

## ACADEMIC EMPLOYMENT AND POSITIONS

Assistant Professor and Arthur M. Weimer Fellow	Operations and Decision Technologies, Kelley School of Business	Indiana University	June 2023 – July 2024
Assistant Professor and Grant Thornton Scholar	Operations and Decision Technologies, Kelley School of Business	Indiana University	July 2020 – June 2023
Founding Executive Director	Kelley's Data Science and Artificial Intelligence Lab (DSAIL)	Indiana University	April 2023 - Present
Assistant Professor	Department of Information Systems and Decision Sciences, Muma College of Business	University of South Florida	August 2018 – May 2020
Adjunct Lecturer (Limited Term)	Department of Management Information Systems, Eller College of Management	University of Arizona	May – July 2018
Research Associate, Project Lead, Scholarship-for-Service Fellow	Artificial Intelligence Lab, Department of Management Information Systems	University of Arizona	August 2014 – May 2018

## EDUCATION

Doctor of Philosophy (Ph.D.)	Major: Management Information Systems Minor: Cognitive Science	University of Arizona	2014-2018
Master of Science (M.S.)	Management Information Systems	University of Arizona	2013-2014
Bachelor of Science in Business Administration (B.S.B.A)	Management Information Systems	University of Arizona	2009-2013

## RESEARCH INTERESTS

### 1. Applications:

(1) Cybersecurity – cyber threat intelligence (key hacker ID, threat detection) and vulnerability assessment; AI risk management; open-source software security; advanced cyberinfrastructure; biometrics and IoT; (2) computational social science; (3) health analytics – motion sensor-based fall detection/prediction, activity of daily living detection; mental health intelligence

### 2. Methods:

(1) Deep learning (autoencoders, graph neural networks, adversarial learning, deep transfer learning, self-supervised learning, explainable AI, interpretable deep learning, deep structured semantic/entity matching); (2) computational linguistics (diachronic linguistics, word/document embeddings, cross-lingual knowledge transfer, large language models); (3) network science (graph/node embeddings), (4) cyber threat intelligence visualization

## DISSERTATION

**Title:** Developing Proactive Cyber Threat Intelligence from the Online Hacker Community: A Computational Design Science Approach

- Winner, ACM SIGMIS (ICIS) Doctoral Dissertation Award, 2019
- Runner-up, INFORMS ISS Nunamaker-Chen Dissertation Award, 2018

**Committee:** Dr. Hsinchun Chen (Chair), Dr. Jay F. Nunamaker, Jr. (Committee Member), Dr. Sue Brown (Committee Member)

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## **JOURNAL PUBLICATIONS (current or former Ph.D. student appear in *italics*)**

1. F. Lin, **S. Samtani**, H. Zhu, L. Brandimarte, and H. Chen, "Automated Analysis of Changes in Privacy Policies: A Structured Self-Attentive Sentence Embedding Approach" *Forthcoming at MIS Quarterly (MISQ)*.
2. S. Yu, Y. Chai, **S. Samtani**, H. Liu, and H. Chen, "Motion Sensor-Based Fall Prediction: A Hidden Markov Model and Generative Adversarial Network (HMM-GAN) Approach" *Forthcoming at Information Systems Research (ISR)*.
3. **S. Samtani**, E. Raff, and H. Anderson, "Applied Machine Learning for Information Security" *Forthcoming at ACM Digital Threats: Research and Practice (DTRAP)*.
4. Y. Gao, B. Ampel, and **S. Samtani**, "Evading Anti-Phishing Models: A Field Note Documenting an Experience in the Machine Learning Security Evasion Competition 2022" *Forthcoming at ACM Digital Threats: Research and Practice (DTRAP)*.
5. B. Ampel, **S. Samtani**, H. Zhu, H. Chen, and J.F. Nunamaker, Jr., "Improving Threat Mitigation Through a Cybersecurity Risk Management Framework: A Computational Design Science Approach" *Journal of Management Information Systems (JMIS)*, Volume 41, Issue 1, Pages 236-265, 2024.
6. B. Ampel, **S. Samtani**, H. Zhu, and H. Chen, "Creating Proactive Cyber Threat Intelligence with Hacker Exploit Labels: A Deep Transfer Learning Approach" *MIS Quarterly (MISQ)*, Volume 48, Issue 1, Pages 137-166, 2024.
7. J. Hughes, S. Pastrana, A. Hutchings, S. Afroz, **S. Samtani**, W. Li, and E. Marin, "SoK: The Art of Cybercrime Community Research" *ACM Computing Surveys (CSUR)*, Volume 56, Issue 6, Pages 1-26, 2024.
8. Y. Liang, L. Liu, L. Huangfu, **S. Samtani**, Z. Yu, and D. Zeng, "Learning Entangled Interactions of Complex Causality via Self-Paced Contrastive Learning" *ACM Transactions on Knowledge and Data Discovery (TKDD)*, Volume 18, Issue 3, Pages 1-24, 2023.
9. Y. Chai, R. Liang, **S. Samtani**, H. Zhu, M. Wang, Y. Liu, and Y. Jiang, "Additive Feature Attribution Explainable Methods to Craft Adversarial Attacks for Text Classification and Text Regression" *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, Volume 35, Issue 12, Pages 12400-12414, 2023.
10. **S. Samtani**, H. Zhu, B. Padmanabhan, Y. Chai, H. Chen, and J.F. Nunamaker, Jr., "Deep Learning for Information Systems Research" *Journal of Management Information Systems (JMIS)*, Volume 40, Issue 1, Pages 271-301, 2023.
11. E. Jing, Y. Liu, Y. Chai, J. Sun, **S. Samtani**, Y. Jiang, and Y. Qian, "A Deep Explainable Representation Learning Method for Speech Emotion Recognition" *Information Processing and Management (IP&M)*, Volume 60, Issue 6, 103501, 2023
12. Y. Liang, Y. Qin, Q. Li, X. Yan, L. Huangfu, **S. Samtani**, B. Guo, and Z. Yu, "An Escalated Eavesdropping Attack on Mobile Devices via Low-Resolution Vibration Signals" *IEEE Transactions on Dependable and Secure Computing (TDSC)*. Volume 20, Number 4, Pages 3037-3050, 2023.
13. **S. Samtani**, Z. Zhao, and R. Krishnan, "Secure Knowledge Management and Cybersecurity in the Era of Artificial Intelligence" *Information Systems Frontiers (ISF)*, Volume 25, Issue 2, Pages 425-430, 2023.
14. Y. Chai, H. Liu, J. Xu, **S. Samtani**, Y. Jiang, and H. Liu, "A Multi-Label Classification with Adversarial-based Denoising Autoencoder Approach for Medical Image Annotation" *ACM Transactions on MIS (TMIS)*, Volume 14, Issue 2, Pages 1-21, 2023.
15. Y. Liang, Y. Qin, Q. Li, X. Yan, Z. Yu, B. Guo, **S. Samtani**, and Y. Zhang, "AccMyrinx: Speech Synthesis with Non-Acoustic Sensor" *Proceedings of the ACM on Interactive, Mobile, Wearable, and Ubiquitous Technologies (IMWUT)*, Volume 6, Issue 3, Pages 1-24,

2022.

16. **S. Samtani**, H. Chen, M. Kantarcioglu, and B. Thuraisingham, "Explainable Artificial Intelligence for Cyber Threat Intelligence" *IEEE Transactions on Dependable and Secure Computing (TDSC)*, Volume 19, Issue 4, Pages 2149-2150, 2022.
17. M. Ebrahimi, Y. Chai, **S. Samtani**, and H. Chen, "Cross-Lingual Security Analytics: Cyber Threat Detection in the International Dark Web with Adversarial Deep Representation Learning" *MIS Quarterly (MISQ)*, Volume 46, Issue 2, Pages 1209-1226, 2022.
18. **S. Samtani**, Y. Chai, and H. Chen, "Linking Exploits from the Dark Web to Known Vulnerabilities for Proactive Cyber Threat Intelligence: An Attention-based Deep Structured Semantic Model Approach" *MIS Quarterly (MISQ)*, Volume 46, Issue 2, Pages 909-946, 2022.
19. H. Zhu, **S. Samtani**, R. Brown, and H. Chen, "A Deep Learning Approach for Recognizing Activity of Daily Living (ADL) for Senior Care: Exploiting Interaction Dependency and Temporal Patterns" *MIS Quarterly (MISQ)*, Volume 45, Issue 2, Pages 859-896, 2021.
20. S. Chakraborty, A. Onuchowska, **S. Samtani**, W. Jank, and B. Wolfram, "Machine Learning for Automated Industrial IoT Attack Detection: An Efficiency – Complexity Tradeoff" *ACM Transactions on MIS (TMIS)*, Volume 12, Issue 4, Pages 1-28, 2021.
21. **S. Samtani**, W. Li, V. Benjamin, and H. Chen, "Developing Situational Awareness from the Dark Web: The AZSecure Hacker Assets Portal" *ACM Digital Threats Research and Practice (DTRAP)*, Volume 2, Issue 4, Pages 1-10, 2021.
22. Y. Liang, X. Wang, Z. Yu, B. Guo, X. Zheng, and **S. Samtani**, "Energy-Efficient Collaborative Sensing: Learning the Latent Correlations of Heterogeneous Sensors" *ACM Transactions on Sensor Networks (TOSN)*, Volume 17, Issue 3, Pages 1-29, 2021.
23. **S. Samtani**, M. Kantarcioglu, and H. Chen, "A Multi-Disciplinary Perspective for Conducting Artificial Intelligence-enabled Privacy Analytics: Connecting Data, Algorithms, and Systems" *ACM Transactions on MIS (TMIS)*, Volume 12, Issue 1, Pages 1-18, 2021.
24. Y. Liang, H. Li, B. Guo, Z. Yu, X. Zheng, **S. Samtani**, and D. Zeng, "Heterogeneous Attention Mechanisms in Multi-View Convolutional Neural Networks for Text Classification" *Information Sciences*, Volume 548, Pages 295-312, 2021.
25. **S. Samtani**, M. Kantarcioglu, and H. Chen, "Trailblazing the Artificial Intelligence for Cybersecurity Discipline: A Multi-Disciplinary Research Roadmap" *ACM Transactions on MIS (TMIS)*, Volume 11, Issue 4, Pages 1-18, 2020.
26. Y. Liang, **S. Samtani**, B. Guo, and Z. Yu, "Behavioral Biometrics for Continuous Authentication in the Internet of Things Era: An Artificial Intelligence Perspective" *IEEE Internet of Things Journal (IoTJ)*, Volume 7, Issue 9, Pages 9128 – 9143, 2020.
27. **S. Samtani**, H. Zhu, and H. Chen, "Proactively Identifying Emerging Hacker Threats on the Dark Web: A Diachronic Graph Embedding Framework (D-GEF)" *ACM Transactions on Privacy and Security*, Volume 23, Issue 4, Pages 1-33, 2020.
28. H. Zhu, **S. Samtani**, H. Chen, and J.F. Nunamaker, Jr., "Human Identification for Activities of Daily Living: A Deep Transfer Learning Approach" *Journal of Management Information Systems*, Volume 37, Issue 2, Pages 457 – 483, 2020.
29. M. Safaei Pour, A. Mangino, K. Friday, M. Rathbun, E. Bou-Harb, F. Iqbal, **S. Samtani**, J. Crichigno, and N. Ghani, "Into Data-driven Curation, Learning and Analysis for Inferring Evolving IoT Botnets in the Wild" *Computers and Security*, Volume 91, 101707, 2020.
30. **S. Samtani**, S. Yu, and H. Zhu, "Fear Appeals and Information Security Behaviors: An Empirical Study on Mechanical Turk" *AIS Transactions on Replication Research*, Volume 5, Number 5, Pages 1-22, 2019.
31. **S. Samtani**, S. Yu, H. Zhu, M. Patton, J. Matherly, and H. Chen, "Identifying SCADA Systems and their Vulnerabilities on the Internet

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of Things: A Text Mining Approach" *IEEE Intelligent Systems*, Volume 33, Issue 2, Pages 63-73, 2018.

