Promoting Cybersecurity Competitions at Nova Southeastern University (NSU)

Wei Li, Ph.D.,
College of Computing and Engineering, Nova Southeastern University, Fort Lauderdale, FL

2019 CAE IN CYBERSECURITY SYMPOSIUM
November 22, 2019, Phoenix, AZ

NSU Florida | NOVA SOUTHEASTERN UNIVERSITY

CAE IN CYBERSECURITY COMMUNITY

Outline

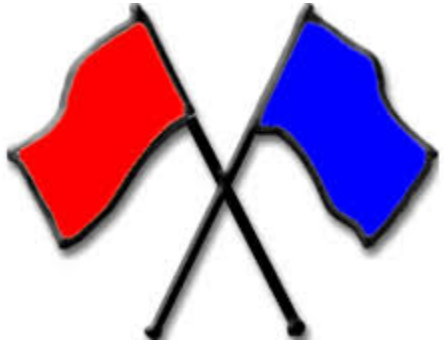
- National cybersecurity competitions currently being promoted
- Faculty support of cyber competitions
- Programs/Courses promotions of cyber competitions
- Outcomes/Benefits of cyber competitions
- Future steps

CAE at NSU

- First designated as a CAE in March 2005
- Amongst the first in Florida
- Re-designated in 2009, and most recently in 2014 as a CAE-CD
- Located in NSU's main campus in Davie/Fort Lauderdale, FL
- Website: https://infosec.nova.edu/

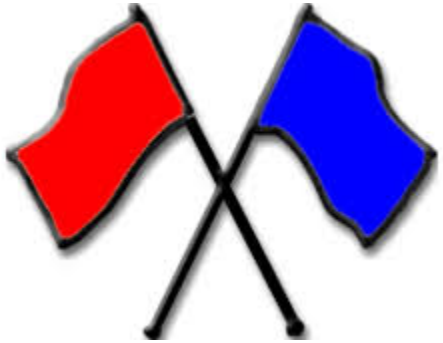
Promotion of cybersecurity competitions

- National
- Regional
- Local
- Program



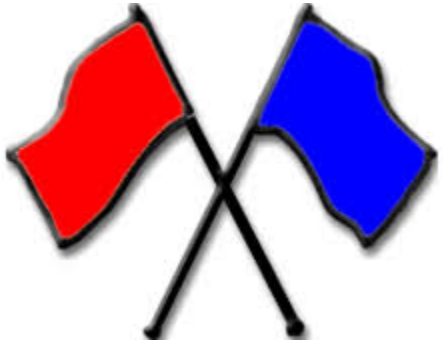
National Competitions

- DEF CON
- NYU-CSAW (Cyber Security Awareness Week)
- US Cyber Challenge: Cyber Quests
- National Cyber League
- Facebook Capture the Flag Competition
- Department of Energy CyberForce Competition



Regional/Local

- Regional
  - Southeast CPTC
- Local
  - Hackathon
  - Hack NSU
  - Cybersecurity month
  - Competitions built on curriculum



