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For immediate release

Argonne bolsters efforts in security research

ARGONNE, IL – (Nov. 28, 2007) The U.S. Department of Energy's Argonne National Laboratory has expanded its capabilities to protect U.S. interests at home and abroad.

The Vulnerability Assessment Team (VAT) moved to Argonne's Nuclear Engineering Division last month from Los Alamos National Laboratory (LANL). The VAT conducts multi-disciplinary research and development on physical security devices, systems and programs.

"The VAT's expertise and capabilities align extremely well with Argonne's work in national and homeland security," said Alfred Sattelberger, associate director of physical sciences and applied science and technology at Argonne, who helped to find the group a home at Argonne. "Since the tragedies of Sept. 11, 2001, this lab has been actively bolstering its research portfolio to support the federal government's national security efforts. We expect that the VAT will be integrated into that work."

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Argonne National Laboratory
is managed by the
University of Chicago for the
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The VAT has worked extensively in the areas of product anti-counterfeiting, tamper and intrusion detection, cargo security, nuclear safeguards and the human factors associated with security using the tools of industrial and organizational psychology.

The VAT made the move to Argonne because the team wants to make scientific research an integral part of its activities – a strategy not typically considered or employed when it comes to physical security, said Roger Johnston, who heads the team.

"We're trying to elevate the field of physical security," said Johnston, who earned a doctoral degree in physics from the University of Colorado. "You can't for the most part get a degree in physical security even though physical security is extremely important and can often be a complex, multidisciplinary problem. Unfortunately, security is not viewed in the same way that science and technology is viewed. Too often, security is thought of as being black or white—something is either secure or it is not. In reality, security is a spectrum, with lots of tradeoffs and uncertainties. Security should be controversial, constantly progressing and not thought of as having only one right answer. There are intelligent approaches to addressing security unknowns and that's where scientific research, including social science, comes into play."

Another reason Argonne was an appealing destination for the VAT team is the lab's "attitude that it should be interacting with private industry," Johnston said. "We want to work more with private industry. We've gotten a lot of interest from companies about security." The VAT is especially interested in collaborating with the pharmaceutical industry, which struggles with the issue of how to deal with drug counterfeiting and tampering.

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Argonne bolsters efforts in security research — add two

The VAT was also attracted to Argonne because of the laboratory's interest in students. The VAT employed more than 50 student research assistants in 14 years at LANL.

Because the over-arching goal of the VAT team – which also includes Jon Warner, a systems engineer, Peter Chen, a psychology professor at Colorado State University, and a soon to be hired computer and security analyst – is to improve security, its members have to think like "the bad guys," said Warner. "We are adversarial vulnerability specialists; we focus on being the bad guys."

Ross Anderson, a University of Cambridge professor of security research, said this about the VAT: "The most impressive physical security research team in the world is probably Roger Johnston's Vulnerability Assessment Team at Los Alamos." Indeed, the team has 10 U.S. patents, two R&D 100 awards, and was awarded Popular Science magazine's "Best of What's New Award," the LANL Fellows Prize for Outstanding Research, and the LANL Achievement Awards in 2007, 2004, 1999 and 1995.

Past VAT sponsors include the International Atomic Energy Agency, EURATOM, the U.S. Departments of Energy, State and Defense, the DOE's National Nuclear Security Administration, intelligence agencies and private companies. In addition to its own research, the team hosts a peer-reviewed scientific journal on physical security, the only known one of its kind, Johnston said.

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Argonne bolsters efforts in security research — add three

About Argonne

Argonne National Laboratory, a renowned R&D center, brings the world's brightest scientists and engineers together to find exciting and creative new solutions to pressing national problems in science and technology. The nation's first national laboratory, Argonne conducts leading-edge basic and applied scientific research in virtually every scientific discipline. Argonne researchers work closely with researchers from hundreds of companies, universities, and federal, state and municipal agencies to help them solve their specific problems, advance America's scientific leadership and prepare the nation for a better future. With employees from more than 60 nations, Argonne is managed by UChicago Argonne, LLC for the U.S. Department of Energy's Office of Science.

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