32. **S. Samtani**, R. Chinn, H. Chen, and J. F. Nunamaker, Jr., "Exploring Emerging Hacker Assets and Key Hackers for Proactive Cyber Threat Intelligence" *Journal of Management Information Systems*, Volume 34, Number 3, Pages 1023-1053, 2017.

## **JOURNAL PAPERS UNDER REVIEW (WORKING PAPERS; current or former Ph.D. student appear in italics)**

1. E. Yoo, C. Craighead, and **S. Samtani**, "The Software Supply Chain and Security Vulnerabilities: An Examination of Vertical and Horizontal Complexity" *Under Third Round Review at Journal of Management Information Systems (JMIS)*.
2. F. Lin, **S. Samtani**, H. Zhu, L. Brandimarte, and H. Chen, "Exploring Digital Personally Identifiable Information and Privacy Risk: From the Dark Web to the Surface Web" *Revise and Resubmit for Second Round Review at Information Systems Research (ISR)*.
3. S. Ullman, **S. Samtani**, H. Zhu, B. Lazarine, and H. Chen, "Smart Vulnerability Assessment for Scientific Cyberinfrastructure: A Multi-View Representation Learning Approach" *Revise and Resubmit for Fourth Round Review at Journal of Management Information Systems (JMIS)*.
4. D. Manatova, C. DeVries, and **S. Samtani**, "Hacker Forum Community Inquiry Framework: Identification, Analysis and Evaluation of Community Detection Algorithms for Cyber Threat Intelligence" *Under Third Round Review at Decision Support Systems (DSS)*.
5. S. Ullman, H. Zhu, **S. Samtani**, and H. Chen, "Linking Vulnerabilities in Cyberinfrastructure with Their Remediations: A Contrastive Representation Learning Approach" *Invited for Second Round Review at Information Systems Research (ISR)*.
6. B. Ampel, **S. Samtani**, and H. Chen, "Adversarially Robust Phishing Generation and Detection: A Large Language Model Approach" *Invited for Second Round Review at Information Systems Research (ISR)*.
7. L. Tang, Z. Li, L. Huangfu, Y. Liang, and **S. Samtani**, "A Hierarchical Reinforcement Learning Framework for Spatio-Temporal Vaccine Allocation: A Case Study of COVID-19" *Information and Management (I&M)*.
8. Y. Liang, X. Yan, Z. Yu, B. Guo, and **S. Samtani**, "VoiceFormer: Fusing Non-Acoustic Motion Sensors for High-Fidelity Voice Synthesis in Mobile Devices" *Under First Round Review at IEEE Transactions on Dependable and Secure Computing (TDSC)*.
9. A. Yuan, H. Song, E. Garcia Colato, and **S. Samtani**, "Improving Workplace Well-being in Modern Organizations: A Review of Large Language Model-based Mental Health Chatbots" *Under First Round Review at ACM Transactions on Management Information Systems (TMIS)*.
10. Y. Liang, Z. Wang, T. Shen, X. Yan, X. Zheng, L. Tang, L. Huangfu, Z. Yu, and **S. Samtani**, "Corner Case Detection and Generation for Autonomous Driving: An Overview" *Under First Round Review at IEEE Transactions on Intelligent Vehicles (TIV)*.

## **WORK-IN-PROGRESS JOURNAL PAPERS (current or former Ph.D. student appear in italics)**

1. B. Lazarine, H. Zhu, A. Sachdeva, **S. Samtani**, and R. Venkataraman, "Identifying Linked Repositories on GitHub: A Graph Self-Supervised Learning Approach" *Targeted at MIS Quarterly*.
2. Z. Ahmad-Post, **S. Samtani**, H. Zhu, and S. Brown, "Russian Computational Propaganda: Information Flow from Proxy News Sites to US Mainstream Media" *Targeted at Information Systems Research (ISR)*.
3. **S. Samtani**, "Identifying Emerging Threats in Dark Web Hacker Forums for Proactive Cyber Threat Intelligence: A Diachronic Co-Occurrence Graph Attention Framework" *Targeted at Information Systems Research (ISR)*.

4. A. Yuan, **S. Samtani**, H. Zhu, and E. Garcia, "Identifying Major Human Behaviors Impacting Depression Using Sensor Signal Data: An Attention-based Multi-View Learning Approach" **Targeted at Information Systems Research (ISR)**.
5. A. Ndubizu, S. Ullman, **S. Samtani**, H. Zhu, and H. Chen, "Generating Security Nutrition Labels for Internet of Things Device GitHub Repositories: A Multi-Task Learning Approach" **Targeted at MIS Quarterly**.
6. C. Yang, S. Ullman, **S. Samtani**, H. Zhu, and H. Chen, "Exploring the Propagation of Vulnerabilities in FinTech Payment Applications on GitHub: A Deep Node Ranking Approach" **Targeted at Information Systems Research (ISR)**.
7. A. Sachdeva, A. Dennis, and **S. Samtani**, "Unraveling the Impact of LLMs on Psychological Ownership and Performance: A Moderated Mediation Model" **Targeted at Information Systems Research (ISR)**.
8. A. Sachdeva, B. Lazarine, **S. Samtani**, H. Zhu, and R. Venkataraman, "User Profiling and Vulnerability Introduction Prediction in Social Coding Repositories" **Targeted at Journal of Management Information Systems**.
9. Y. Gao, D. Zhou, B. Ampel, and **S. Samtani**, "Generating Adversarial Phishing Websites to Evade Machine Learning-based Anti-Phishing Detectors: A Reinforcement Learning" **Targeted at MIS Quarterly**.
10. A. Yuan, H. Song, E. Garcia, and **S. Samtani**, "Improving Workplace Mental Health in Modern Organizations: A Review of Large Language Model-based Mental Health Chatbots" **Targeted at ACM Transactions on Management Information Systems**.
11. A. Yuan, H. Zhu, E. Garcia, and **S. Samtani**, "Privacy-Preserving Behavior Detection Using Sensor Signal Data: An Attention-based Knowledge Distillation Approach" **Targeted at MIS Quarterly**.
12. B. Lazarine, S. Ullman, H. Zhu, and **S. Samtani**, "Suggesting Alternatives for Insecure Machine Learning Repositories: A Multi-View Graph Transformer Approach" **Targeted at MIS Quarterly**.
13. B. Ampel, **S. Samtani**, and H. Chen, "Automated Detection of Phishing Calls: An Audio Generation Approach" **Targeted at MIS Quarterly**.
14. S. Ullman, B. Lazarine, **S. Samtani**, and H. Chen, "Securing Software Deployments in Cloud Computing: A Graph Contrastive Learning Approach" **Targeted at MIS Quarterly**.
15. A. Ndubizu, S. Ullman, **S. Samtani**, and H. Chen, "Identifying Vulnerability Propagation in Advanced Computing Technologies on GitHub: A Retrieval-Augmented Generation Approach" **Targeted at MIS Quarterly**.
16. R. Reyes, S. Ullman, **S. Samtani**, and H. Chen, "Identifying Vulnerability Persistence in Docker Containers: A Temporal Multi-View Learning Approach" **Targeted at Journal of Management Information Systems**.
17. E. Garcia, J. Macy, and **S. Samtani**, "Behind the Screens: Comparing Mental Health Challenges Between Software Developers and Other IT Professionals" **Target TBD**.

## **BOOK CHAPTERS**

1. **S. Samtani**, M. Abate, V. Benjamin, and W. Li "Cybersecurity as an Industry: A Cyber Threat Intelligence Perspective" **Palgrave Handbook of International Cybercrime and Cyberdeviance**, Springer, 2020.
2. V. Benjamin, **S. Samtani**, and H. Chen, "Conducting Large-Scale Analyses of Underground Hacker Communities" **Cybercrime**

*Through an Interdisciplinary Lens*, Routledge, 2016.

## **REFEREED CONFERENCE PROCEEDINGS (\*I was the presenter; current or former Ph.D. student appear in *italics*)**

1. *B. Lazarine*, **S. Samtani**, H. Zhu, and R. Venkataraman, "Suggesting Alternatives for Potentially Insecure Artificial Intelligence Repositories: An Unsupervised Graph Embedding Approach" Hawaii International Conference on Systems Sciences (HICSS). Waikiki, Hawaii, January 3 – 6, 2024.
2. M. Patton, **S. Samtani**, H. Chen, and H. Zhu, "Minitrack Introduction: Cybersecurity in the Age of Artificial Intelligence, Ai for Cybersecurity, and Cybersecurity for AI" Hawaii International Conference on Systems Sciences (HICSS). Waikiki, Hawaii, January 3 – 6, 2024.
3. A. Kathikar, A. Nair, *B. Lazarine*, *A. Sachdeva*, and **S. Samtani**, "Assessing the Vulnerabilities of the Open-Source Artificial Intelligence Landscape: A Large Scale Analysis of the Hugging Face Platform" IEEE Intelligence and Security Informatics. Charlotte, North Carolina, October 2-3, 2023.
4. *B. Ampel*, T. Vahedi, **S. Samtani**, and H. Chen, "Mapping Exploit Code on Paste Sites to the MITRE ATT&CK Framework: A Multi-label Transformer Approach" IEEE Intelligence and Security Informatics. Charlotte, North Carolina, October 2-3, 2023.
5. *B. Ampel*, K. Otto, **S. Samtani**, and H. Chen, "Disrupting Ransomware Actors on the Bitcoin Blockchain: A Graph Embedding Approach" IEEE Intelligence and Security Informatics. Charlotte, North Carolina, October 2-3, 2023.
6. **S. Samtani**, S. Yang, and H. Chen, "The 3<sup>rd</sup> Workshop on Artificial Intelligence-Enabled Cybersecurity Analytics" 29<sup>th</sup> ACM SIGKDD Conference on Knowledge Discovery and Data Mining. Washington, DC, August 6-10, 2023.
7. *A. Sachdeva*, *B. Lazarine*, H. Zhu, **S. Samtani**, "User Profiling and Vulnerability Introduction Prediction in Social Coding Repositories: A Dynamic Graph Embedding Approach" 16th USENIX Cyber Security Experimentation and Test (CSET) Workshop. Marina del Rey, CA. August 7, 2023.
8. *A. Yuan*, M. Xu, H. Zhu, E. Garcia, and **S. Samtani**, "Towards Privacy-Preserving Depression Detection: Experiments on Passive Sensor Signal Data" IEEE International Conference on Digital Health (ICDH). Chicago, IL. July 2-8, 2023.
9. *A. Yuan*, H. Zhu, E. Garcia, and **S. Samtani**, "Detecting the Human Behaviors Associated with Depression via Sensor Signal Analysis: A Multiview-based Self-Attention Approach" Conference on Health Information Technology and Analytics (CHITA). Baltimore, Maryland. May 4-6, 2023. (**Best Student Paper Award**).
10. *B. Ampel*, *Y. Gao*, *J. Hu*, **S. Samtani**, and H. Chen, "Benchmarking the Robustness of Phishing Email Detection Systems" Americas Conference on Information Systems (AMCIS). Panama City, Panama. August 10-12, 2023.
11. *D. Manatova*, D. Sharman, **S. Samtani**, and L. Camp, "Building and Testing a network of Social Trust in an Underground Forum: Robust Connections and Overlapping Criminal Domains" APWG Symposium on Electronic Crime Research. Virtual. November 30, 2022.
12. *A. Sachdeva*, *B. Lazarine*, R. Dama, **S. Samtani**, and H. Zhu, "Identifying the Patterns of Vulnerability Incidence in Foundational Machine Learning Repositories on GitHub: An Unsupervised Graph Embedding Approach" IEEE International Conference on Data Mining Workshop on Machine Learning for Cybersecurity (MLC). Orlando, FL. November 28, 2022.
13. *B. Lazarine*, Z. Zhong, *A. Sachdeva*, **S. Samtani** and H. Zhu, "Exploring the Propagation of Vulnerabilities from GitHub Repositories Hosted by Major Technology Organizations" 15<sup>th</sup> USENIX Cyber Security Experimentation and Test (CSET) Workshop. Los Angeles,

CA. August 8, 2022.

