CERIAS
Student Welcome
Agenda

- Welcome and Intro
- Services for Students
- CERIAS Seminar Series
- CERIAS Security Symposium
- Summer Internship Review
- Clubs and Organizations
- Recruiting Season
- Pizza & Networking
Who is CERIAS?

North America’s largest and top-ranked, interdisciplinary academic institute for Cyber and Cyber-physical Systems for security, privacy, resiliency, trusted electronics, autonomy and explainable A.I.
Purdue’s West Lafayette Campus

- Agriculture
- Education
- Engineering
- Health and Human Sciences
- Liberal Arts
- Management
- Pharmacy
- Purdue Polytechnic Institute
- Science
- Veterinary Medicine
CERIAS constituencies:

Industry:
- Formal Strategic Partners
- Companies funding IA/IS research at Purdue
- Government agencies funding IA/IS work at Purdue
- Government and non-profit organizations working to protect the Nation’s systems and infrastructure
Who can be a CERIAS affiliated student:

- Any Purdue student, in good academic standing, who has an interest in cyber/cyber-physical systems.
- Undergraduate, Masters, PhD Candidates, Post-Docs
  - [https://www.cerias.purdue.edu/students](https://www.cerias.purdue.edu/students)
Why be CERIAS affiliated?

- Scholarships / Fellowships
- Internship and career opportunities
- Invites to special events (on-campus and off)
- Invites to contests and promotions
- Conference support and travel grants
- Networking and Social opportunities
Why be CERIAS affiliated?

- Local employment opportunities
  - SENSE Program (Sandia National Labs)
  - RSA Anti-Fraud Command Center
  - IN-SAC (Indiana Information Sharing & Analysis Center)
  - Intel (Pathmaker, Research Assistantships)
  - Analog Devices
Why be CERIAS affiliated?

CERIAS Weekly Seminars - CS 59100-SEC
Wednesdays @ 4:30p, STEW G52

• The most-widely viewed security video series in North America
• Guest lectures and technical talks from industry and academia
• Online recordings available back to 2001
• For-credit class, or a week-by-week opportunity
• Available to juniors, seniors and all graduate students
Why be CERIAS affiliated?

Annual CERIAS Security Symposium, April 7-8, 2020

– Keynotes, topical panel discussions, technical talks
– STUDENT project poster session (with cash prizes!)
  • January emails with attached templates and instructions; pay attention to deadlines
– Student / Industry networking
– Career recruitment
CERIAS affiliated student internship experiences

Priyam Biswas – Intel

Lucas Hennessy – Crowe LLP
Clubs of possible interest to CERIAS students:

- B01lers Club – Bader Albassan
- Purdue Cyber Forensics Team – Yung Han Yoon
- Collegiate Cyber Defense Competition Team (CCDC) - Lucas Hennessy
- Women in Cybersecurity (WiCyS) – Kaitlyn Knabe
- 127.0.0.1 (localhost) – Jessa Ackerman / Harry Brennan
- Order of the Sword & Shield (Cybersecurity Honor Society) - Nigel Wilson
B01lers

What We Are
- An Offensive Security Team
- Compete in Global Competitions
- Competitive researchers
- Hackers

What We Do
- Capture The Flag competitions
- Attack and Defense competitions
- Playing the game of 0-Days
Skills you will use and learn

**Binary Exploitation**
- Remote code execution
- Stack and Heap overflows
- Abuse of OS Internals

**Web / Network**
- Exploiting web frameworks
- SQL Injection
- Packet Captures and Analysis

**Reverse Engineering**
- Read different assembly languages
- Reconstruct functionality from binary
- Defeating anti tamper techniques

**Crypto**
- Cracking flawed ciphers
- Hash collisions/reversing
- Predicting RNG
## Nationally Ranked

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*As of Apr 2nd 2019 Via ctftime.org*
Opportunities

Engagement

- Technical Talks
- Hardware

Events

- Callout
- Individual CTFs

Here is @GH0S1 from his better angle. Congrats again @shellphish and thanks to @oooverflow for hosting the event at DEF CON CTF's
B01lers Meeting Times

