

## **Workshop on Adaptive Host and Network Security**

14 September, 2012 @ SASO 2012, Lyon France, 10-14 September, 2012

Over the past decade the threat of cyber attacks on critical commercial and government infrastructure has been growing at an alarming rate to a point where it is now considered to be a major threat in the world. Current approaches to cyber security involve building fast-growing multi-million line systems that attempt to detect and remove attacking software. Meanwhile, cyber exploits continue to multiply in number, but their size continues to be a couple of hundred lines of code. This disparity of effort means that the current defensive approaches to cyber security can at best fight a holding action. The workshop is intended to explore game-changing approaches to cyber security that focus on adaptation. There is a clear need to develop systems at both the host level and the network level to actively adapt to cyber attacks and to provide greater protection for networked computation at all levels.

The format for this full day workshop is to have a number of short paper presentations, thematically organized discussion and panel sessions, and one invited speaker.

The significance of this workshop is to bring together researchers from different areas such as networking, programming languages, computer hardware, and operating systems to gain broad insights into specific research issues related to adaptive host and network security, and to foster discussions about ongoing research, establish directions for future research and collaborations, and identify best practices for adaptive security.

### **Specific topics of interest include:**

- Protecting the host
- New OS models for secure hosts
- Combining proof, model checking and dynamic monitoring techniques for host security
- Meta-level control and monitoring of networks
- Use of feedback mechanisms in network operations
- Self-monitoring and self-explaining network systems
- Self-adaptive and autonomic networking
- Centralized versus distributed network control
- Measurement of network properties in support of self evaluation
- Programming language abstractions to support security
- Computational models of network security
- Self healing networks
- Learning in adaptive networks
- Dynamically reprogrammable switches
- The use of a Policy-based Network Management system to build self-adaptively secure networks

## Organizing committee chairs.

### Stuart Wagner

Applied Communication Sciences  
[swagner@appcomsci.com](mailto:swagner@appcomsci.com)

### Robert Laddaga (primary email contact)

DOLL, Inc.  
[rladdaga@dollabs.com](mailto:rladdaga@dollabs.com)

### Robert Watson

University of Cambridge, UK  
Computer Laboratory  
[robert.watson@cl.cam.ac.uk](mailto:robert.watson@cl.cam.ac.uk)

## Submission

- **Deadline for submission: July 04, 2012**
- Acceptance notification: **July 25, 2012**
- Early registration deadline: August 20, 2012
- Camera-ready papers: **August 24, 2012**
- *The exact deadlines are at 11:59pm Hawaii time (HST)*

The length of a workshop paper may not exceed 8 pages including references and follow the IEEE Computer Society Press proceedings style guide. A Latex package and Word template can be downloaded here: <http://www.computer.org/portal/web/cscps/formatting>

All papers should be submitted in PDF format using the EasyChair login page for Adaptive Host and Network Security 2012:

<https://www.easychair.org/conferences/?conf=ahansaso2012>

By submitting a paper, the authors confirm that in case of acceptance, at least one author will attend the workshop to present the work.

More information for authors can be found on the SASO webpage:

<http://saso2012.univ-lyon1.fr/index.php?menu=submission>

Should you have any questions please contact Robert Laddaga ([rladdaga@dollabs.com](mailto:rladdaga@dollabs.com)).