14. **S. Samtani**, G. Wang, A. Ahmadzadeh, S. Yang, A. Ciptadi, and H. Chen, "ACM KDD AI4Cyber/MLHat: Workshop on AI-enabled Cybersecurity Analytics and Deployable Defense" 28<sup>th</sup> ACM SIGKDD Conference on Knowledge Discovery and Data Mining. Washington, DC, August 14-18, 2022
15. *D. Manatova*, I. Kouper, and **S. Samtani**, "Designing a Vulnerability Management Dashboard to Enhance Security Analysts' Decision Making Processes," ACM Practice & Experience in Advanced Research Computing. Boston, MA, July 10-14, 2022.
16. M. Kantarcioglu, B. Carminati, **S. Samtani**, S. Mittal, and M. Gupta, "Enforcement of Laws and Privacy Preferences in Modern Computing Systems," ACM Conference on Data and Application Security and Privacy. Baltimore, MD. April 24-27, 2022.
17. T. Vahedi, *B. Ampel*, **S. Samtani**, and H. Chen, "Identifying and Categorizing Malicious Content on Paste Sites: A Neural Topic Modeling Approach," IEEE Intelligence and Security Informatics. San Antonio, TX. November 2-3, 2021.
18. K. Otto, *B. Ampel*, **S. Samtani**, H. Zhu, and H. Chen, "Exploring the Evolution of Exploit-Sharing Hackers: An Unsupervised Graph Embedding Approach," IEEE Intelligence and Security Informatics. San Antonio, TX. November 2-3, 2021.
19. **S. Samtani**, S. Yang, and H. Chen, "ACM KDD AI4Cyber: The 1st Workshop on Artificial Intelligence-enabled Cybersecurity Analytics," 27<sup>th</sup> ACM SIGKDD Conference on Knowledge Discovery and Data Mining. Virtual, August 2021.
20. E. Bertino, M. Kantarcioglu, C. Akcora, **S. Samtani**, S. Mittal, and M. Gupta "AI for Security and Security for AI" ACM Conference on Data and Application Security and Privacy. Baltimore, MD. April 26 – 28, 2021.
21. *B. Lazarine*, **S. Samtani**, M. Patton, H. Zhu, S. Ullman, B. Ampel, and H. Chen, "Identifying Vulnerable GitHub Repositories and Users in Scientific Cyberinfrastructure: An Unsupervised Graph Embedding Approach" IEEE Intelligence and Security Informatics. Rosslyn, VA. November 9-10, 2020.
22. *S. Ullman*, **S. Samtani**, *B. Lazarine*, H. Zhu, *B. Ampel*, M. Patton, and H. Chen, "Smart Vulnerability Assessment for Scientific Cyberinfrastructure: An Unsupervised Graph Embedding Approach" IEEE Intelligence and Security Informatics. Rosslyn, VA. November 9-10, 2020.
23. *B. Ampel*, **S. Samtani**, H. Zhu, *S. Ullman*, and H. Chen, "Labeling Hacker Exploits for Proactive Cyber Threat Intelligence: A Deep Transfer Learning Approach" IEEE Intelligence and Security Informatics. Rosslyn, VA. November 9-10, 2020. (**Best Paper Award**).
24. *F. Lin*, Y. Liu, M. Ebrahimi, Z. Ahmad-Post, J. Hu, J. Xin, **S. Samtani**, W. Li, and H. Chen, "Linking Personally Identifiable Information from the Dark Web to the Surface Web: A Deep Entity Resolution Approach" IEEE International Conference on Data Mining (ICDM), Deep Learning for Cyber Threat Intelligence (DL-CTI) Workshop. Sorrento, Italy. November 17 – 20, 2020.
25. M. Ebrahimi, **S. Samtani**, Y. Chai, and H. Chen, "Detecting Cyber Threats in Non-English Hacker Forums: An Adversarial Cross-Lingual Knowledge Transfer Approach" 41<sup>st</sup> IEEE Symposium on S&P, 3<sup>rd</sup> Deep Learning for Security Workshop. San Francisco, CA. May 21, 2020.
26. P. Du, M. Ebrahimi, N. Zhang, H. Chen, R. Brown, and **S. Samtani**, "Identifying High-Impact Opioid Products and Key Sellers in Dark Net Marketplaces: An Interpretable Text Analytics Approach" ISI 2019, Proceedings of 2019 IEEE Conference on Intelligence and Security Informatics. Shenzhen, CHN. July 1 – 3, 2019.
27. N. Arnold, M. Ebrahimi, N. Zhang, *B. Lazarine*, **S. Samtani**, M. Patton, and H. Chen, "Dark-Net Ecosystem Cyber Threat Intelligence Tool," ISI 2019, Proceedings of 2019 IEEE Conference on Intelligence and Security Informatics. Shenzhen, CHN. July 1 – 3, 2019.

28. A. Onuchowska, D. Berndt, and **S. Samtani**, "Rocket Ship or Blimp? – Implication of Malicious Accounts Removal on Twitter," European Conference on Information Systems. Stockholm and Uppsala, Sweden. June 8 – 14, 2019.
29. R. Williams, \***S. Samtani**, M. Patton, and H. Chen, "Incremental Hacker Forum Exploit Collection and Classification for Proactive Cyber Threat Intelligence: An Exploratory Study," ISI 2018, Proceedings of 2018 IEEE Conference on Intelligence and Security Informatics. Miami, FL. November 8 – 10, 2018.
30. P. Du, N. Zhang, M. Ebrahimi, **S. Samtani**, B. Lazarine, N. Arnold, R. Dunn, S. Suntwal, G. Angeles, R. Schweitzer, and H. Chen, "Identifying, Collecting and Presenting Hacker Community Data: Forums, IRC, Carding Shops, and DNMs," ISI 2018, Proceedings of 2018 IEEE Conference on Intelligence and Security Informatics. Miami, FL. November 8 – 10, 2018.
31. M. Ebrahimi, M. Surdeanu, **S. Samtani**, and H. Chen, "Detecting Cyber Threats in Non-English Dark Net Markets: A Cross-Lingual Transfer Learning Approach," ISI 2018, Proceedings of 2018 IEEE Conference on Intelligence and Security Informatics. Miami, FL. November 8 – 10, 2018. (**Runner-Up for Best Paper Award**).
32. C. Harrell, **S. Samtani**, M. Patton, and H. Chen, "Vulnerability Assessment, Remediation, and Automated Reporting: Case Studies of Higher Education Institutions," ISI 2018, Proceedings of 2018 IEEE Conference on Intelligence and Security Informatics. Miami, FL. November 8 – 10, 2018.
33. E. McMahon, M. Patton, **S. Samtani**, and H. Chen, "Benchmarking Vulnerability Assessment Tools for Enhanced Cyber-Physical System Resiliency," ISI 2018, Proceedings of 2018 IEEE Conference on Intelligence and Security Informatics. Miami, FL. November 8 – 10, 2018.
34. M. El, E. McMahon, **S. Samtani**, M. Patton, and H. Chen, "Benchmarking Vulnerability Scanners: An Experiment on SCADA Devices and Scientific Instruments," ISI 2017, Proceedings of 2017 IEEE Conference on Intelligence and Security Informatics. Beijing, China. July, 2017. (**Runner-Up for Best Paper Award**).
35. E. McMahon, R. Williams, M. El, **S. Samtani**, M. Patton, and H. Chen, "Assessing Medical Device Vulnerabilities on the Internet of Things," ISI 2017, Proceedings of 2017 IEEE Conference on Intelligence and Security Informatics. Beijing, China. July, 2017.
36. J. Grisham, **S. Samtani**, M. Patton, and H. Chen, "Identifying Mobile Malware and Key Threat Actors in Online Hacker Forums for Proactive Cyber Threat Intelligence," ISI 2017, Proceedings of 2017 IEEE Conference on Intelligence and Security Informatics. Beijing, China. July, 2017.
37. R. Williams, E. McMahon, **S. Samtani**, M. Patton, and H. Chen, "Identifying Vulnerabilities of Consumer Internet of Things Devices: A Scalable Approach," ISI 2017, Proceedings of 2017 IEEE Conference on Intelligence and Security Informatics. Beijing, China. July, 2017.
38. \***S. Samtani**, K. Chinn, C. Larson, and H. Chen, "AZSecure Hacker Assets Portal: Cyber Threat Intelligence and Malware Analysis," ISI 2016, Proceedings of 2016 IEEE Conference on Intelligence and Security Informatics. Tucson, Arizona. September, 2016.
39. \***S. Samtani**, S. Yu, H. Zhu, M. Patton, and H. Chen, "Identifying SCADA Vulnerabilities using Passive and Active Vulnerability Assessment Techniques," ISI 2016, Proceedings of 2016 IEEE Conference on Intelligence and Security Informatics. Tucson, Arizona. September, 2016.
40. \***S. Samtani** and H. Chen, "Using Social Network Analysis to Identify Key Hackers for Keylogging Tools in Hacker Forums," ISI 2016, Proceedings of 2016 IEEE Conference on Intelligence and Security Informatics. Tucson, Arizona. September, 2016.



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41. \***S. Samtani**, R. Chinn, and H. Chen, "Exploring Hacker Assets in Underground Forums," ISI 2015, Proceedings of 2015 IEEE Conference on Intelligence and Security Informatics. Baltimore, Maryland. May, 2015.

## **REFEREED WORKSHOP PAPERS (No Proceedings; current or former Ph.D. student appear in italics)**

1. Y. Gao, **S. Samtani**, H. Zhu, B. Ampel, and Y. Chai, "Generating Adversarial Phishing Websites to Evade Machine Learning-based Anti-Phishing Detectors: A Reinforcement Learning Approach" INFORMS Workshop on Data Science (WDS). Phoenix, Arizona. October 14, 2023.
2. N. Luo, A. Zheng, **S. Samtani**, and E. Zheng, "SmartRD: Leveraging GPT Prompting Strategies for Reasoning and Decision – The Case of Smart Contract Vulnerability Assessment" INFORMS Workshop on Data Science (WDS). Phoenix, Arizona. October 14, 2023.
3. A. Yuan, H. Zhu, E. Garcia, and **S. Samtani**, "Detecting the Human Behaviors Associated with Depression via Sensor Signal Analysis: An Agreement-based Self-Attention Deep Learning Approach" INFORMS Workshop on Data Science (WDS). Indianapolis, Indiana. October 15, 2022. (*Nominated for Best Student Paper Award*).
4. A. Sachdeva, B. Lazarine, **S. Samtani**, and H. Zhu, "User Profiling and Vulnerability Introduction Prediction in Social Coding Repositories: A Dynamic Graph Embedding Approach" INFORMS Workshop on Data Science (WDS). Indianapolis, Indiana. October 15, 2022.
5. B. Lazarine, A. Sachdeva, **S. Samtani**, and H. Zhu, "Identifying Linked Repositories on GitHub: A Self-Supervised Graph Embedding Approach" INFORMS Workshop on Data Science (WDS). Indianapolis, Indiana. October 15, 2022.
6. **S. Samtani**, "An AI Perspective for Dark Web Analytics" RENC1 Workshop on AI for Networking. Virtual Event. October 21, 2021.
7. Z. Ahmad-Post, **S. Samtani**, H. Zhu, and S. Brown, "Political News Propagation Headline Matching: A Deep Learning-Based Short Text Matching Approach" ACM KDD Workshop on AI-enabled Cybersecurity Analytics. Virtual Event. August 14 – 18, 2021.
8. B. Ampel, **S. Samtani**, S. Ullman, and H. Chen, "Linking Common Vulnerabilities and Exposures to the MITRE ATT&CK Framework: A Self-Distillation Approach" ACM KDD Workshop on AI-enabled Cybersecurity Analytics. Virtual Event. August 14 – 18, 2021.
9. R. Shenandoah, **S. Samtani**, M. Patton, and H. Chen, "Fostering Cybersecurity Big Data Research: A Case Study of the AZSecure Data System," Hawaii International Conference on System Sciences Cybersecurity Big Data Symposium. Hawaii. January 2018.

