

# Trends in SwA Practice: Education and Adoption

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# Academia Contributes to Software Assurance

## DHS SwA Partnership with Academia

- Working Group - Workforce Education & Training
- Build Security In Website
- Curriculum models

## Research Initiatives

- Workshops
- Standards
- Building and Piloting Methods, Practices, and Frameworks



# Workforce Education & Training

## Co-chairs

- Dan Shoemaker
- Sam Redwine
- Art Conklin

Composed of members from industry, government, and academia and facilitates both students and educational institutions to improve their production of adequately secure software

## Products

- Software Assurance Body of Knowledge V1
- Pocket guides



# Education Material: Build Security In

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Build Security In web site: <https://buildsecurityin.us-cert.gov/>

- For use by software developers and software development organizations
- BSI contains or links to information about best practices, tools, guidelines, rules, principles, etc. to help organizations build secure and reliable software.

Contributing authors include CMU SEI CERT, Cigital, and experts from the SwA community

Expanding to include current doctoral research

Sponsored by U.S. Department of Homeland Security, Software Assurance Program



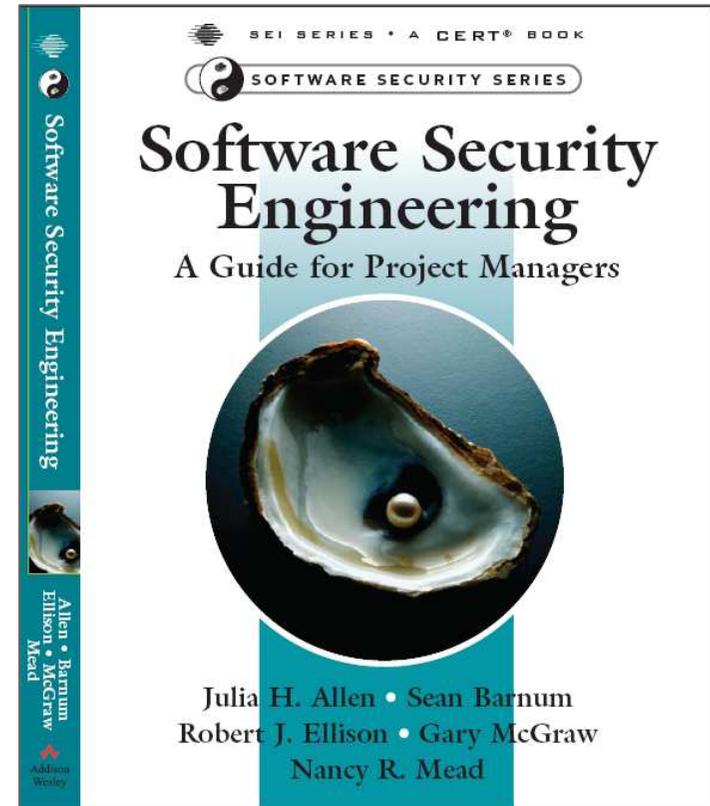
# Software Security Engineering: A Guide for Project Managers

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Published May 2008

Contains an introduction to software security engineering and guidance for project managers

- Derives material from DHS SwA “Build Security In” web site
- Provides a process focus for projects delivering software-intensive products and systems



# Software Assurance Curriculum Development in support of DHS NCSD

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Development of graduate curriculum reference model for Master's in Software Assurance, and software assurance specialization(s) within other master's degrees. Related artifacts include sample curricula and faculty awareness seminar. Delivery 2Q2010

Development of annotated undergraduate course outlines in software assurance, to fit into a variety of existing curricula. Related enhancements include more detailed course descriptions and more hands on (e.g. secure programming) content. Delivery 1Q2010

# Workshop: Making the Business Case for SwA

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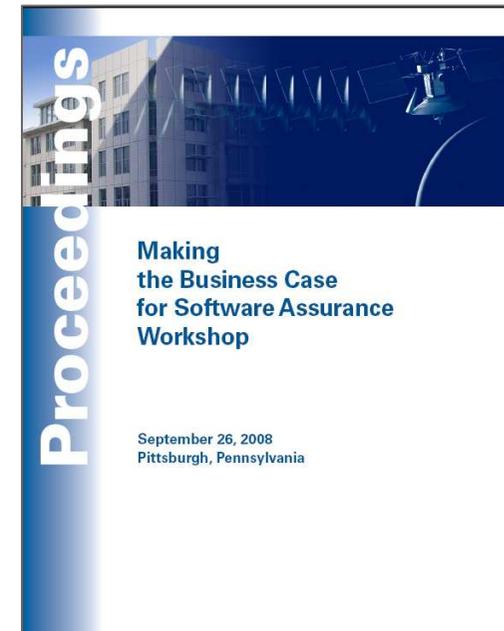
Held September 26, 2008 at Carnegie Mellon

Invited speakers, refereed paper presentations, facilitated discussions; 70 researchers and practitioners