Support from the government

NSU's College of Engineering and Computing Presents

TechTalk-Cyber Threatscape: Business E-mail Compromise

J. Richard "Rick" Kiper, Ph.D.
Kiper@mynsu.nova.edu

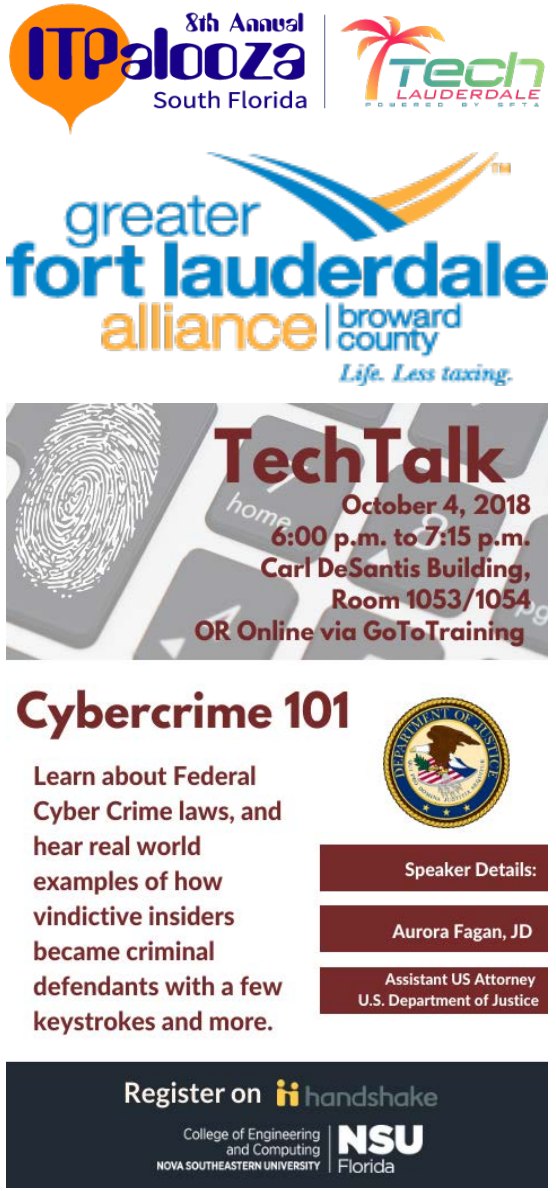
Dr. J. Richard "Rick" Kiper is a highly-decorated Special Agent, digital forensic examiner, and instructor working for the FBI since 1999. He has served as a senior manager, lead investigator, project manager, and liaison in a variety of overseas assignments including Assistant Legal Attaché to San Salvador. Along with four degrees in computer science and education, Dr. Kiper also holds seven Global Information Assurance Certifications in the field of cybersecurity and serves as an advanced instructor in

When: Thursday, May 31 @ 5pm EST

Location: Nova Southeastern University - Main Campus
3301 College Ave, Ft. Lauderdale, FL— Carl DeSantis Building
Room - TBD

According to the FBI's Internet Crime Complaint Center (IC3), Business E-mail Compromise (BEC) is one of the fastest growing and lucrative scams committed by online criminals today. The methods are simple, the risks are small, and the payoffs are huge. This presentation explores how BEC attackers target their victims, how they gain and maintain their victims' personas, and how they exploit the ability to impersonate their victims in order to rip off hundreds of thousands of dollars. Businesses worldwide are losing more than $5 billion annually, with no signs of slowing down. Fortunately, there are steps we can take to substantially lower our risk.