## **OTHER REFEREED CONFERENCE PRESENTATIONS (No Proceedings; current or former Ph.D. student appear in italics)**

1. D. Manatova, D. Sharman, **S. Samtani**, and L. Camp, "Building and Testing a Network of Social Trust in an Underground Forum: Robust Connections and Overlapping Criminal Domains"
  - Symposium on the Science of Security (HotSoS). April 4, 2024
  - Messaging, Malware, and Mobile Anti-Abuse Working Group (M<sup>3</sup>AAWG). February 2024.
2. A. Kathikar, A. Nair, B. Lazarine, A. Sachdeva, **S. Samtani**, and H. Anderson, "Assessing the Vulnerabilities of the Open-Source Artificial Intelligence Landscape: A Large Scale Analysis of the Hugging Face Platform" DEFCON AI Village. Las Vegas, NV. August 10-13, 2023.
3. H. Anderson and **S. Samtani**, "AI Risk Database: Hunting vulns in your OSS AI Supply Chain," Black Hat USA Arsenal. Las Vegas, NV. August 9-10, 2023.
4. A. Sachdeva, B. Lazarine, **S. Samtani**, and H. Zhu, "User Profiling for Personalized and Proactive Developer Security Awareness

Training: A Dynamic Graph Embedding Approach," Improving Scientific Software (ISS) Conference. Virtual. April 17-19, 2023.

5. **S. Samtani** and *S. Ullman* "AI4Cyber: An Overview of Artificial Intelligence for Cybersecurity and An Open-Source Virtual Machine," Open Data Science Conference (ODSC) East. Boston, MA. May 9, 2023.
6. Y. Chai, *R. Liang*, **S. Samtani**, H. Zhu, M. Wang, Y. Liu, and Y. Jiang, "Additive Feature Attribution Explainable Methods to Craft Adversarial Attacks for Text Classification and Text Regression," Annual Meeting of China Association for Information Systems (CNAIS). Shanghai, CH. December 2-4, 2022.
7. **S. Samtani** and *S. Ullman* "AI for Cybersecurity (AI4Cyber): An Overview of the Field and An Open-Source Virtual Machine for Research and Education," Open Data Science Conference (ODSC) West. Virtual. November 2, 2022.
8. *B. Lazarine*, *D. Manatova*, **S. Samtani**, and H. Zhu, "Visualizing the Vulnerability Landscape of Major Scientific Cyberinfrastructure GitHub Ecosystems," ACM PEARC Interact!. Boston, MA. July 10 – 14, 2022.
9. *D. Manatova*, I. Kouper, and **S. Samtani**, "Designing a Vulnerability Management Dashboard to Enhance Security Analysts' Decision Making Processes," ACM PEARC Interact!. Boston, MA. July 10 – 14, 2022.
10. **S. Samtani** and E. Garcia, "Taking a Proactive Stance for Mental Health for the Cybersecurity Industry: Tangible Strategies to Address Common Stressors," IT Nation Secure. Orlando, FL. June 26 – 28, 2022.
11. **S. Samtani**, "Trailblazing the AI for Cybersecurity Discipline: Overview of the Field and Promising Directions," EDUCAUSE Cybersecurity and Professionals Conference. Baltimore, MD. May 5, 2022.
12. **S. Samtani**, "Examining the Role of AI for Cybersecurity," Open Data Science Conference (ODSC) East. Boston, MA. April 21, 2022.
13. **S. Samtani**, *B. Lazarine*, and E. Skidmore, "Lessons Learned from Assessing the Vulnerabilities of Source Code in GitHub for Scientific Cyberinfrastructure: An Artificial Intelligence Perspective"
  - NSF Cybersecurity Summit. Virtual Event. October 11 – 13, 2021
  - Improving Scientific Software (ISS) Conference. Virtual Event. April 4, 2022.
14. **S. Samtani**, "AI for Cybersecurity: An Overview of the Field and Future Trends"
  - DEFCON AI Village. Virtual Event. August 5-8, 2021.
  - IT Nation Secure. Orlando, FL. June 26 – 28, 2021.
15. **S. Samtani**, "Linking Exploits from the Dark Web to Known Vulnerabilities for Proactive Cyber Threat Intelligence: An Attention-based Deep Structured Semantic Model Approach"
  - 2020 INFORMS Annual Meeting. National Harbor, MD. November 8 – 11, 2020.
  - Conference on Machine Learning for Information Security (CAMLIS). Washington, DC. October 25 – 26, 2019.
16. M. Ebrahimi, Y. Chai, **S. Samtani**, and H. Chen, "Cross-Lingual Security Analytics: Cyber Threat Detection in the International Dark Web with Adversarial Deep Representation Learning"
  - FoRMLA, CU Boulder. Virtual. April 8, 2022.
  - Winter Conference on Business Analytics. Snowbird, UT. March 12, 2019.
17. *A. Onuchowska*, D. Berndt, **S. Samtani**, and *S. Chakraborty*, "Rocket Ship or Blimp? – Implication of Malicious Accounts Removal on Twitter," GKMC Winter Conference on Business Intelligence (WCBA). Snowbird, UT. March 7 – 9, 2019.

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18. **S. Samtani**, M. Patton, and H. Chen, "Large-Scale Vulnerability Assessment of Venezuelan Internet of Things (IoT) Devices," Hawaii International Conference on System Sciences (HICSS) Cybersecurity Big Data Symposium. Hawaii. January 2017.
  19. **S. Samtani** and H. Chen, "Understanding Malicious Tools in Underground Hacker Communities," 2016 INFORMS Annual Meeting. Nashville, Tennessee. November 13 – 16, 2016.
  20. **S. Samtani** and H. Chen, "Exploring SCADA Devices and their Vulnerabilities on the Internet of Things," 2016 INFORMS Annual Meeting. Nashville, Tennessee. November 13 – 16, 2016.

## **FUNDED or RECOMMENDED GRANTS (~\$5.8M Total; ~\$4.6M IU Share)**

1. **Year:** 2024. **Funding Source:** NSF. **Grant Title:** "CAREER: An Artificial Intelligence (AI)-enabled Analytics Perspective for Developing Proactive Cyber Threat Intelligence," **Funding Request:** \$604K. **Role:** PI. **Duration:** 2024 – 2029.
2. **Year:** 2023. **Funding Source:** IU VPR and Kelley School of Business. **Grant Title:** "Developing Artificial Intelligence (AI)-enabled Mental Health Analytics to Objectively Identify and Measure Depressive Behaviors in College Students," **Funding Amount:** \$100K. **Status:** Awarded. **Role:** PI (Co-PIs: B. Pescosolido, E. Garcia-Colato). **Duration:** 2023-2025.
3. **Year:** 2023. **Funding Source:** NSF. **Grant Title:** "Breaking Down Silos and Building Bridges to Raise Awareness of Opportunities, Expand, and Diversify the Space-Cybersecurity Workforce," **Funding Amount:** \$255K. **Role:** Co-PI. **Duration:** 2023-2025.
4. **Year:** 2023. **Funding Source:** NSF. **Grant Title:** "CICI: UCSS: Enhancing the Usability of Vulnerability Assessment Results for Open-Source Software Technologies in Scientific Cyberinfrastructures: A Deep Learning Perspective," **Funding Amount:** \$600K (IU Share: \$200K). **NSF Award Number:** OAC-2319325. **Role:** Co-PI. **Duration:** 2023-2026.
5. **Year (added as Co-PI):** 2022. **Funding Source:** NSF. **Grant Title:** "CyberCorps SFS: Preparing the Next Generation of Cybersecurity Professionals" **Funding Amount:** \$2.3M. **Status:** Awarded. **NSF Award Number:** DGE-1946537. **Role:** Co-PI. **Duration:** 2020-2025.
6. **Year:** 2022. **Funding Source:** NSF ACCESS. **Grant Title:** "Generating Adversarial Phishing Websites to Evade Machine Learning-based Anti-Phishing Detectors: A Reinforcement Learning Approach" **Funding Amount:** \$1.6K (IU Share: \$1.6K). **Status:** Awarded. **Rating:** N/A. **Role:** PI. **Duration:** 2022 – 2023.
7. **Year:** 2021. **Funding Source:** NSF. **Grant Title:** "Cultivating the Next-Generation of "Cyber AI" Professionals: Reviewing the Present to Provide Recommendations for the Future" **Funding Amount:** \$242K. **Status:** Awarded. **Role:** PI. **Duration:** 2021 – 2025.
8. **Year:** 2020. **Funding Source:** NSF XSEDE. **Grant Title:** "Exploratory Study of Scientific Cyberinfrastructure for Information Systems Research" **Funding Amount:** \$2K (IU Share: 2K). **Status:** Awarded. **Rating:** N/A. **Role:** PI. **Duration:** 2020 – 2021.
9. **Year:** 2020. **Funding Source:** NSF. **Grant Title:** "SaTC EAGER: AI for Cybersecurity Research Education at Scale" **Funding Amount:** \$300K (IU Share: 100K). **Status:** Awarded. **Rating:** N/A. **NSF Award Number:** DGE-2038483. **Role:** Co-PI. **Duration:** 2020 – 2022.
10. **Year:** 2019. **Funding Source:** Arnie and Lauren Bellini Foundation. **Grant Title:** "Fight Back Initiative" **Funding Amount:** \$250K. **Status:** Awarded. **Role:** Sole-PI (Transferred to Dr. Manish Agrawal when I left USF).
11. **Year:** 2019. **Funding Source:** NSF. **Grant Title:** "CRII: SaTC: Identifying Emerging Threats in the Online Hacker Community for Proactive Cyber Threat Intelligence: A Diachronic Graph Convolutional Autoencoder Framework" **Funding Amount:** \$175K. **Status:** Awarded. **NSF Award Number:** CNS-1850362. **Role:** Sole-PI. **Duration:** 2019 – 2021.
12. **Year:** 2019. **Funding Source:** NSF. **Grant Title:** "CICI: SSC: Proactive Cyber Threat Intelligence and Comprehensive Network Monitoring for Scientific Cyberinfrastructure: The AZSecure Framework" **Funding Amount:** \$1M (IU Share: \$120K). **Status:**

Awarded. **NSF Award Number:** OAC-1917117. **Role:** Co-PI. **Duration:** 2019 – 2022.

## EXTERNAL GIFTS

1. **Year:** 2023. **Funding Source:** Robust Intelligence (Private Company). **Gift Title:** “AI Risk Database” **Funding Amount:** \$22K.