B01lers Training -- Web

When
Fri, August 30, 6:30pm – 8:00pm

Where
Lawson Computer Science Building, 305 N University St, West Lafayette, IN 47907, USA (map)

Description
Come out to the second training session for the b00tc4mp in LWSN B151. This session will cover the basics of web in the context of ctf challenges.

https://b01lers.net/calendar.html
CCDC

- Compete in the National Collegiate Cyber Defense Competition (CCDC)
- Meet two times a week
- Placed second in the Indiana Qualifier advancing to the Midwest Region Wildcard in both 2018 and 2019
- Founded in 2017
- Unofficial Purdue club affiliated with CERIAS
2019 Midwest Competition

- Blue Team vs. Red Team
- Keep the following scored services online:
  - Splunk Phantom
  - BIND DNS
  - Active Directory
  - Apache site with MySQL
  - SMTP
  - POP3
- Respond and perform business requests (injects)
  - Ex. Please allow the CEO VPN access from this IP address
Who Are We Looking For?

- Freshmen, Sophomores, Juniors
- Any and All Majors
- Hack the Planet

CCDC Callout: Tuesday, September 3rd from 7:30-8:30 PM in REC 108
WiCyS Conference in Pittsburgh 2019

Community Page and directory
Purdue University Chapter of
The Order of the Sword and Shield

- National chapter founded in 2010
- 56 other chapters
- Purdue chapter founded Spring 2018
- Security Disciplines:
  - Cybersecurity
  - Computer Science
  - Criminal Justice
  - Forensic Science
  - Etc.
- Excellence, knowledge, ethics, and peace.
- High value on Community Service
Upcoming Events:

- Eli Lilly Day at Purdue – August 28
  - Info Tables – Bell Tower 12:30 – 2:30
  - Panel Discussion – PMU North Ballroom 4:15
  - Career Breakout Session – Stewart Center 5:30

- CyberSecurity Awareness Month *(hosted by IT@P)* October
  - Privacy Matters Panel Discussion – October 29
    - Krannert Auditorium, 5:30p – 7:00p
  - ”Boss of the SOC” sponsored by Splunk
  - “I’ve Been Hacked” cybersecurity escape room
CERIAS Student Recruitment Events

Mastercard Workshop – September 4

“Student Marketability for Careers in Cybersecurity”

Rebecca Ledingham
VP, Product Development and Innovation, Cybersecurity Products
Mastercard

Register at: https://cerias-mastercard.eventbrite.com

Is your resume/CV current?
CERIAS Recruiting Event
Sept. 10, 7-9p, STEW 218

Internship and Career opportunities from: *Eli Lilly, General Motors, Intel, Lawrence Livermore National Lab, Lockheed Martin, Mastercard, NSA, Purdue IT@P, Raytheon, Sandia National Labs and more!*

Light refreshments will be served


*Is your resume/CV current?*
CERIAS Student Recruitment Events

• AITP Computing Career Fair, September 5
  – Open to all computing students (regardless of department)
• CS Career Fair, Monday, September 9
• ECE Career Fair, Monday, September 9
• IE Career Fair, Monday, September 9
• Purdue Industrial Roundtable (IR), September 10-11
  – Largest career fair of the academic year
• CIT Career Fair, September 12

Is your resume/CV current?
Please affiliate yourself with CERIAS!

- The best way to keep informed about:
  - Internships & career opportunities
  - Free admission to CERIAS Symposium and other related events
  - Contests and other promotions
  - Poster assistance

- [www.cerias.purdue.edu/students](http://www.cerias.purdue.edu/students)
Center for Education and Research in Information Assurance and Security

Information for Students

New Students Start Here:

Register with CERIAS

Are you a Graduate or Undergraduate student that is interested in information security? Register to be affiliated with CERIAS! We'll add you to our mailing list so you can hear about infosec related events on campus. Also, IT'S FREE to join!

Register here

Other Resources

Upload your Resume

CERIAS Strategic Partners are always looking to hire top infosec talent. We'll add your resume to our database so your skills can be seen by our partners.

Upload your resume here
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Consider enrolling in CERIAS Seminar CS 59100-SEC

Questions?

Pizza!
Center for Education and Research in Information Assurance and Security