Support from the industry

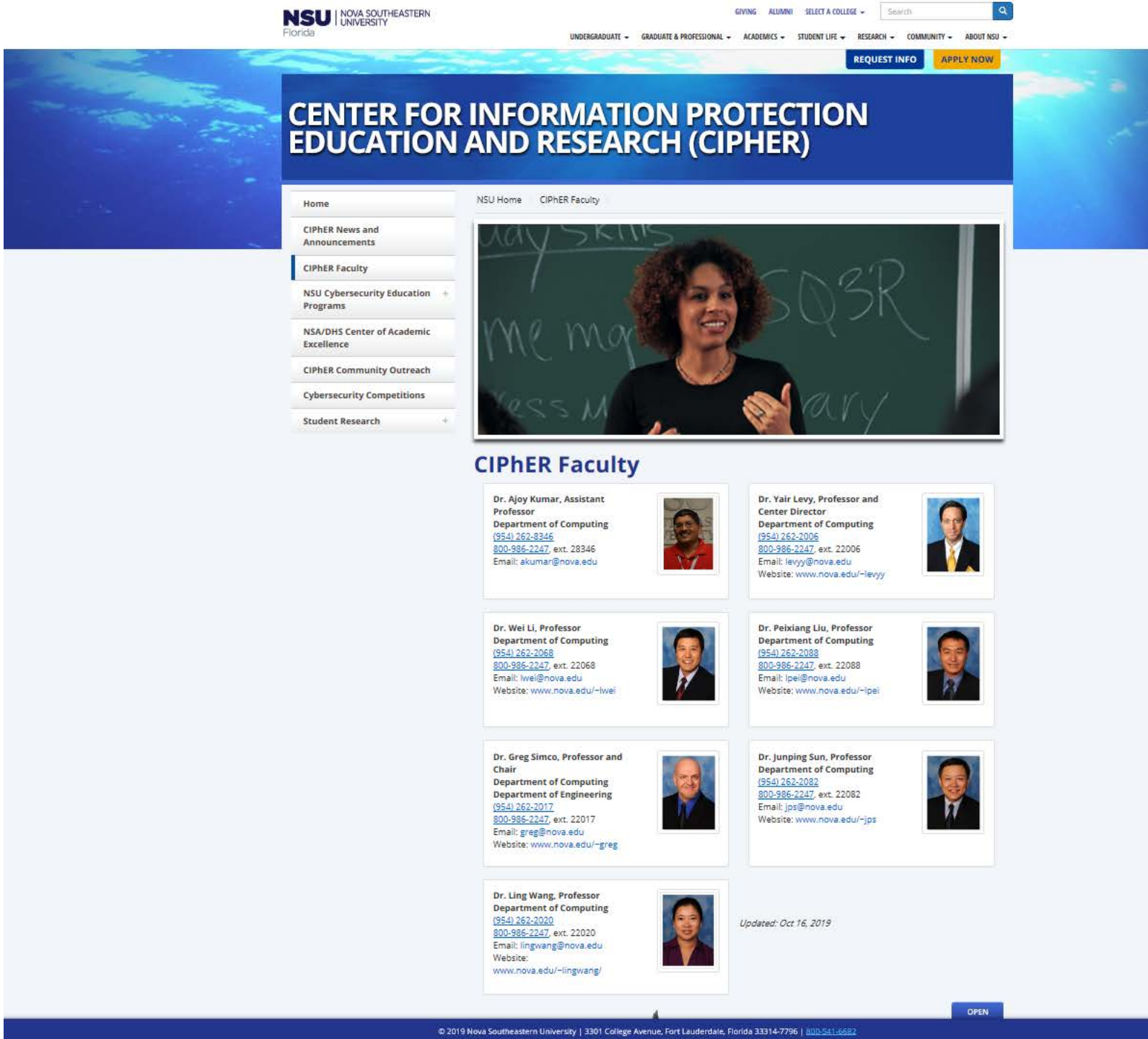


SF high-tech companies

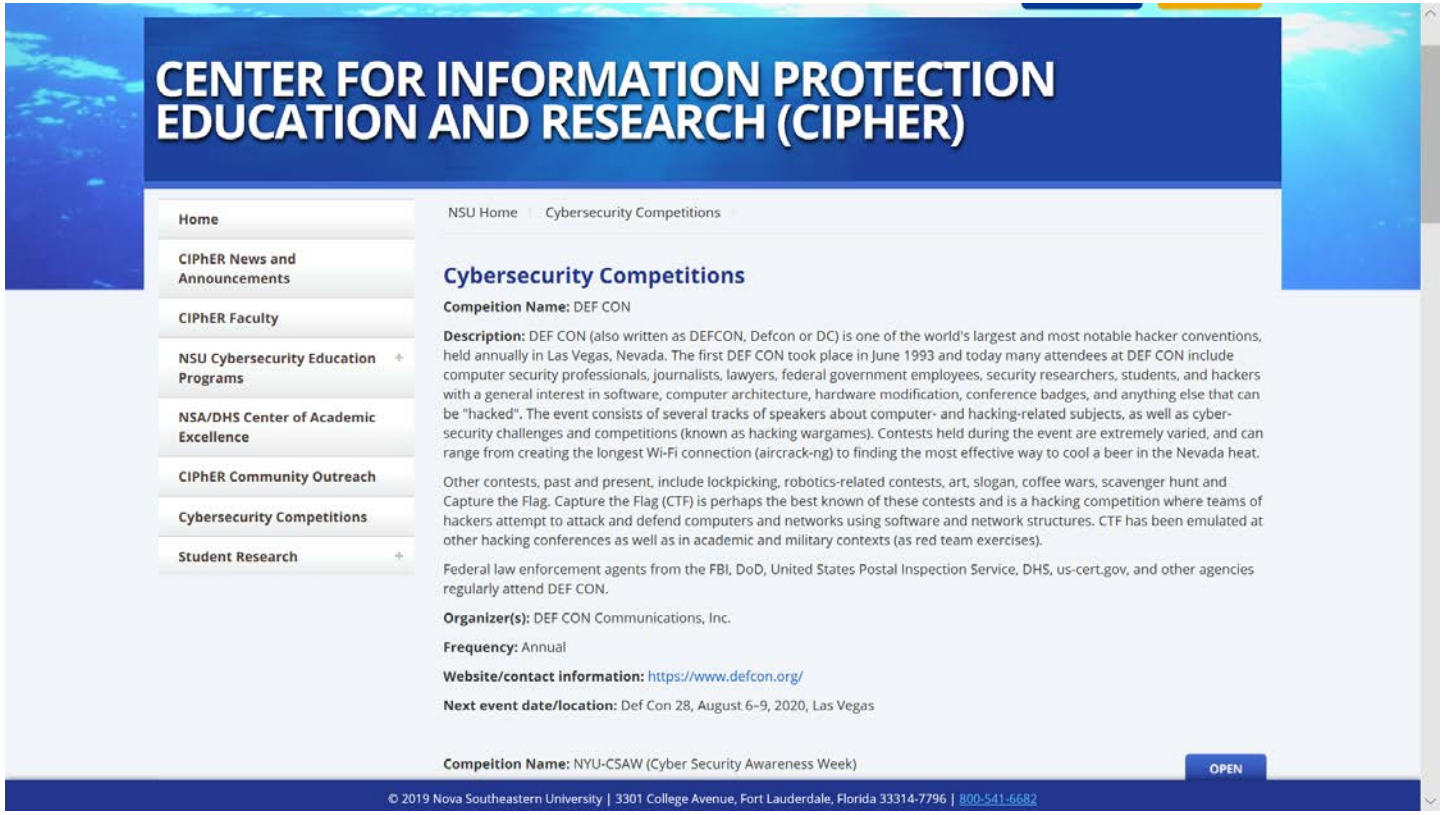
- South Florida Tech Gateway –Miami, Fort Lauderdale, West Palm Beach
- https://www.techgateway.org/
- Increasing number of start-ups
- Increasing demand on Cybersecurity talents

Faculty support

- 7 full-time faculty members in cybersecurity
- Faculty members from other disciplines
- Adjunct faculty members

