

Hal Berghel is currently Professor of Computer Science at the University of Nevada, Las Vegas where he has previously served as Director of the School of Computer Science and Associate Dean of the College of Engineering. He is also the founding Director of the Identity Theft and Financial Fraud Research and Operations Center. His research interests are wide-ranging within the binary and digital ecosystem, ranging from logic programming and expert systems, relational database design, algorithms for non-resolution based inferencing, approximate string matching, digital watermarking and steganography, and digital security (including both computer and network forensics). Since the mid-1990's he has applied his work in digital security to law enforcement, particularly with respect to digital crime, cyberterrorism, and information warfare. His research has been supported by both the industry and the government for over thirty years. His most recent work in secure credentialing technology was funded by the Department of Justice. In addition to his academic positions, Berghel is also a popular columnist, author, talk show guest, inventor, and keynote speaker. For nearly fifteen years he wrote the popular Digital Village column for the Communications of the ACM.

Berghel is a Fellow of both the Institute for Electrical and Electronics Engineers and the Association for Computing Machinery, and serves both societies as a Distinguished Visitor and Distinguished Lecturer, respectively. He has received the ACM Outstanding Lecturer of the Year Award four times and was recognized for Lifetime Achievement in 2004. He has also received both the ACM Outstanding Contribution and Distinguished Service awards. He is also the founder and owner of Berghel.Net, a consultancy serving business and industry, and co-owner of BC Innovations Management, a startup company in IP and DRM.

Parking is available in West Drive Parking South and Lot N.

The University of Missouri–St. Louis campus is located one mile east of I-170 off Natural Bridge Road.