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Cyber Security and Information Infrastructure Research Group (CSIIR) and The Information Operations Center (IOC) 1st Annual Workshop

March 14-15, 2005
JICS (5100) Building 1st Floor Conference Room

The information revolution continues to penetrate every aspect of daily life around the globe, affecting everything from national security to personal privacy, from economic competitiveness to democratic participation in governance. Information, the key output from nearly every human societal activity, is now carried over most every conceivable medium (e.g., power lines, light waves/wireless into deep sea/space and across the globe) via a myriad of information infrastructures. The CSII Research group is exploring the programmatic, organizational and technological issues to identify and develop advanced end-to-end solutions based on sound/innovative applied research and development. Currently, CSIIR provides various innovative prototypical/research projects, feasibility studies and products/solutions for our sponsors such as DHS, EPA, DOD, FBI, among others, utilizing a host of advanced interdisciplinary technologies and approaches within the context of the largest multi-science national laboratory, ORNL. In doing so, CSIIR endeavors to convene experts from government, industry, and academia and to draw on the perspectives/insights of policy-makers, scientists, and technologists in pursuit of its mission to understand emerging IT and advance the state-of-the-art to ensure the security and dependability of our national critical infrastructure.

To advance this mission and instigate a productive collaborative research agenda, we have organized a special workshop and invited a series of presentations from recognized extramural researchers as well as ORNL researchers and project leaders. Our objective is to find common ground where we can work together to develop useful tools for National Security based on sound fundamental principles and theory that can form the basis for meeting the difficult challenges today and in the future. We expect to make this investment on an annual basis and to host eminent people committed to our mutual prospects to identify sponsors and secure funding.

Necessary updates will appear on the CSIIR website <http://www.ioc.ornl.gov/> Please join us for this special initiative. The workshop agenda follows:

Workshop Agenda

March 14-15, 2005
JICS (5100) Building 1st Floor Conference Room

Monday, March 14 – JICS (5100) building 1st floor conference room

- 7:15 a.m.** Badge and Pass - Bethel Valley Road entrance station/Visitor Center.
Please have your [picture identification ready](#) so officers can quickly confirm you are on the access list. [If you are a Foreign National you will need your passport and visa.](#) Once verified, you will be issued a Temporary Entry Pass and map to the Visitor Center which authorizes you to travel from the entrance to the ORNL Visitor Center. We will have an individual standing by to direct you to the meeting area.
- 8:00 a.m.** Coffee and pastries
- 8:10 a.m.** Welcome Lee Riedinger, Introduction and agenda overview – Joe Trien
- 8:30 a.m.** Fast Abstracts Round Robin 3-5 minutes per person in order as follows:
Mili, Kafura, Yoo, Che, McGregor, Schumann, Park, Arazi, Prowell, Langston, Shankar/Sheldon
- 9:15 a.m.** Presentation by Nagi Rao (ORNL/CSMD), Infrastructure and Protocols for Dedicated Bandwidth Channels
- 9:45 a.m.** Prof. Ali Mili (N.J. Institute of Tech./CS), An Integrated Approach to Security Management
- 10:30 a.m.** Break
- 10:45 a.m.** Prof. Dennis Kafura (Virginia Tech./CS), Policy Delegation and Dynamic Policy for Authorization in Pervasive Cyber Infrastructures
- 11:30 a.m.** Prof. Seong-Moo Yoo (Univ. of AL Huntsville/CSE), Case Based Reasoning Approach to Intrusion Detection
- 12:15 p.m.** Lunch at cafeteria
- 1:15 p.m.** Prof. Che Hao (Univ. of TX at Arlington/CSE), Detection and Containment: Algorithms and High Speed Dynamic Filtering
- 2:00 p.m.** Prof. John McGregor (Clemson Univ./CS), Techniques for Validating the Security Quality Attributes of Infrastructure Software
- 2:45 p.m.** 30 min Open Discussion (Concepts, Approach, Deliverables, Targeted Problem Areas)
- 3:15 p.m.** SNS Tour (Van available)
- 4:15 p.m.** Return to JICS building
- 4:30 p.m.** Prof. B. Arazi (Univ. of Louisville/CS), Security in Constrained Environments
- 5:15 p.m.** Return to Hotel
- 6:00 p.m.** Van picks everyone up from the Hampton lobby at Cedar Bluff
- 6:30 p.m.** Reservation at Calhoun's on the River, Lenoir City
Dinner and Open Issues Discussion
- 8:00 p.m.** Dr. Sheldon (CSED/ CSIIR), Wrap-up of Day 1 and Agenda for Day 2

Tuesday, March 15 – JICS (5100) building 1st floor conference room

- 8:00 a.m.** Coffee and pastries
- 8:15 a.m.** Dr. R. Abercrombie and R. Walker (CSED/ CSIIR), DoD/DHS Infrastructure Applications
- 8:45 a.m.** Dr. Johann Schumann (NASA/Ames), Design Tools for Reliable Secure Communication Software
- 9:30 a.m.** Prof. Jung-Min Park (Virginia Tech./ECE), Defending Against Denial-of-Service Attacks in Wired and Wireless Networks
- 10:15 a.m.** Break
- 10:30 a.m.** Arjun Shankar (ORNL/CSED), Fusing Intrusion Data for Pro-Active Containment
- 11:00 a.m.** Prof. Stacy Prowell (Univ. of TN/CS and SEI), Automated Program Behavior Analysis
- 11:30 a.m.** Prof. Mike Langston (Univ. of TN/CS), Trusted Computing Amidst Untrustworthy Intermediaries
- 12:00 p.m.** Open Discussion Agenda by Joe Trien
- 12:15 p.m.** 3 Hour Working Lunch (catered) – Open Discussion
- Develop research topics for the summer program
 - Research topic areas to include:
 - Concepts, approach, and deliverables
 - Targeted problem areas and time table
 - Identify research strategies for sustained funding
- 3:15 p.m.** Closing remarks
- 3:30 p.m.** National Transportation Research Center (NTRC) Tour (Van available)
- 4:00 p.m.** Return to Visitor Center for Departure