



DREXEL UNIVERSITY

Isaac L. Auerbach Cybersecurity Institute

September 2017 Newsletter

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Spotlight



Professor Kapil Dandekar

Professor of Electrical and Computer Engineering and Associate Dean for Research and graduate Studies. Technical Fellow of the Isaac L. Auerbach

Cybersecurity Institute

Professor Kapil Dandekar is a professor in the Electrical and Computer Engineering Department, and the director of the Drexel Wireless Systems Laboratory (DWSL). His current research and publications are in wireless, ultrasonic, and optical communications, reconfigurable antennas, and smart textiles. His research interests related to cybersecurity include RFID and wireless physical layer security, reactive jamming and anti-jamming techniques, as well as new technologies for cybersecurity education. He received a Ph.D. degree in Electrical and Computer Engineering from the University of Texas at Austin in 2001. He joined Drexel University in 2011. Prior to joining Drexel, he worked at the U.S. Naval Observatory and the U.S. Naval Research Laboratory.

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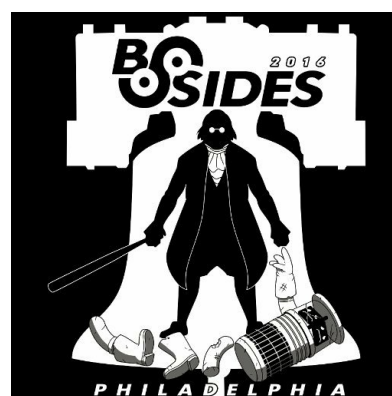
[Drexel Wireless Systems lab](#)

Institute News

NSA Cybersecurity Workforce Education Grant

The Isaac L. Auerbach Cybersecurity Institute will receive the Cybersecurity Workforce Education grant from National Security Agency (NSA). This grant will fund the development and offering of several new cybersecurity laboratory courses aimed at senior undergraduate students in Drexel's Department of Electrical and Computer Engineering (ECE), including Security Offensive and Defensive Topics, Blockchain and Cryptocurrency Laboratory, Wireless Security Laboratory, Image, and Video Forensics Laboratory.

Philly BSides Conference 2017



New Cybersecurity Courses

New Cybersecurity course sequence is offered this academic year!

- Instructor: Adjunct Professor **Russel Handorf** of FBI
- Undergraduate and Graduate
- Fall 2017 course: "Security Offensive and Defensive Tactics"
- Follow-up course in Spring 2018

<https://www.bsidesphilly.org/>

The BSides Philadelphia is an Information Security conference by information security community members. The conference is going to be at Drexel University again. The event will be just one day on December 8th. The meeting included speakers, demonstrations, and lectures related to numerous topics in cybersecurity. Small career opportunities and networking sessions were also provided throughout the conference. The limited tickets are available through the student organization, CyberDragons.

Drexel Isaac L. Auerbach Cybersecurity Institute Has a New Website!

[Click here to check it out](#)

Seeking Cyber Students



Join CyberDragons

- Knowledge and hands-on experience on cybersecurity topics
- Preparation for National Collegiate Cybersecurity Defense Competition
- Meetings for Fall term:

Tuesday: 17:00 - 19:00

Thursday: 17:00 - 19:00

Location: Science Center at 3401

Market St. 3rd-floor room 326

Email CyberDragons Student President **Colbert Zhu** with questions about how to get involved at colbert.zhu@gmail.com

[Click Here to Join!](#)



Drexel Women in Computing Society (WiCS)

Drexel's Women in Computing Society's (WiCS) purpose is to support, recruit, and retain women pursuing a degree in the broad field of computing. As a recognized student organization at

Drexel University, WiCS is open to current undergraduate and graduate students of all genders, majors, and backgrounds.

[Click here to learn more about the Drexel Women in Computing Society \(WiCS\)](#)

The Master of Science (MS) Degree in Cybersecurity at Drexel

The MS in Cybersecurity is an interdisciplinary program that prepares students with both the academic and practical training to be competitive in the ever-changing technical landscape of cybersecurity.

[Click here to view required courses and to learn more about the graduate co-op program](#)

Cybersecurity Institute's Recent Grants

Isaac L. Auerbach Cybersecurity Institute has been granted these three grants from different sources for researches in Cybersecurity topics.

1. High Performance Techniques to Identify the Source and Authenticity of Digital Videos Using Multimedia Forensics

Matthew C. Stamm who is a professor at Drexel Electrical and Computer Engineering is a Primary Investor (PI) of this grant. The grant is give by The Army Research Office Rapid Innovation Fund. The grant will be valid until June 2019.

2. Secure Hardware IP Solution Low Overhead Circuit Obfuscation Primitives

Ioannis Savidis who is a professor in College of Electrical and Computer Engineering at Drexel, is a Primary Investor (PI) of the grant. The grant is give by Drexel Ventures Innovation Fund. The grant will be valid until June 2018.

3. Attribution of Malicious Binaries

Rachel Greenstadt who is a professor in College of Computing and Informatics at Drexel, is a Primary Investor (PI) of the grant. The grant is give by Defense Advanced Research Project Agency (DARPA). The grant will be valid until 2019.

Drexel Women In Cybersecurity



Ni An

Ph.D. candidate in the Cybersecurity degree program

Ni is a Ph.D. candidate in the Cybersecurity degree program, and a member of the Modeling and Analysis of Network Laboratory (MANL) supervised by Steven Weber. She obtained a Bachelor's degree in Communication

Engineering in China in 2012, and a Master's degree in Electrical Engineering at Drexel University in 2015. She is a member of the

Drexel Women in Computing Society (WICE). Ni's research interests lie in the performance analysis of statistical network-based and host-based anomaly detection algorithms. Her research includes investigating distributed principal component analysis (PCA) based network anomaly detection algorithms, and studying the impact of the training sample size on the accuracy of PCA subspace estimation and the error rates of anomaly detection. In summer 2015, she worked as a Security Engineer intern at Comcast in Philadelphia, PA.

[Click here to learn more about Ni An](#)

Cybersecurity Institute's Recent Publications

Isaac L. Auerbach Cybersecurity Institute has worked on many publications. Recently, these two papers have been selected to be presented at 12th International Conference on Malicious and Unwanted Software on October 11th to 14th.

1. Behavioral Anomaly Detection of Malware on Home Router

Authors: Ni An, Alexander Duff, Gaurav Naik, Michaelis Faloutsos, Steven Weber and Spiros Mancoridis

2. Lightweight Behavioral Malware Detection for Windows Platforms

Authors: Bander Alsulami, Spiros Mancoridis, Avinash Srinivasan and Hunter Dong

DREXEL ISAAC L. AUERBACH CYBERSECURITY INSTITUTE

Director: Steven Weber, PhD

Student Coordinator: Michael Raffle, CST Student

For more information about the Drexel Isaac L. Auerbach Cybersecurity Institute, please email cybersecurity@drexel.edu

