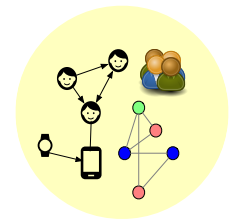
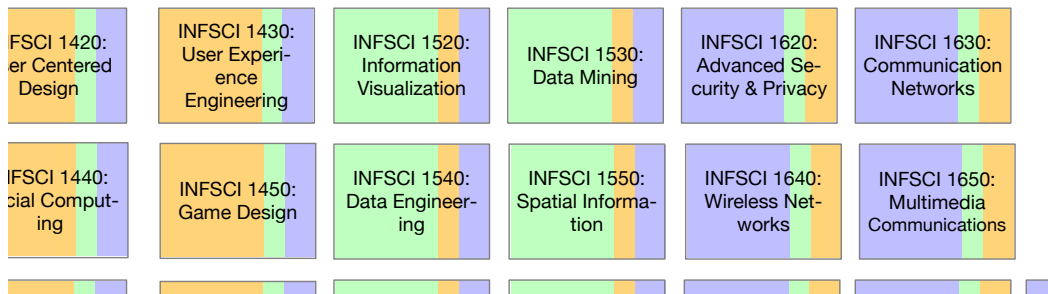
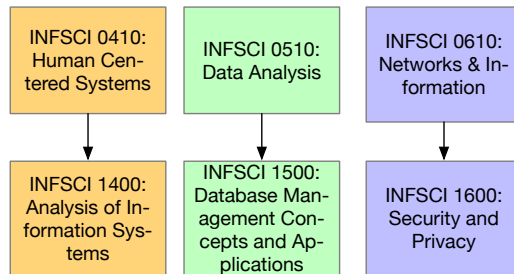
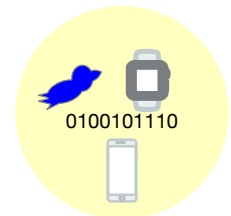


DINS Newsletter

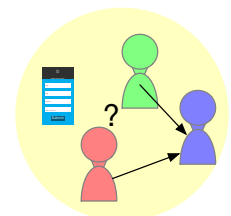
Department of Informatics and Networked Systems



Networks
Connections
between entities
of all kinds



Data & Information
Generated by
humans and
machines alike



Humans and Technology
What would a human
use and why? Let us
make it easy!

New BSIS Curriculum is on the Horizon

Revised curriculum brings together networks, data & information, and human interaction with technology

The Bachelor of Science in Information Science major dates to 1979. The field of computing and information has been rapidly advancing over the last several years. These advances have been the result of the exponential growth in the types and capabilities of technologies such as the Internet,

1

FOUNDATIONS

IS majors will have a firm foundation in Math, Stats, Programming

2

STRUCTURE

The curriculum is structured and scaffolds students as they navigate the classes

3

INTEGRATION

Each class integrates concepts from networks, information and human behavior

wireless networks, machine learning, as well as the ever-more-sophisticated information needs of people, groups, organizations, and society as a whole. To make information systems more effective, an IS major must understand how people interact with data and the networks that carry data, as well as understand the science of networks between people and those between humans and machines.



“An integrated approach to technology development and management with human behavior, information, and networks is the foundation of the proposed academic program in Information Science”

The new curriculum builds a foundation in Math, Stats, and Programming followed by a core set of six classes that develop building, managing and securing technology with the integrated view of human centered systems, networks, and data & information. Exciting electives in social computing, advanced topics in security and privacy, information visualization and immersive media allow IS majors to either specialize in areas of their interest or prepare with a broad, yet absorbing set of state-of-the art topics in Information Science. A capstone experience, experiential learning opportunities, labs, and more bring an impressive set of skills to an IS major.

SPOTLIGHT: AMY BABAY

Dr. Amy Babay joined DINS in September 2019.

Her general research interests are in distributed systems and networking. Dependability is a major theme of her work: as our world grows more connected and complex, making sure that the distributed systems that power so many aspects of our lives today are always available and working as expected becomes more and more crucial. She is especially interested in how we can ensure that the critical infrastructure systems our society relies on are resilient to failures and attacks.



Faculty Highlights

- DINS welcomes Dr. Morgan Frank and Dr. Ahmed Ibrahim - faculty members who will join the department in August 2020 (see Page 5).
- James Joshi, Professor, is currently at the National Science Foundation as Program Director in the Secure and Trustworthy Cyberspace (SaTC) program. There, he has explored creating a Research Coordination Network for Industry-Academic Collaboration on Cyber Security.
- Konstantinos Pelechrinis, Associate Professor, was interviewed by WTAE to discuss how Google data is showing that people in Allegheny County are *practicing social distancing* and what that could mean for the spread of COVID-19.
- Yu-Ru Lin, Associate Professor, with colleagues from SCI and Pitt's School of Education, has been awarded a RAPID Grant from the National Science Foundation for their project titled, *"Countering COVID-19 Misinformation via Situation-Aware Visually Informed Treatment,"* that aims to develop a debunking system for COVID-19 related misinformation. Their debunking system will rely heavily on citizen journalism and crowdsourcing images that counter misinformation on Twitter.
- Rosta Farzan, Associate Professor, has been awarded a fellowship from the Leverhulme Trust for her project titled, *"Developing Research and Training Agenda in Promoting Data-Driven Civic Engagement among Youth in Marginalized Communities."*
- Lingfei Wu, Assistant Professor, has been awarded a research grant by the Richard King Mellon Foundation to support *creating information systems to match the supply and demand for middle-skill healthcare labor* in Western Pennsylvania.