## GRANT PROPOSALS UNDER REVIEW

13. **Year:** 2023. **Funding Source:** NSF. **Grant Title:** “Assessing and Predicting Technology Outcomes for High-Performance Computing (HPC) and Semiconductors: Data Sets, Tools, and Models,” **Funding Request:** \$10M. **Role:** Co-PI. LOI Encouraged.
14. **Year:** 2023. **Funding Source:** CTSI. **Grant Title:** “Indiana University Artificial Intelligence for Mental Health Mobile Application for Objectively Measuring the Mental Health of College Students,” **Funding Request:** \$40K. **Role:** PI.
15. **Year:** 2023. **Funding Source:** NSF. **Grant Title:** “SCH: Developing Artificial Intelligence (AI)-Enabled Mental Health Analytics to Objectively Identify and Measure Mental Health Disorders” **Funding Request:** \$1.2M. **Role:** PI.
16. **Year:** 2024. **Funding Source:** NSF. **Grant Title:** “CICI: TCR: Enhancing the Resilience of Open Source Artificial Intelligence Software: Vulnerability Detection and Deep Learning-based Linkage and Remediation” **Funding Request:** \$1.2M. **Role:** PI.

## GRANT PROPOSALS IN PREPARATION

17. **Year:** 2023. **Funding Source:** NSF. **Grant Title:** “SaTC: CORE: Medium: Labeling, Linking, and Presenting Personally Identifiable Information from the Dark Web and Surface Web to Nudge Privacy Protecting Behaviors: A Multi-Disciplinary Deep Learning Perspective,” **Funding Request:** \$1.2M (IU Share: \$200K). **Role:** Co-PI.
18. **Year:** 2023. **Funding Source:** NSF. **Grant Title:** “SaTC: CORE: Medium: Adversarial Malware Generation and Defense: A Generative and Robust Optimization Approach” **Funding Request:** \$1.2M (IU Share: \$80K). **Role:** Co-PI.

## INVITED TALKS

1. **Panel Title:** Research Portfolio and Productivity. **Event Title:** Faculty Development Panel Series, Kelley School of Business. Bloomington, Indiana. November 3, 2023.
2. **Panel Title:** Faculty Experiences with IU Research. **Event Title:** IU Research On-Boarding Orientation Series. Virtual. October 6, 2023.
3. **Panel Title:** Intelligent AI/ML and Automation. **Event Title:** Argyle CIO Leadership Forum. Virtual. January 17, 2023.
4. **Panel Title (Moderator):** Cybersecurity Education in the Age of Artificial Intelligence. **Event Title:** NSF Scholarship-for-Service (SFS) CyberCorps Principal Investigator’s Meeting. Washington, DC. January 13, 2023.
5. **Panel Title (Moderator):** SFS Alumni Panel. **Event Title:** NSF Scholarship-for-Service (SFS) CyberCorps Principal Investigator’s Meeting. Washington, DC. January 11, 2023.
6. **Talk Title:** Artificial Intelligence (AI)-enabled Cyber Threat Intelligence: Linking Exploits from the Dark Web to Known Vulnerabilities. UT Dallas, Naveen Jindal School of Management. March 3, 2023.
7. “Mapping the Vulnerabilities of the Artificial Intelligence Innovation Landscape: A Risk Management Perspective”
  - IU Cybersecurity Clinic. April 3, 2023.
  - Augusta University, Department of Computer Science. January 20, 2023
  - **Event Title:** Bright Internet Global Summit 2022 (Pre-ICIS Workshop). Virtual. December 7, 2022.

8. "From Subjective to Objective Measurements of Mental Health: An Artificial Intelligence (AI)-enabled Analytics Perspective"
  - University of Kansas. Fall 2024.
  - UT Austin, Computational Data Science Group. Virtual. April, 2024.
  - University of Arizona, Department of Management Information Systems. Tucson, AZ. September 8, 2023.
  - National Taiwan University, Department of Information Management. Taipei, Taiwan. June 26, 2023.
  - **Event Title:** Kelley Institute for Business Analytics Conference on Analytics for Healthcare. Bloomington, IN. March 31, 2023.
  - **Event Title:** GT-IDEA Research Webinar. Virtual. November 11, 2022.
9. **Keynote Speaker:** AI and Cybersecurity SWT. **Event Title:** Hawaii International Conference on Systems Sciences (HICSS). January 3-6, 2023. Maui, Hawaii.
10. **Panel Title:** On the Curation of Artifacts in the Era of AI/ML for Cybersecurity. **Event Title:** Annual Computer Security Applications Conference (ACSAC) 2022. Austin, TX. December 8, 2022.
11. **Panel Title:** The State of AI. **Event Title:** National AI and Cybersecurity ISAO Live Event. September 28, 2022.
12. AZCyber Bootcamp Speaker. May 31, 2022.
13. **Panel Title:** "Enforcement of Laws and Privacy Preferences in Modern Computing Systems" **Event Title:** ACM CODASPY. April 25 – 27, 2022.
14. "AI in Cyber: Cutting Through the Hype" Center for Women in Technology, Indiana University. Virtual. April 21, 2022.
15. "AI for Cybersecurity: Overview of the Field and Promising Future Directions"
  - Oxford University. March 17, 2023.
  - NIO. October 26, 2022.
  - National Taiwan University. July 6, 2022.
  - Microsoft Internal Call – The Aegis. May 18, 2022.
  - RSA Conference Webinar. February 3, 2022.
  - Purdue University. Virtual. January 19, 2022.
  - Indiana Statewide Cybersecurity Summit. Virtual. October 17, 2021.
  - Digital Unleashed: AI for Cybersecurity. Kelley Institute for Digital Enterprise, Indiana University. April 9, 2021.
  - AI DEFCON Village Hacker Journal Club. March 24, 2021.
16. MIT Computer Science & Artificial Intelligence Lab (CSAIL). **Presentation Title:** "A Multi-Disciplinary Perspective for Conducting Artificial Intelligence-enabled Privacy Analytics: Connecting Data, Algorithms, and Systems" Virtual. March 30, 2022.
17. **Panel Title:** AI for Credible Elections. **Event Title:** NeurIPS 2021 Workshop on AI for Credible Elections. December 14, 2021.
18. "Proactively Identifying Emerging Threats for Proactive Cyber Threat Intelligence: A Diachronic Graph Embedding Framework"
  - University of Washington. Virtual. November 29, 2021.
  - American University. Washington, DC. February 5, 2020.
  - SaTC PI Meeting. Washington, DC. October 28-29, 2019.
  - 2019 Muma College of Business Executive Advisory Council (EAC) Meeting. Tampa, FL. May 31, 2019.
  - Florida Business Analytics Forum. Tampa, FL. May 14, 2019.
19. **Event Title:** 6<sup>th</sup> Annual CFF Summit. **Panel Title:** Addressing the Critical and Imminent Need for Security AI. October 21, 2021.

20. "AI Policy Talk: An AI Security ISAC and An AI Playbook"
  - Georgetown University CSET. September 30, 2021.
  - DEFCON AI Village and DEFCON Policy Village. August 6, 2021.
21. **Event Title:** CSforAll AI and Data Science Education Leadership Meeting. **Presentation Title:** Framing the Conversation on AI for Cybersecurity Education. June 29-30, 2021.
22. "An Overview of the Dark Web: An Artificial Intelligence Perspective"
  - Do Good With Data Webinar. Virtual. April 21, 2023.
  - JP Morgan Innovation Week. June 26, 2019 and June 26, 2021.
  - Florida Bankers Association 6<sup>th</sup> Annual Cyber Security Symposium. Tampa, FL. February 7, 2020.
  - JABIL Research Institute. Tampa, FL. January 23, 2020.
  - JABIL Cybersecurity Awareness Fair. St. Petersburg, FL. October 22, 2019.
  - Muma College of Business Dean's Speaker Series. Tampa, FL. February 15, 2019 and February 14, 2020.
  - Muma College of Business Executive MBA Meeting. February 16, 2019.
  - 2019 Muma College of Business Executive Advisory Council (EAC) Meeting. February 1, 2019.
23. **Panel Title:** Academia/Research Panel. **Event Title:** Arizona Cyber Bootcamp. June 22, 2021.
24. Trusted CI Webinar. **Presentation Title:** Identifying Vulnerable GitHub Repositories in Scientific CI: An AI Approach. May 24, 2021.
25. Cyber Research Roundtable. Indiana University Ethics, Values, and Tech Series. April 28, 2021.
26. NSF SFS PI Meeting. **Presentation Title:** An Overview of AI for Cybersecurity: Ideas for Cultivating the Cyber AI Workforce. April 27, 2021.
27. **Panel Title:** "AI for Security and Security for AI" **Event Title:** ACM CODASPY. April 24 – 26, 2021.
28. My Journey as a Zipperman Scholar. University of Arizona Management Information Systems Department. March 22, 2021.
29. Convergence of AI Education and Cybersecurity Education. **Conference:** 2021 SIGCSE Technical Symposium. March 17, 2021.
30. Linking Exploits from the Dark Web to Known Vulnerabilities for Proactive Cyber Threat Intelligence: An Attention-based Deep Structured Semantic Model Approach.
  - Virginia Tech Doctoral Seminar.
  - University of Minnesota Information and Decision Sciences Research Workshop. Virtual. March 12, 2021.
  - Rochester Institute of Technology Global Cybersecurity Institute. Virtual. November 13, 2020.
  - Indiana University Luddy School of Informatics AI Seminar. Virtual. August 18, 2020.
  - Indiana University Friday Consortium Speaker Series. Virtual. August 7, 2020.
  - Indiana University Operations and Decision Technologies Research Seminar. Bloomington, IN. January 21, 2020.
31. OmniSOC Year 3 Virtual Event. **Panel Title:** Research Opportunities with OmniSOC and ResearchSOC Data. February 26, 2021.
32. American University. **Presentation Title:** AI for Cybersecurity Analytics. Washington, DC. February 23, 2021.
33. UT San Antonio Cyber Center. **Presentation Title:** Cybersecurity for Scientific CI: A Deep Learning Perspective. January 28, 2021.

34. ICIS Doctoral Consortium Panel. **Panel Title:** “What the Doctoral Consortium Meant to Me and My Career” December 10, 2020.
35. **Panel Title (Moderator):** Industry Perspectives on AI for Cybersecurity. **Event:** IEEE ISI. November 9, 2020.
36. IU CACR Brown Bag. **Presentation Title:** Cybersecurity for Scientific CIs: An AI Perspective. Bloomington, IN. September 25, 2020.
37. **Panel Title:** AI, CTI, Dark Web. **Event:** Cyber Florida Research Symposium. Miami, FL. April 1, 2020 (Postponed due to COVID-19).
38. American University. **Presentation Title:** Text Mining, Network Science, and Machine Learning for CTI Applications. Washington, DC. February 4, 2020.
39. Panel on Raising the Industry Defense: TSP-ISAO. **Event:** IT Nation. Orlando, FL. November 1, 2019.
40. Invited Participant for IT Nation Keynote. Orlando, FL. October 31, 2019.
41. 2019 NSF CICI PI Meeting. **Title:** Identifying the Breadth and Scope of CICI Projects. Minneapolis, MN. September 23 – 25, 2019.
42. Panel on AI and Machine Learning Topics in Cybersecurity. **Event:** Cyber Florida Research Symposium. Tampa, FL. April 9, 2019.
43. **Event Name:** 2018 MIS Board of Advisors Dinner. Tucson, AZ. April 12, 2018.
  - **Poster Title:** Hacker Community Collection and Analytics. Tucson, AZ. April 12, 2018.
  - **Poster Title:** Identifying SCADA Devices and their Vulnerabilities on the IoT.
44. **Presentation Title:** Developing Proactive Cyber Threat Intelligence: A Data and Text Mining Approach.
  - University of South Florida (USF), Muma College of Business. Tampa, Florida. October 11, 2017.
  - University of Nevada Las Vegas (UNLV), Lee School of Business. Las Vegas, Nevada. October 6, 2017.
45. **Event Name:** 2017 Women in Cybersecurity. Tucson, Arizona. March 31, 2017.
  - **Presentation Title:** DIBBs Tool Inventory for ISI Research.
  - **Presentation Title:** AZSecure Hacker Assets Portal: Enhancing Cybersecurity Education.
46. **Event Name:** SaTC PI Meeting. Washington, DC. January 9 – 11, 2017.
  - **Poster Title:** Hacker Community Collection and Analytics.
  - **Poster Title:** Identifying SCADA Devices and their Vulnerabilities on the IoT.
47. CyberCorps SFS Job Fair. **Presentation Title:** Hacker Web Assets Portal. Washington, DC. January 4 – 6, 2017.
48. University of Arizona GenCyber Summer Camp. **Talk Title:** Cybersecurity Research Overview. July 16 and July 30, 2015.