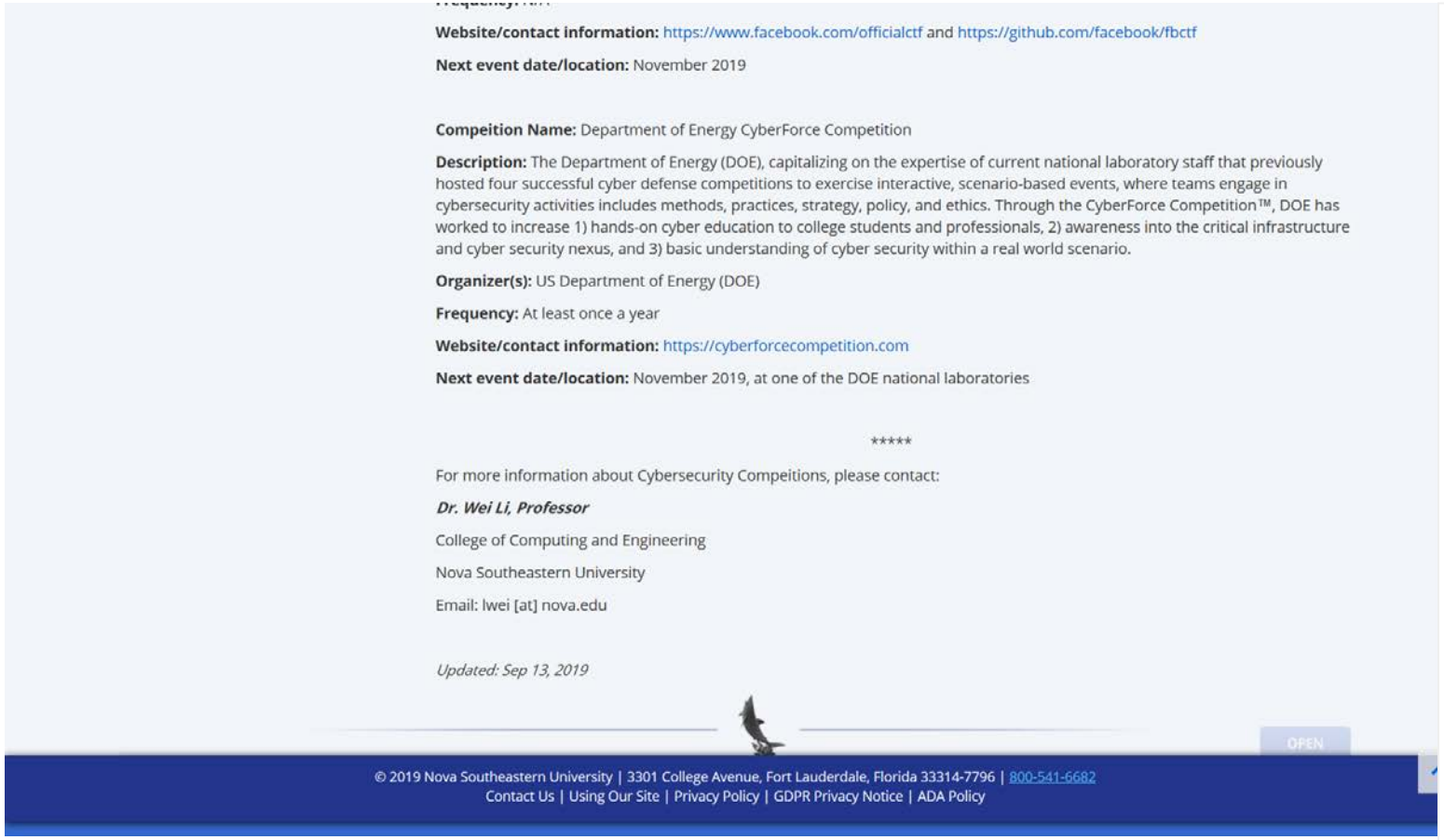


Competitions on the center's website



- https://infosec.nova.edu/competitions/
- Regular updates of competition information

Designated POC



Website/contact information: https://www.facebook.com/officialctf and https://github.com/facebook/fbctf

Next event date/location: November 2019

Compeition Name: Department of Energy CyberForce Competition

Description: The Department of Energy (DOE), capitalizing on the expertise of current national laboratory staff that previously hosted four successful cyber defense competitions to exercise interactive, scenario-based events, where teams engage in cybersecurity activities includes methods, practices, strategy, policy, and ethics. Through the CyberForce Competition™, DOE has worked to increase 1) hands-on cyber education to college students and professionals, 2) awareness into the critical infrastructure and cyber security nexus, and 3) basic understanding of cyber security within a real world scenario.

Organizer(s): US Department of Energy (DOE)

Frequency: At least once a year

Website/contact information: https://cyberforcecompetition.com

Next event date/location: November 2019, at one of the DOE national laboratories

*****

For more information about Cybersecurity Compeitions, please contact:

Dr. Wei Li, Professor

College of Computing and Engineering

Nova Southeastern University

Email: lwei [at] nova.edu

Updated: Sep 13, 2019

OPEN

© 2019 Nova Southeastern University | 3301 College Avenue, Fort Lauderdale, Florida 33314-7796 | 800-541-6682
Contact Us | Using Our Site | Privacy Policy | GDPR Privacy Notice | ADA Policy

- Designated coordinator of cybersecurity competitions: Dr. Wei Li
- Reviewing process of events we promote

Program-/Course-Level promotions

- 5 masters programs in College of Computing and Engineering
- Promotion mainly focused on two cybersecurity programs
  - M.S. in Cybersecurity Management
  - M.S. in Information Assurance & Cybersecurity
  - Students earn extra credits
    - E.g., ISEC 615: Fundamentals of Cybersecurity, ISEC 765: Managing Risk in Secure System, ISEC 665: Advanced Network Security
- Format
  - Student extra credits
  - Students participate in certification tests – e.g., CompTIA Security+, CISSP, etc.
  - Working on competitions as an option for course projects
    - E.g., Capstone courses

