

## **NICIAR: Pursuing Disruptive Technologies for Information Assurance**

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### **Keynote Abstract**

Despite substantial research investments in the past, the U.S. (and global) cyber infrastructure remains highly vulnerable to a wide range of attacks. The Disruptive Technology Office (DTO) is a research organization in the Office of the Director of National Intelligence (ODNI). Its mission is to incubate revolutionary research and development activities that address needs arising from all agencies under the ODNI. DTO originates and manages advanced research and development programs in a variety of domains that will have fundamental impact on future operational needs and strategies of its customers and demand substantial, long-term venture investment to spur risk-taking. The National Intelligence Community Information Assurance Research (NICIAR) program is one such program. NICIAR has initiated two thrusts: (1) technologies to improve accountability in NIC systems, leading to more accountable information flow, and (2) technologies to improve defenses of large scale systems against attacks. This talk will provide some background on the motivation for these thrusts and the recently initiated research projects within the program.

### **Speaker Bio**

Carl E. Landwehr, Ph.D., is Chief of the Cyber Access and Protection Division of the Disruptive Technology Office under the Director of National Intelligence, on assignment from his position as Senior Research Scientist at the University of Maryland's Institute for Systems Research. He is developing new strategies and directions for the programs in this division with the goal of achieving dramatic change in the overall trustworthiness of National Intelligence Community systems. He was recently named Editor-in-Chief of IEEE Security & Privacy Magazine. He has been active internationally as the founding chair of IFIP WG 11.3 (Database and Application Security) and is also a member of IFIP WG 10.4 (Dependability and Fault Tolerance). Dr. Landwehr has received Best Paper awards from the IEEE Symposium on Security and Privacy and the Computer Security Applications Conference. IFIP has awarded him its Silver Core, and the IEEE Computer Society has awarded him its Golden Core. His research interests span many aspects of trustworthy computing, including high assurance software development, understanding software flaws and vulnerabilities, token-based authentication, system evaluation and certification methods, multilevel security, and architectures for intrusion tolerant systems.