## TEACHING EXPERIENCE

Course	Delivery Method	# of Sections	# of students	Institution	Semester	***Overall Teaching Effectiveness
T596: AI for Cybersecurity	edX	1	14	Indiana U.	Spring 2024	TBD
S364 Business Data Programming	In-Person	3	134	Indiana U.	Fall 2023	6.60/7.00
T596: AI for Cybersecurity	edX	1	13	Indiana U.	Fall 2023	6.60/7.00
S601: Technical Issues in IS	Hybrid	1	5	Indiana U.	Fall 2023	7.00/7.00
T596: AI for Cybersecurity	edX	1	29	Indiana U.	Spring 2023	5.80/7.00
S364 Business Data Programming	In-Person	3	106	Indiana U.	Fall 2022	6.78/7.00

T596: AI for Cybersecurity	edX	1	29	Indiana U.	Fall 2022	5.63/7.00
S601: Technical Issues in IS	Hybrid	1	5	Indiana U.	Fall 2022	6.50/7.00
T596: AI for Cybersecurity	edX	1	44	Indiana U.	Spring 2022	6.61/7.00
T596: AI for Cybersecurity	edX	1	35	Indiana U.	Fall 2021	6.60/7.00
S601: Technical Issues in IS	In-Person	1	3	Indiana U.	Fall 2021	7.00/7.00
S364 Business Data Programming	In-Person	2	70	Indiana U.	Fall 2021	6.80/7.00
T596: AI for Cybersecurity	edX	1	28	Indiana U.	Spring 2021	6.90/7.00
T596: AI for Cybersecurity*	edX	1	32	Indiana U.	Fall 2020	6.61/7.00
S601: Technical Issues in IS	Hybrid	1	3	Indiana U.	Fall 2020	7.00/7.00
S364 Business Data Programming	Hybrid	3	90	Indiana U.	Fall 2020	6.73/7.00
ISM 6328: Info. Security and Management	Online	2	44	USF	Spring 2020	4.55/5.00
ISM 6328: Info. Security and Management	Online	4	89	USF	Fall 2019	4.50/5.00
ISM 6905: Independent Study	Online	2	12	USF	Fall 2019	4.63/5.00
ISM 6328: Info. Security and Management	Online	4	104	USF	Spring 2019	4.50/5.00
ISM 6328: Info. Security and Management	Online	4	80	USF	Fall 2018	4.50/5.00
MIS 562: Cyber Threat Intelligence*	Online	1	8	U. of Arizona	Summer 2018	4.75/5.00
MIS 562: Cyber Threat Intelligence	In-Person	1	14	U. of Arizona	Spring 2018	4.93/5.00
MIS 596A: Special Topics in MIS – CTI*	In-Person	1	14	U. of Arizona	Spring 2017	4.36/5.00
MIS 111: Computers and the Internetworked Society	In-Person	1	37	U. of Arizona	Summer 2017	4.85/5.00

\*Note: First time offered. Designed, developed, and delivered all content.

\*\*Regularly invited for guest lectures pertaining to text analytics, data mining, deep learning, and cybersecurity.

\*\*\*Based on responses to the phrase “Overall, I would rate this instructor as outstanding” or an equivalent question. More detailed reports of responses to other questions can be provided upon request.

**PROFESSIONAL WORKSHOPS AND SYMPOSIA DELIVERED**

- 2022 SaTC PI Meeting Breakout Session Leader. **Breakout Session Title:** AI for Security. Washington, DC. June 1-2, 2022.
- AI-enabled Analytics Bootcamp. National Taiwan University. May 26 – 30, 2022; May 18, 25, and June 9, 2023. Virtual.
- University of Arizona (UA) Management Information Systems (MIS) Scholarship-for-Service (SFS) Technical Workshop. **Workshop Title:** Research Bootcamp for SFS. Fall 2017 (Tucson, AZ), Fall 2018 (Tucson, AZ), September 13, 2019 (Tucson, AZ), August 28, 2020 (Virtual), September 10, 2021 (Tucson, AZ), September 2, 2022 (Tucson, AZ).
- University of South Florida (USF) Information Systems and Decision Sciences (ISDS) Technical Workshop. **Workshop Title:** Web Crawling and API Access. Tampa, FL. February 22, 2019.
- University of Arizona (UA) Management Information Systems (MIS) Technical Workshop. **Workshop Title:** Hadoop and Spark: Data Collection, Loading, and Analysis. Tucson, AZ. Spring, 2016.
- University of Arizona (UA) Management Information Systems (MIS) Technical Workshop. **Workshop Title:** Hadoop and Spark: Infrastructure Installation, Setup, and Configuration. Tucson, AZ. Spring, 2016.

**PROFESSIONAL SERVICE**

**1. Editorial Roles:**

• **Journals:**

- Editorial Review Board Member, Information Systems Research, 2024.
- Associate Editor, MIS Quarterly (starting January 2025).
- Associate Editor, Information and Management, 2021 – Present.
- Associate Editor, ACM Transactions on Management Information Systems (TMIS), 2021 – Present.
- Associate Editor, ACM Digital Threats: Research and Practice (DTRAP), 2022 – Present.



- **Journals (Special Issues):**

- Guest Associate Editor for ACM Transactions on Management Information Systems (TMIS) Special Issue on Analytics for Cybersecurity Applications, 2019 – 2021.
- Guest Associate Editor for ACM Transactions on Management Information Systems (TMIS) Special Issue on Analytics for Privacy Applications, 2019 – 2021.
- Guest Editor for IEEE Transactions on Dependable and Secure Computing (TDSC) Special Issue on Explainable Artificial Intelligence for Cyber Threat Intelligence (XAI-CTI), 2020 – 2022.
- Guest Editor for Information Systems Frontiers Special Issue on Secure Knowledge Management in the Era of Artificial Intelligence, 2021 – 2022.
- Guest Editor for ACM Digital Threats: Research and Practice Special Issue on Applied Machine Learning for Information Security, 2022 – 2023.
- Editorial Board for Journal of the Association for IS Special Issue on Data Analytics for Social Good, 2020 – 2022.
- Editorial Board for IS Research (ISR) Special Issue on Disaster Response Management, 2021 – 2023.
- Editorial Board for ACM TMIS Special Issue on Impacts of LLMs on Business and Management, 2023-2025.

- **Conferences:**

- Associate Editor for International Conference on IS (ICIS) Track on Data Analytics for Business and Societal Challenges, 2024.
- Associate Editor for Pacific Asia Conference on IS (PACIS) Track on AI and Business Analytics, 2022.
- Associate Editor for Panels, Americas Conference on IS (AMCIS), 2022.
- Associate Editor for Pacific Asia Conference on IS (PACIS) Track on Artificial Intelligence and Big Data, 2020.
- Associate Editor for International Conference on IS (ICIS) Track on Advances in Research Methods, 2020.

## 2. Ad-hoc Reviewer (53 Journals):

- Journal of Management Information Systems (JMIS), 2018 – 2022; Springer Security Informatics, 2018; ACM Transactions on Management Information Systems (TMIS), 2018 – 2022; Information Systems Frontiers (ISF), 2018 – 2019, 2022; MIS Quarterly (MISQ), 2018 – 2023; IEEE Computer, 2018; Big Data, 2018; IEEE Intelligent Systems, 2018, 2022; Electronic Commerce Research and Applications, 2019; Journal of the Association of Information Systems (JAIS), 2019, 2021, 2022; Information Systems Research (ISR), 2019 – 2023; IEEE Access, 2019 – 2020; IEEE Transactions on Knowledge and Data Engineering (TKDE), 2019 – 2022; Security and Privacy, 2019; Science China Information Sciences (SCIS), 2019; Internet Technology Letters (ITL), 2019. Sensors, 2019; PLOS One, 2019 – 2020; IEEE Transactions on Industrial Informatics (TII), 2019; Future Generation Computer Systems (FGCS), 2019; Computers and Security (C&S), 2019 – 2020; Journal of Parallel and Distributed Computing (JPDC), 2019; Journal of Cyber Security Technology (TSEC), 2019 – 2020; Social Science Computer Review (SSCR), 2020; Journal of Network and Computer Applications (JNCA), 2020; Cluster Computing, 2020; Journal of Medical Systems (JOMS), 2020; World Wide Web Journal (W3J), 2020; Wireless Communications and Mobile Computing, 2020; Information and Management (I&M), 2020 – 2022; IEEE Transactions on Dependable and Secure Computing (TDSC), 2020 – 2022; IEEE Transactions on Information Forensics and Security (TIFS), 2020, 2022; IEEE Communications Magazine, 2020; Management Science, 2020 – 2022; INFORMS Journal on Computing (JoC), 2020, 2022, 2023; ACM Transactions on Information Systems (TOIS), 2020, 2022-2023; IEEE Transactions on Engineering Management (TEM), 2020; Production and Operations Management (POM), 2020; IEEE Transactions on Human-Machine Systems (THMS), 2020; ACM Transactions on Privacy and Security (TOPS), 2021; ACM Computing Surveys (CSUR), 2021 – 2022; European Journal on Information Systems (EJIS), 2021; ACM Digital Threats: Research and Practice (DTRAP), 2021 – 2022; Decision Support Systems, 2022-2023; IEEE Communications Magazine, 2022; IEEE Internet Computing, 2022; Applied Intelligence (APIN), 2022; Journal on Big Data, 2023; Communications of the Association for Computing Machinery, 2023; Information Security Journal: A Global Perspective, 2023; Business Horizons, 2023; Nature Scientific Reports, 2023; IEEE Security and Privacy, 2023.

## 3. Ad-hoc Reviewer (14 Conferences):

- IEEE International Conference on Data Mining (ICDM), 2020; USENIX Security and Artificial Intelligence Networking

(ScAINet) Summit, 2020; IEEE Security and Privacy (S&P), 2020; International Conference on Secure Knowledge Management (SKM), 2019; International Conference on Computer Science Application Engineering, 2019. Workshop on Data Science (WDS), 2019. Advances in Social Network Analysis and Mining (ASONAM), 2019. International Conference on Design Science Research in Information Systems and Technology (DESRIST), 2019; Americas Conference on Information Systems (AMCIS), 2019; Workshop on Information Technologies and Systems (WITS), 2018-2019; International Conference on Information Systems (ICIS), 2017, 2019; Hawaii International Conference on System Sciences (HICSS), 2016, 2017; IEEE Intelligence and Security Informatics (ISI), 2016, 2019; ICIS Doctoral Consortium, 2018.

