



# CyberCARD 2011: Advancing the National Agenda on Cyberspace Defense

Pacific Northwest National Laboratory (PNNL), a leader in science-based approaches to cyber security, recently participated in CyberCARD 2011, a workshop on Cooperative Autonomous Resilient Defenses in Cyberspace. Jointly sponsored by PNNL, the National Science Foundation, CRAY, and the University of Pittsburgh, the workshop set in motion the first step toward advancing a national agenda and framework for cyberspace defenses.

Program co-chairs Mohamed Eltoweissy (PNNL), and David Aucsmith (Microsoft Corporation), provided the vision and direction for a program that is attracting industry experts and thought leaders in the field of cyberspace defense. Members from PNNL's Cybersecurity team also actively participated in the workshop and are currently working on a closely related Laboratory initiative.

## WHY IT MATTERS

Cyberspace defense is vital in today's world. The scale, complexity, and sensitivity of the targeted systems and their historical reliance on untrustworthy components is problematic. Coupled with the increased sophistication, resources, and insider-knowledge of the perpetrators, the destructive impact of attacks is alarming. A multi-disciplinary and coordinated multi-agency response – including a robust research agenda – is critically needed. At the same time, working collaboratively is essential toward solving this threat of global proportions.

CyberCARD 2011 was successful in launching the development of a national research agenda and unifying framework. A major theme that emerged from the workshop is the need for new science and engineering for defining, evaluating, and verifying secure and resilient computing, communication, and control to defend against cyber attacks, particularly on the emerging smart infrastructure systems.

PNNL delivers leadership and advancements in science, national security, energy, and the environment for the benefit of the nation.