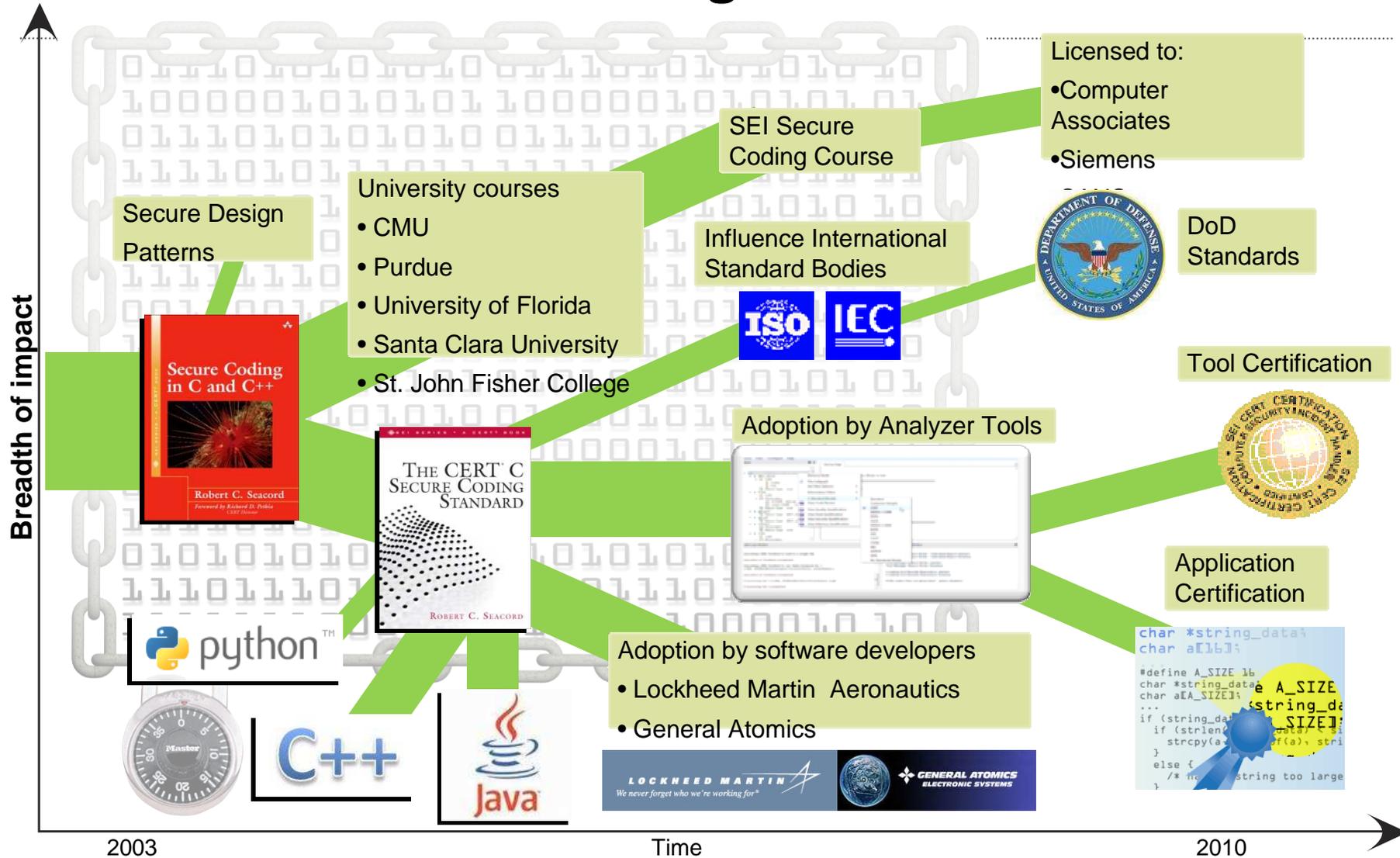
Topics:

- Measurement
- Process and decision making issues
- Legal issues
- Globalization
- Risk issues
- Organizational development issues

[http://www.sei.cmu.edu/community/BCW\\_Proceedings.pdf](http://www.sei.cmu.edu/community/BCW_Proceedings.pdf)



# Standards: Secure Coding Initiative



# SwA Needs From Academia (Nov 09 Forum)

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Academia has capabilities that SwA can leverage

- Curriculum, teaching skills, multiple delivery approaches, students

Tapping capabilities requires a planned approach

- Agreed body of knowledge structured for course content and delivery
- Appropriate teaching level (Masters, Bachelors, Community College)
- Measures of effectiveness
  - For hiring organizations - certification?
  - For the students - Expectation of jobs
- Keeping the content current

# How Can the SwA Forum Help?

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SwA Forum participants:

- support education and research efforts
- tap education and research to address their needs
- contribute lessons learned

SwA Forum provides a venue for sharing research

**Is this enough?**

If not – what else is needed?

# Contact Information

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