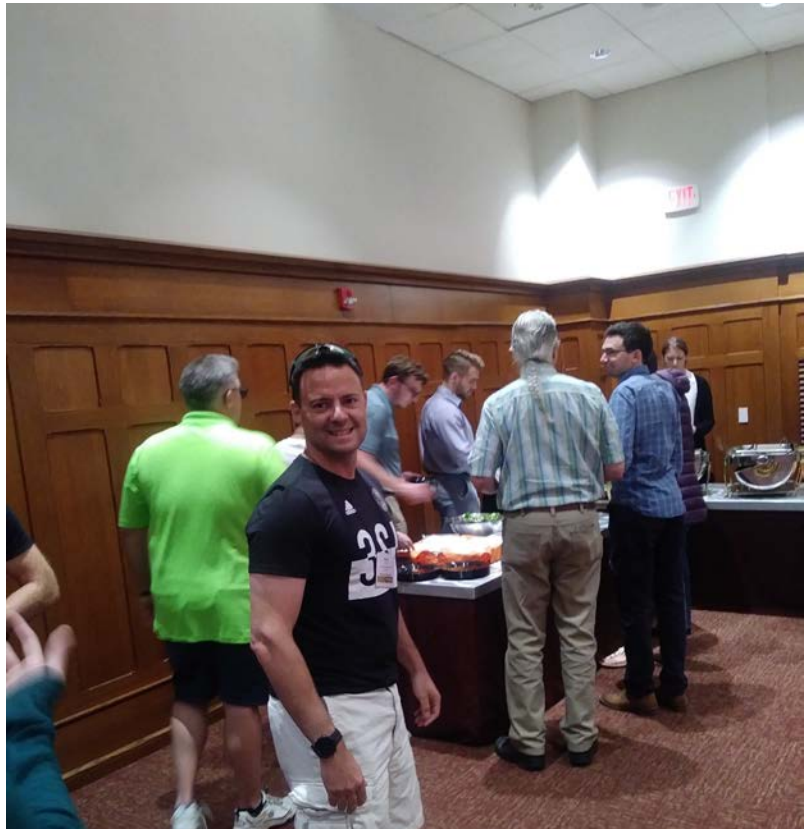
- If you are interested in participating in cybersecurity competitions, I will provide two (2) extra credit points if you demonstrate that you have registered, participated, and **achieved some reasonable level at a recognized cybersecurity competition. If you wish to learn more about cybersecurity competitions, check our page via:** https://infosec.nova.edu/competitions/

Recent outcomes

- Students
  - Attending national competitions
  - Campus-wide competitions
  - Positive feedback from students
    - Better understanding on course materials
    - More hands-on practice
    - Career advancement
- Collaboration with other programs/colleges in NSU
- Collaboration with certification & training organizations
- Promotion of CAEs and the university
- Enrollment