SPOTLIGHT: LINGFEI WU

Dr. Lingfei Wu joined DINS in September 2019.

Dr. Wu is a computational social scientist interested in understanding the geometry of thinking and applying it to design the future of research, education, and employment in the knowledge economy. He is at the forefront of asking the next question in the interaction between humans and machines - such as: can machines push the limits of human reasoning? He teaches information visualization and his research focus is on the future of work, where he is analyzing the skills of 500 million LinkedIn users to predict their optimal, next skills using artificial neural networks



Student Highlights

- ▶ J. Stephanie Rose, Ph.D. student in Information Science with a concentration in Telecom, won first place in ***Pitt's Three-Minute Thesis competition*** for her thesis titled, "Telecommunications Policy, Regulation, and Enforcement: A 20 Year Retrospective of FCC Adjudication."
- ▶ Paige Franjione, graduating BSIS student, was selected as the recipient of the ***Ida M. Flynn Memorial Award*** for Spring 2020. This award is made to a graduating BSIS student who exemplifies excellence while studying in the BSIS program and it recognizes those who participate keenly in the intellectual life of the BSIS program, work well with peers to master skills and share concepts, and become a peer role model of noted value to the BSIS program

Alumni Highlights

- ▶ Julio Arauz (Ph.D., IS-Telecom) is the new director of the J. Warren McClure School of Emerging Communication Technologies in the Scripps College of Communication at Ohio University. He starts on July 1, 2020.
- ▶ Yi-Ling "Jennifer" Lin (Ph.D., IS '13) was recently promoted to Associate Professor in the Department of Management Information Systems at National Chengchi University (NCCU). Lin earned her Ph.D. in Information Science in 2013.
- ▶ Dennis Parra (Ph.D IS) was promoted to Associate Professor in the Department of Computer Science in the School of Engineering at Pontificia Universidad Catolica de Chile. He is also a researcher in the Millennium Institute Foundational Research on Data, an initiative funded from 2018-2028 to investigate the impact of *data* in an interdisciplinary manner.



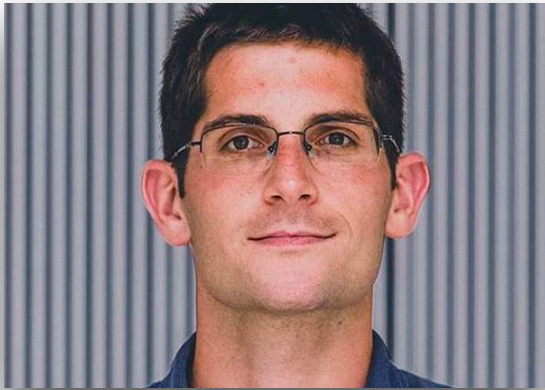
Julio Arauz,
Associate
Professor, Ohio
University

SPOTLIGHT: THE PROFESSIONAL INSTITUTE

The Professional Institute at the School of Computing and Information provides a wide range of flexible and customizable educational offerings in Cybersecurity tailored to help the working professional rapidly gain these needed skills. There are three distinct pathways: Cyber Essentials, Cyber Management, and Cyber Boot Camp. The Professional Institute also offers a graduate certificate in Cybersecurity, Policy, and Law that provides the skills needed to develop comprehensive cybersecurity policies, strengthen cybersecurity ecosystems to minimize risk, and gain an in-depth understanding of the laws surrounding cybersecurity

In 2019-20, sixteen companies sent 85 of their employees to get certificates from the professional institute. For more details, please visit: <https://sciprofessional.pitt.edu>

New Faculty



Morgan Frank joined the Department of Informatics and Networked Systems (DINS) as Assistant Professor in August 2020. He is interested in the complexity of AI, the future of work, and the socio-economic consequences of technological change. Morgan has a Ph.D. from MIT's Media Lab, was a postdoc at MIT IDSS and the IDE, and has a Master's degree in applied mathematics from the University of Vermont.

Ahmed Ibrahim joined



DINS as a Teaching Assistant Professor in September 2020. He currently teaches several courses and is interested in the area of communication and network security. He was previously in the Department of Computer Science at the University of Virginia. He received his Ph.D. in Computer Science from the University of Kentucky.

More Research Highlights

DINS faculty were PI or co-PI on a number of newly awarded grants in a variety of programs illustrating the broad spectrum of research in the department. These include NSF's Information and Intelligent Systems (IIS), Computer and Network Systems (CNS), Secure and Trustworthy Cyberspace (SaTC), Cyberlearning for Work at the Human-Technology Frontier (CLFT), Spectrum Innovation Initiative (SII), and Security & Preparedness (SAP). The primary faculty are Profs. Rosta Farzan, Yuru-Lin, Balaji Palanisamy, Konstantinos Pelechrinis, Martin Weiss, Lingfei Wu, and Vladimir Zadorozhny.

CONTACT

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- **VISION:** To empower humans and society through modeling and designing systems that are accountable, resilient, trustworthy, sustainable and ethical and through synthesizing and advancing fundamental science in *information*, *networks*, and *human behavior*
- DINS offers a BS in **Information Science**, an MS in Information Science, an MS in Telecommunications, a Ph.D. in Information Science and a Ph.D. in Information Science with a **Telecommunications** Concentration
- DINS also offers a number of graduate certificates - in Big Data Analytics; Information Security; Cybersecurity, Policy & Law; and Telecommunications