#### 4. Conference Program Committees (14 Conferences):

- ACM CODASPY Workshop on Secure and Trustworthy Cyber-Physical Systems (SaT-CPS) 2022, 2023; DEFCON AI Village, 2021-2023; Workshop on Information Technologies and Systems (WITS), 2018-2020; ASONAM Foundations of Open Source Intelligence and Security Informatics (FOSINT-SI) 2019-2023; IEEE Intelligence and Security Informatics (ISI), 2019-2020; INFORMS Workshop on Data Science (WDS), 2019 – 2021; International Conference on Secure Knowledge Management (SKM), 2019-2023; GPC International Workshop on Pervasive Health with Artificial Intelligence (PHAI-20), 2020; IEEE Security and Privacy (IEEE S&P) Deep Learning for Security (DLS) Workshop, 2020 – 2023; USENIX Security and Artificial Intelligence Networking (ScAINet) Summit, 2020; IEEE International Conference on Data Mining (ICDM) Workshop on Deep Learning for Internet of Things (DL-IoT), 2020; ACM Conference on Computer and Communications Security (CCS) AISec Workshop, 2020-2022; Conference on Information Systems and Technology (CIST), 2020 – 2021; International Workshop on Smart and Green Edge Computing and Networking (SmartEdge), 2020.

#### 5. Grant Proposal Reviewer:

- Ad-hoc Reviewer, National Science Foundation (NSF) Cyberinfrastructure for Sustained Scientific Innovation (CSSI) Program, 2022.
- Panel Reviewer, National Science Foundation (NSF) Secure and Trustworthy Cyberspace (SaTC) CORE Program, 2022.
- Panel Reviewer, National Science Foundation (NSF) Secure and Trustworthy Cyberspace (SaTC) Education Program, 2022.
- Panel Reviewer, National Science Foundation (NSF) Convergence Accelerator Program, 2022.
- Ad-hoc Reviewer, National Science Foundation (NSF) Scholarship-for-Service (SFS) Program, 2022.
- Panel Reviewer, National Science Foundation (NSF) Secure and Trustworthy Cyberspace (SaTC) Program, 2021.

#### 6. Conference Workshop Leadership:

- Workshop Committee, NSF SaTC-EDU Directions Workshop. 2023.
- Mini-Track Co-Founder, Cybersecurity in the Age of Artificial Intelligence, AI for Cybersecurity, and Cybersecurity for AI, Hawaii International Conference on Systems Sciences, 2023.
- Workshop Co-Founder, Workshop on Vulnerability Management for Scientific CI, NSF Cybersecurity Summit, 2021.
- Workshop Co-Founder, IEEE ICDM Workshop on Deep Learning for Cyber Threat Intelligence (DL-CTI), 2020 – 2021.
- Workshop Co-Founder and Co-Chair, ACM KDD Workshop on Artificial Intelligence (AI)-enabled Cybersecurity Analytics, 2021, 2022, 2023.
- Workshop Co-Founder, Workshop on Cybersecurity as a Data Science Problem (NSF Big Data Hubs). April 12, 2021.

#### 7. Conference Chair Positions:

- Program Co-Chair, Workshop on Information Technologies and Systems (WITS), 2024.
- Conference Co-Chair, Conference on Generative AI and Cybersecurity, Kelley School of Business Institute of Business Analytics (IBA), 2023.
- Cluster Co-Chair for the Information Systems Cluster, INFORMS Annual Meeting, 2023.
- Conference Co-Chair, INFORMS Workshop on Data Science (WDS), 2023.
- Conference Co-Chair, Conference on Applied Machine Learning for Information Security (CAMLIS), 2023.
- Conference Co-Chair, Conference on Analytics for Cybersecurity, Kelley School of Business Institute of Business Analytics (IBA), 2022.

- Program Co-Chair, INFORMS Workshop on Data Science (WDS), 2022.
- Program Co-Chair, Artificial Intelligence for Business Intelligence (AI4BI) Workshop at National Taiwan University, 2022.
- Program Co-Chair, Conference on Applied Machine Learning for Information Security (CAMLIS), 2021, 2022.
- Breakout Session Leader, SaTC PI Meeting (Session Title: AI and Security), 2022.
- Program Co-Chair, International Conference on Secure Knowledge Management (SKM), 2021.
- Program Co-Chair, IEEE Intelligence and Security Informatics (ISI), 2020.
- Publicity Chair, International Conference on Secure Knowledge Management (SKM), 2019.
- Session Chair INFORMS Annual Meeting. Session Title: "Artificial Intelligence for Social Media Applications." 2017; Session Chair IEEE Intelligence and Security Informatics (ISI), 2018.

## 8. Other Service to the Field (IS and CS):

- Co-Lead for IU's group in the US AI Safety Institute Consortium. 2024.
- Invited Participant, NSF Center of Academic Excellence in Artificial Intelligence Workshop. 2024.
- Selection Committee, NSF/CISA CyberCorps Scholarship-for-Service Hall of Fame. 2023.
- Webmaster, Journal of Management Information Systems. Fall 2022 – Present.
- Board of Directors, DEFCON AI Village (AIV). 2021 – 2023.
- Publicity Chair, INFORMS College of Artificial Intelligence (CAI). 2021 – Present.
- Volunteer, IEEE Intelligence and Security Informatics (ISI), 2016. Tucson, Arizona; Volunteer, International Conference on Information Systems (ICIS), 2015. Fort Worth, Texas.

## 9. Service to the Indiana University (IU; Campus Level):

- Search Committee, Cybersecurity Faculty Position; part of Faculty 100 Plan (2023-2024).
- Search Committee for Associate Vice President and Vice Provost for Research (2023).
- Review Committee, Research Support Funds Grant (2023).
- Provost Undergraduate Research Award Committee (2023).
- High-Performance Computing (HPC) Faculty Advisory Council (2020 – Present).

## 10. Service to the Indiana University (IU; Kelley School of Business Level):

- Information Systems Doctoral Program Chair (2023 - 2025).

## 11. Service to the Indiana University (IU; Department Level):

- 1<sup>st</sup> Year Ph.D. Summer Paper Evaluation Committee (2022).
- Curriculum Committee (2021).
- Ph.D. Annual Evaluation Committee (2021, 2022).
- Ph.D. Recruiting Committee (2021, 2022, 2023).

## 12. Service to the University of South Florida (USF):

- Search Committee, Cybersecurity Faculty Positions (USF Sarasota Manatee; 2020).
- Information Systems and Decision Sciences (ISDS) Ph.D. Course Re-design (2019-2020).
- Assisted in Center of Academic Excellence Cyber Defense Education (CAE-CDE) Designation Renewal (2018 – 2019).
- Director of Information Assurance (IA) Concentration for USF's MS in Cybersecurity (2018 – 2020).

## 13. Dissertation Chair (Formal):

- Ben Lazarine, IU IS. (Dissertation Committee Chair) – 2021 – Present. Dissertation topic – AI risk management and open source software security.
- Aijia Yuan, IU IS. (Dissertation Committee Chair) – 2021 – Present. Dissertation topic – AI-enabled mental health analytics for IT professionals and information workers.

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- Yang Gao, IU IS. (Dissertation Committee Chair) – 2022 – Present. Dissertation topic – adversarial attack generation to robustify cyber-defenses, business intelligence.
  - Raina Zhang, IU IS (Dissertation Committee Chair) – 2024 – Present. Dissertation topic – bias in AI, AI risk management, large language modelling

#### 14. Dissertation Committee Member (Formal):

- Agrim Sachdeva, IU Operations and Decision Technologies, Kelley School of Business. – 2022 – Present. Initial Placement: University of Arizona.
- Dalyapraz Manatova, IU Luddy School of Informatics – 2022 – Present.
- Moez Farokhniahamedani, USF ISDS. – 2019 – Present.
- Kimia Keshanian, USF ISDS. – 2019 – 2020.
- Saurav Chakraborty, USF ISDS, Muma College of Business (ICIS Doctoral Consortium Fellow, 2019) – 2018 – 2020. Initial Placement: University of Louisville.
- Agnieszka Onuchowska, USF ISDS – 2018 – 2020. Initial Placement: Private Industry.

#### 15. Other Dissertation Advising (Not part of formal committee, but helped guide dissertation):

- Henry Yang, UArizona MIS – (2021 – Present); Andrea Ndubizu, UArizona MIS – (2021 – Present); Steven Ullman, UArizona MIS – (2019 – Present); Ben Ampel, UArizona MIS – (2019 – Present); Fang-Yu Lin, UArizona MIS – (2018 – Present).

#### 16. Masters and Undergraduate Mentoring (Formal and Informal):

- **At Indiana University:** Anika Tandon, IU IS, CEWIT (2023 – Present); Syd Cook, IU Luddy, CEWIT (2023 - Present); Sagar Sahu, IU MS Data Science (2023 – Present); Venkatesh Arunachalam, IU MS Data Science (2023 – Present); Prasanna Pandiane, IU MS Data Science (2023 – Present); Atharv Nikam, IU MS Data Science (2023 – Present); Yunhan Ye, IU Kelley (2023-Present); Cathy Zhang (2023-Present); Aishwarya Nair, IU Kelley, CeWIT (2022-Present); Adishree Kathikar, IU Kelley (2022-Present); Kendrick Mernitz, IU CAS – (2022 – 2023); Han Nguyen, IU Kelley IS – (2022); Hyunju Song, IU Luddy – (2022- Present); Michael Xu, IU Kelley IS – (2022); Zhong (Samson) Zhang, IU Kelley IS – (2021 – 2022); Yuxuan Yang, IU Kelley IS – (2021 – 2022); Ruchik Dama, IU MS Data Science – (2021 – 2022); Jay Madhu, IU Luddy – (2020 – 2021; MS); Charlie DeVries, IU Kelley IS – (2020 – 2022; UG).
- **Through collaboration with UArizona AI Lab:** Jody Askren MSMIS (2022 - Present); Wyatt Kershaw MSMIS (2022 - Present); Raul Reyes MSMIS (2021 - 2023); Ryan Ott MSMIS (2021 - 2023); Jessica Diep MSMIS (2021 - 2022); Zara Ahmad-Post, UArizona MSMIS (2020 – 2021); David Hall, UArizona MSMIS (2020 – 2021); Matt D’Vertola, UArizona MSMIS (2020 – 2021); Kaeli Otto, UArizona MSMIS (2020 – 2022); Tala Vahedi, UArizona MSMIS (2020 – 2022); Ben Lazarine, UArizona BS MIS and MSMIS (2017 – 2021); Ryan Williams, UArizona MSMIS (2016 – 2018); Emma McMahan, UArizona MSMIS (2016 – 2018); Chris Harrell, UArizona MSMIS (2017 – 2018); John Grisham, UArizona MSMIS (2014 – 2017); Malaka El, UArizona MSMIS (2016 – 2017).

#### AWARDS AND RECOGNITION

1. Winner, NSF CAREER Award (first within the Kelley School of Business). 2024.
2. Winner, IEEE Intelligence and Security Informatics Best Paper Award. 2023.
3. Nominee, INFORMS Information Systems Research Best Reviewer Award. 2023.
4. Winner, INFORMS ISS Gordon B. Davis Young Scholar Award. 2023.
5. Winner, INFORMS ISS Design Science Award. 2023.
6. Winner, Indiana University Outstanding Junior Faculty Award (IU’s most prestigious award for junior faculty). 2023.
7. Winner, IEEE Big Data Security Junior Research Award (for outstanding contributions to AI for CTI). 2023.
8. Winner, Indiana University Kelley School of Business Early Career Research Impact Award. 2023.
9. Winner, Indiana University Trustees Teaching Award. 2023.
10. Winner, Conference on Health Information Technology and Analytics (CHITA) Best Student Paper Award. 2023.
11. Winner, AIS Early Career Award. 2022.