2019 US Cyber Challenge (USCC)

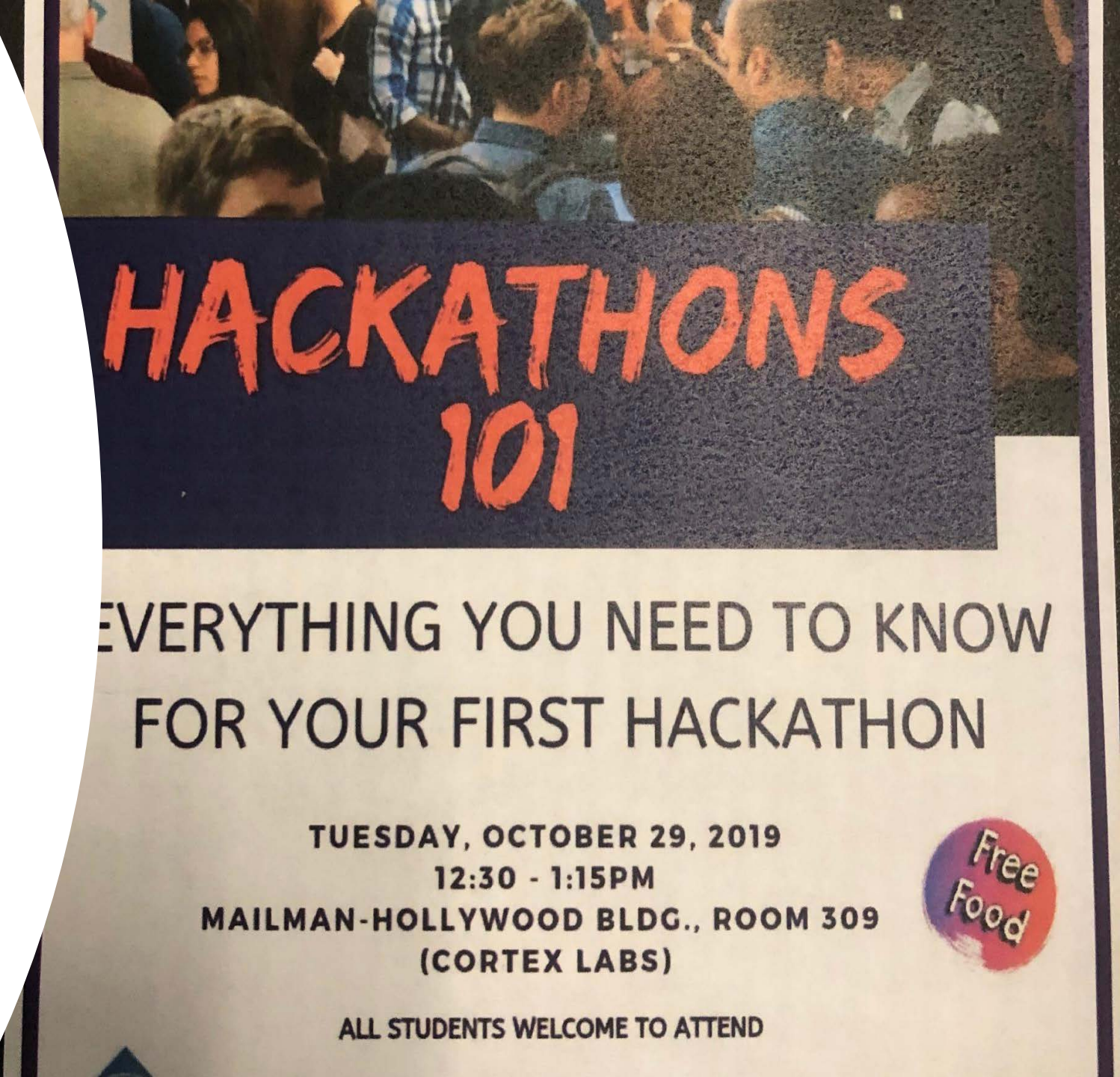
- 8 students participated
- Scored 31 ~ 96
- Attend the bootcamp
- Prepared for national CTF



