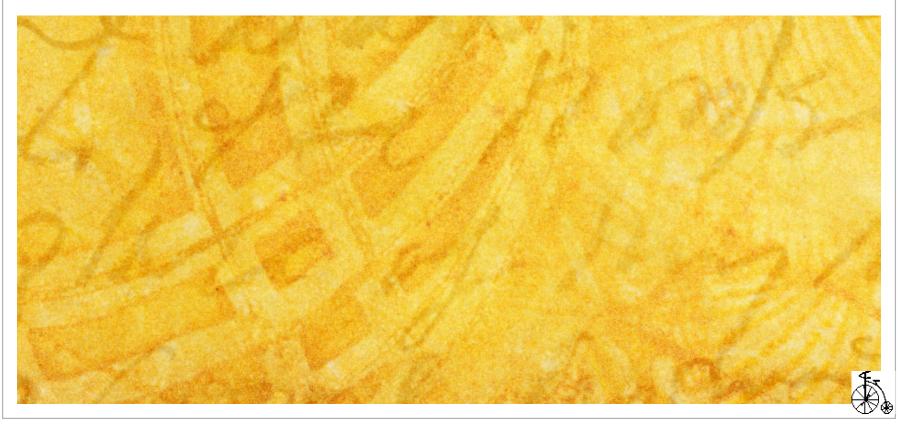# Workshop on GENI and Security

January 22–23, 2009

# Workshop Goal

- To engage the security community in GENI's planning, design, prototyping, and early trial experiments (now underway) to ensure that security issues are properly considered during development.

- To give ideas on how to make GENI as useful as possible to the security community

- To answer, or suggest approaches to determine the answers, to several questions
  - See breakout sessions

- To solicit security-related proposals

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# Agenda: Thursday Morning

8:30–9:00     Welcome, schedule, orientation, discussion of goals, *etc*

9:00–10:00    Talk: All about GENI, both organizational and technical

10:00–10:15   **Break**

10:15–10:45   Talk: Experimentation in Security

10:45–11:00   Talk: Reflections on GENI Security

11:00–11:15   Talk: National Cyber Range

11:15–12:00   Participant talks

12:00–1:15    **Lunch** (at Tercero)

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# Agenda: Thursday Afternoon

| | |
|---|---|
| 1:15–2:25 | Breakout #1 |
| 2:25–2:40 | Reports from breakout groups (5 minutes each) |
| 2:40–3:20 | Participant talks |
| 3:20–3:35 | **Break** |
| 3:35–4:45 | Breakout #2 |
| 4:45–5:00 | Reports from breakout groups (5 minutes each) |
| 5:00–6:00 | **Reception** (in the lobby) |

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# Agenda: Friday Morning

| | |
|---|---|
| 8:30–9:00 | Logistics, review of previous day's results |
| 9:00–9:50 | Participant talks |
| 9:50–11:00 | Breakout #3 |
| 11:00–11:15 | **Break** |
| 11:15–11:30 | Reports from breakout groups (5 minutes each) |
| 11:30–12:00 | Plenary discussion, summing up, *etc*. |
| 12:00 | **Workshop ends** |

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# Participant Talks: Thursday Morning

11:15 Nick Weaver

11:20 Nikita Borosov

11:25 Joao Cangussu

11:30 Justin Cappos

11:35 Nick Feamster

11:40 Wenke Lee

11:45 John Hartman

11:50 Ken Klingenstein

# Participant Talks: Thursday Afternoon

2:40  Ben Zhao

2:45  Chase Cotton

2:50  Richard Ford

2:55  Raquel Hill

3:00  Patrick McDaniel

3:05  Deborah Frincke

3:10  Ehab Al-Shaer

# Participant Talks: Friday Afternoon

9:00    Brian Hay

9:05    Calvin Ko

9:10    Carrie Gates

9:15    Yan Luo

9:20    Doug Pearson

9:25    Jacques Thomas

9:30    Von Welch

9:35    Sandeep Gupta

9:40    Robin Wilton

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# Breakout Sessions

- Designed to focus on specific questions, areas

- Three sessions of 70 minutes each
  - People assigned to first sessions
  - You can go to any of the second and third sessions—we urge you to go to a different one each time!

- At end of each session, 5 minutes to present answers, thoughts, *etc*., to series of questions
  - See following slides

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# Breakout #1: Experimental Issues

*Moderators*: Terry Benzel, Karl Levitt

- What types of experiments will people want to do on GENI?

- What resources (construed broadly) do they need?

- What types of experiments could be started quickly assuming resources were available? What types of these resources could be made available quickly?

# Breakout #2: Infrastructure Issues

*Moderator*: Deborah Frincke

- What technological issues arise from a federated, heterogeneous environment?

- What procedural issues arise from a federated, heterogeneous environment? Can we separate these from technological issues?

- What legal issues arise from this network being spread over multiple jurisdictions? This includes international jurisdictions such as Europe.

# Breakout #3: GENI Security Issues

*Moderator*: J. F. Mergen

- What does "GENI security" mean? What does "protecting (a federated) GENI" mean?

- How do we protect GENI experiments from one another?

- How do we protect GENI itself from both experiments and outside attack? When things go wrong within GENI, how do we restore it?

- How do we protect the outside world from experiments? This includes the Internet, SCADA, cellular systems, and any other type of system or network connected to GENI.

# Logistical Information

- Bathrooms
  - Midway down the corridor outside this room

- Wireless network
  - Called "moobilenet" (yes, *two* "o"s—think cows)
  - Bring up web browser
    - Login is bishop@cs.ucdavis.edu
    - Password is "geni-sec"
  - This will work in many places on campus
    - *Warning*: this network may not be accessible on other floors of this buildng

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# Web Site

- We want to put a list of participants there
  - Plan is: Name, affiliation
  - If you do not want to be listed, please tell us!

- We also would like to put slides, results of breakout sessions there
  - If you do not want your slides put up, please tell us!

- Web site:
  - http://seclab.cs.ucdavis.edu/meetings/gen-sec

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# Travel Support

- Form in your packet
  - Also available on the web at
  http://www.cs.ucdavis.edu/department/forms/travelexpense.pdf

- Fill it out, sign it, send it *along with the original receipts* to:

  > Matt Bishop
  >
  > Dept. of Computer Science
  >
  > University of California at Davis
  >
  > 1 Shields Ave.
  >
  > Davis, CA 95616-8562

- Please do so within 30 days!

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# People

- Co-chairs:
  - Matt Bishop, UC Davis
  - Chip Elliott, BBN

- General Assistance
  - Sean Peisert, UC Davis

- Local Arrangements
  - Greg Gibbs, UC Davis
  - Linda Tsang, UC Davis

- **Sponsor**
  - **National Science Foundation**

- Steering Committee
  - Heidi Picher Dempsey, BBN
  - Deborah Frincke, PNNL
  - Suzanne Iacono, NSF
  - Karl Levitt, NSF
  - John Mitchell, Stanford
  - Vern Paxson, UC Berkeley
  - Taieb Znati, NSF

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