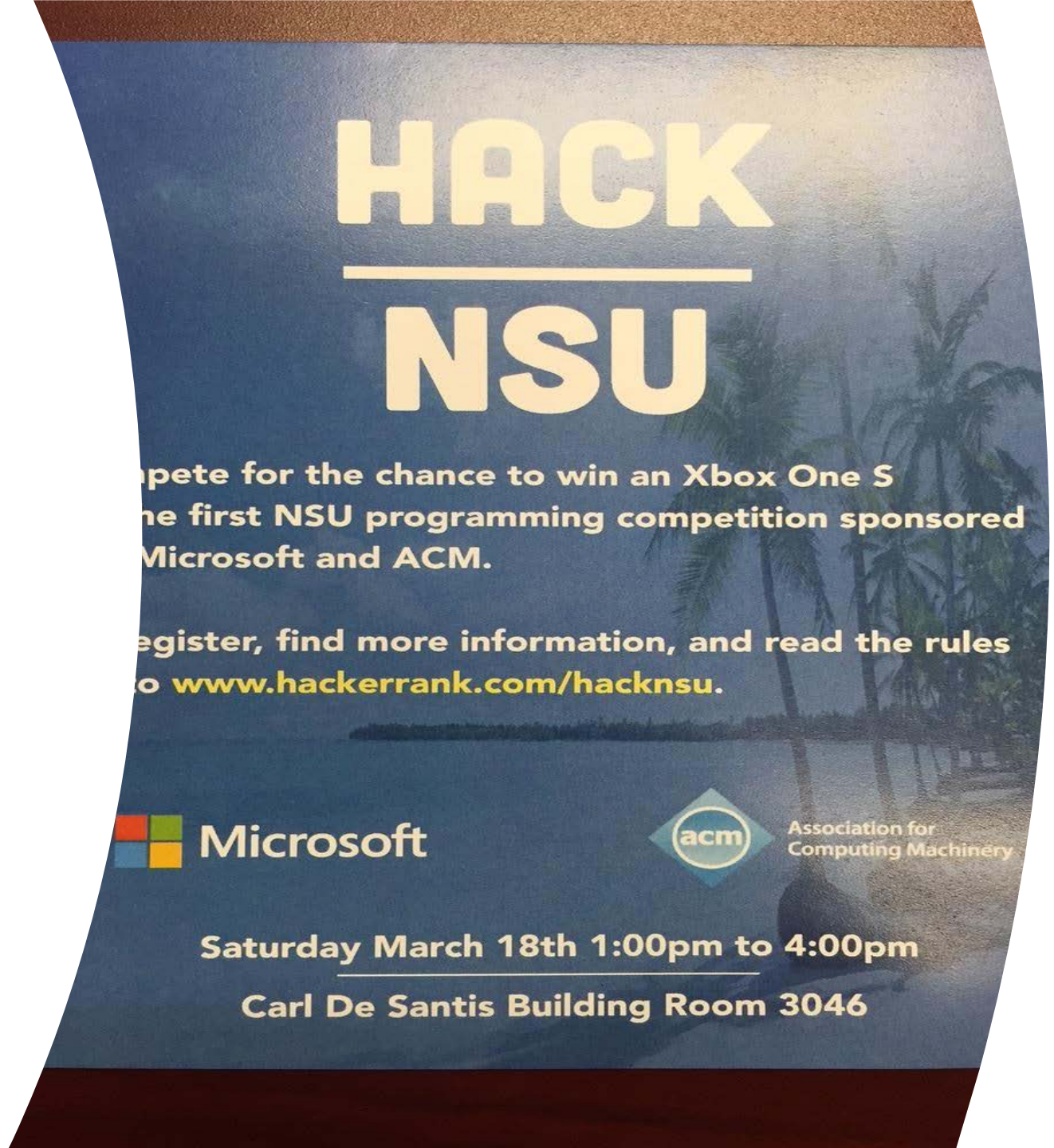
2019 US Cyber Challenge (USCC)

Eastern Regional Cyber Security Boot Camp @ Virginia Tech, Blacksburg, VA June 10-14, 2019

Hackathons 101



Hack NSU


HACK
NSU
pete for the chance to win an Xbox One S
he first NSU programming competition sponsored
Microsoft and ACM.
egister, find more information, and read the rules
o www.hackerrank.com/hacknsu.
Microsoft
acm
Association for Computing Machinery
Saturday March 18th 1:00pm to 4:00pm
Carl De Santis Building Room 3046

Program-/Course-Level promotions - future steps

- Extend promotion to other courses
  - E.g., ISEC 695: Information Security Management Project, ISEC 650: Computer and Network Forensics, etc.
- Extend the promotion to other programs
  - E.g., CISC 650: Computer Networks

More on future steps …

- More faculty involvement
- Better engagement of students
- Collaboration with local industry and government
- Collaboration with other universities/institutions
- Support from the College and University
  - IT technical support
  - Funding
- Your ideas??

Thoughts?
Questions?

Thank you!

CAE IN CYBERSECURITY COMMUNITY

NSU | NOVA SOUTHEASTERN UNIVERSITY
Florida