12. Winner, Kelley School of Business Research Award (for my Samtani et al. 2022 *MIS Quarterly* paper). 2022.
13. AIS Distinguished Member. 2022.
14. Elected to the Top 50 Undergraduate Professors of 2022, Poets and Quants. 2022.
15. Inductee, NSF/CISA CyberCorps Scholarship-for-Service (SFS) Hall of Fame. 2022.
16. Winner, Best Associate Editor. Pacific Asia Conference on Information Systems (PACIS). 2022.
17. Nominee, Best Student Paper, INFORMS Workshop on Data Science. 2022.
18. Nominee, Kelley Doctoral Student Association (DSA) for Faculty Exceptional Inspiration and Guidance Award. 2022, 2023.
19. Winner, IU Faculty Academy on Excellence on Teaching (FACET) Mumford Excellence in Extraordinary Teaching Award. 2021.
20. Nominee, Indiana University Trustees Teaching Award. 2021, 2022, 2023.
21. Winner, Best Paper Award. IEEE Intelligence and Security Informatics (ISI). 2020.
22. Grant Thornton Scholar, Indiana University. 2020 – 2023.
23. Winner, ACM SIGMIS Doctoral Dissertation Competition, International Conference on Information Systems (ICIS). 2019.
24. MIS Nominee for ACM SIGMIS Doctoral Dissertation Competition. University of Arizona. 2019.
25. National Science Foundation (NSF) CISE Research Initiation Initiative (CRII) Award. 2019.
26. Runner-up, Best Paper Award. IEEE Intelligence and Security Informatics (ISI). 2018.
27. Runner-up, INFORMS Information Systems Society (ISS) Nunamaker-Chen Dissertation Award. 2018.
28. Paul S. and Shirley Goodman Award in International Computer Technology. 2017.
29. Doctoral Consortium, International Conference on Information Systems (ICIS). 2017.
30. Runner-up, Best Paper Award. IEEE Intelligence and Security Informatics (ISI). 2017.
31. Doctoral Consortium, Americas Conference on Information Systems (AMCIS). 2017.
32. National Science Foundation (NSF) Scholarship-for-Service (SFS) Fellowship. 2014 – 2017.
33. MIS Nominee for the Eller College Teaching Award. University of Arizona. 2017.
34. Doctoral Consortium, IEEE Intelligence and Security Informatics (ISI). 2016.
35. James F. LaSalle Award for Teaching Excellence as a Graduate Student Instructor. University of Arizona. 2016.
36. Zipperman Scholar. University of Arizona. 2010-2011.
37. Wildcat Excellence Award. University of Arizona. 2009-2013.

## **PRESS AND MEDIA MENTIONS**

1. [“Artificial Intelligence research at Kelley impacts business – and beyond”](#) Kelley School of Business Faculty Spotlight, February 26, 2024.
2. [“Kelley professors playing an important role in international efforts to govern data use and artificial intelligence”](#) Kelley School of Business, February 21, 2024.
3. [“IU advancing safe, trustworthy AI as part of new US government consortium”](#) IU Today (lead story). February 15, 2024.
4. [“Project will protect researchers’ open-source software worldwide”](#) IU Today (lead story). October 19, 2023.
5. [“Research Roundup: October 2023”](#) AACSB. October 25, 2023.
6. [“AI Risk Database Tackles AI Supply Chain Risks”](#) Dark Reading. August 9, 2023.
7. [“MITRE and Robust Intelligence Tackle AI Supply Chain Risks in Open-Source Models”](#) MITRE. August 9, 2023.
  - a. Picked up by over a dozen media outlets, including [Yahoo Finance](#).
8. [“MITRE and Robust Intelligence Tackle AI Supply Chain Risks in Open-Source Models”](#) Yahoo Finance. August 9, 2023.
9. [“Power of Technology: Enhances Life, Takes Toll on Well-Being”](#) Biz Voice Mag, Indiana Chamber of Commerce. August 9, 2023.
10. [“Generative AI Has its Risks, But the Sky Isn’t Falling”](#) Dark Reading. June 19, 2023.
11. [“SNAP recipients in Indiana benefits stolen through card skimmers”](#) WRTV ABC Indianapolis. May 15, 2023.
12. [“Mass event will let hackers test limits of AI technology”](#) Associated Press. May 10, 2023.
13. [“Why Biden’s White House Just Got Behind The ‘Biggest AI Hacking Event Ever’”](#) Forbes. May 5, 2023.
14. [“Fact Sheet: Biden-Harris Administration Announces New Actions to Promote Responsible AI Innovation that Protects Americans’ Rights and Safety”](#) The White House Fact Sheet. May 4, 2023.
15. [“Joe Biden Wants Hackers’ Help to Keep AI Chatbots in Check”](#) WIRED. May 4, 2023.
16. [“Hackers to Put AI Models From Google, OpenAI, More to the Test at Defcon 31”](#) PC Magazine. May 4, 2023.

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17. "[Committee name to lead search for vice provost for research Bloomington](#)" IU Bloomington Today. May 4, 2023.
  18. "[Kelley professor named Provost Professor; another wins Outstanding Junior Faculty Award](#)" Kelley School of Business. April 21, 2023.
  19. "[6 named Outstanding Junior Faculty](#)" IU Bloomington Today. April 14, 2023.
  20. "[Carlo Brayda Taps Forbes Councils Members for Insight on Cybersecurity](#)" Forbes Councils. January 24, 2023.
  21. "[Two Kelley School professors receive international honors for their scholarly efforts](#)" Kelley School of Business. December 15, 2022.
  22. "[Poets&Quants' Top 50 Undergraduate Professors of 2022](#)" Yahoo!. December 12, 2022.
  23. "[APWG Announces Papers Accepted for the 2022 Annual Symposium on Electronic Crime Research – Messages From the Edge of Cybercrime Experience](#)" Associated Press (AP). November 18, 2022.
    - a. Picked up by: [GlobeNewswire](#)
  24. "[IU Kelley School of Business researcher recognized for his work on using AI to improve cybersecurity](#)" IU Office of the Vice President of Research (VPR). May 12, 2022.
  25. "[Eller alumnus named 2022 CyberCorps: Scholarship for Service Hall of Fame recipient](#)" Eller College of Management. May 2, 2022.
  26. "[Strategies for IT Business Leaders to Manage Employees' Mental Health](#)" CompTIA. March 11, 2022.
  27. "[Cybersecurity, and applying AI to middle school science](#)" IU Office of the Vice President of Research (VPR). February 28, 2022.
  28. "[How AI is shaping the cybersecurity arms race](#)" The Conversation. February 23, 2022.
    - a. Picked up by 70+ media outlets including: [Yahoo!](#), [Houston Chronicle](#)
  29. "[Kelley Professor Studies Increased Use of Artificial Intelligence in Cybersecurity](#)" Kelley School of Business. February 18, 2022.
  30. "[Why the 2022 Winter Olympic Games are a 'field day' for hackers – how their efforts could impact competition](#)" WTHI. February 6, 2022.
  31. "[5 Strategies to Proactively Address the Growing Mental Health Crisis Amongst IT Professionals](#)" CompTIA. January 28, 2022.
  32. "[Kelley professors offer thoughts on marketing, cybersecurity concerns around Winter Olympics](#)" Kelley School of Business, January 28, 2022.
  33. "[2020-2021 Annual Report on Indiana University Research](#)" IU Office of the Vice President of Research (VPR). 2021.
  34. "[Advanced Monitoring and Security Automation Keep Businesses a Step Ahead of Hackers](#)" BizTech Magazine, September 2, 2021.
  35. "[IU Awarded Additional Grant for CyberCorps Project](#)" Inside Indiana Business, August 31, 2021.
  36. "NSF Grant will Help Indiana University Train Next Generation of AI, Cybersecurity Professionals" [NewsWise](#), [News at IU Bloomington](#), August 30, 2021.
  37. "Biden's Infrastructure Plan: 3 Cybersecurity Provisions" [BankInfoSecurity](#), [DataBreachToday](#), March 31, 2021.
  38. "[CompTIA ISAO Names Executive Advisory Council](#)" MSSP Alert, February 16, 2021.
  39. "[Cybersecurity and MSP Market Leaders Bring Their Expertise to CompTIA ISAO](#)" CompTIA, February 11, 2021.
  40. "[Operations and Decision Technologies is fourth worldwide in terms of research contributions](#)" Kelley School of Business, January 27, 2021.
  41. "[MIS PhD Student Ben Ampel Receives Best Paper Award at IEEE ISI Conference](#)" Eller College of Management, December 21, 2020
  42. "[Cyber Threats Rise in Time of Uncertainty, Fear](#)" Muma College of Business, March 26, 2020.
  43. "[What the Tampa Bay Rays Can Teach Us About Building a Successful Cyber Team](#)" Cyber Florida, March 5, 2020.
  44. "[FBI: Don't Pay the Ransom in a Cyberattack](#)" BayNews9, December 10, 2019
  45. "[UArizona Researchers Going on Offense and Defense in Battle Against Hackers](#)" UANews. December 3, 2019.
    - a. "[Eller College Researchers Go on Offense, Defense in Battle Against Hackers](#)" Eller College of Management, December 4, 2019.
  46. "[ConnectWise-initiated IT threat intelligence sharing body gears up for launch to provide 'Star Wars' defense against cyber attacks](#)" ChannelBuzz. November 5, 2019.
    - a. "[ConnectWise Parts Curtain on Evolving Cybersecurity Threat Sharing Initiative](#)" ChannelProNetwork. November 1, 2019.
    - b. "[ConnectWise's New TSP-ISAO Program Creates Hub for Cyberthreat Information](#)" ChannelFutures. November 4, 2019.
    - c. "[ConnectWise IT Nation Connect 2019 – Recap](#)" ConnectWise. November 14, 2019.
    - d. "[USF receives \\$250K from ConnectWise founder to study cybersecurity](#)" Tampa Bay Business Journal. November 18,

2019.

47. "[ISDS Professor Lands a \\$250K Grant to Study Cybersecurity, Dark Web](#)" Muma College of Business. November 5, 2019.
48. "[NSF renews grant for University of Arizona Cybersecurity Program](#)" EurekAlert!, AAAS. October 15, 2019.
  - a. "[NSF renews grant for University of Arizona Cybersecurity Program](#)" Science Magazine, October 15, 2019.
  - b. "[NSF Grant Renews Cybersecurity Program in Eller College](#)" Eller College of Management, October 18, 2019.
  - c. "[Cybersecurity Students Benefit from Scholarship Program](#)" UANews, University of Arizona. October 18, 2019.
49. "[Why shakedown artists find it so easy to bamboozle Florida cities out of cash and data](#)" Miami Herald. August 23, 2019.
50. "[New Projects in Business Education – September 2019](#)" BizEd AACSB International. August 26, 2019.
51. "Artificial Intelligence and the Dark Web" Cyber Florida No Password Podcast. WUSF Public Media. August 15, 2019.
52. "[USF Professor on Artificial Intelligence: 'Data is the new oil'](#)" Fox 13. August 6, 2019.
53. "[Capital One Hack Sparks Discussion of Cyber Hygiene](#)" WUSF Public Media. August 6, 2019.
54. "[What to Consider Before Claiming the \\$125 Settlement from the Equifax Hack](#)" The Penny Hoarder. August 2, 2019.
55. "[Cybersecurity to Get Added to the Business School Curriculum](#)" Dark Web Link. June 14, 2019.
56. "[USF Adds Cybersecurity to Business School Curriculum](#)" Fox 13. June 12, 2019.
57. "[ISDS Professor's NSF Grant Will Fund Research Aimed at Protecting Scientific Instruments from Cyber Attack](#)" Muma College of Business. June 5, 2019.
58. "[ISDS Assistant Professor Sagar Samtani Lands a National Science Foundation Grant to Study the Dark Web](#)" Muma College of Business. April 10, 2019.
59. "[Faculty Spotlight: Sagar Samtani Dives Deep into the Dark Web to Find Answers, Solutions](#)" Muma College of Business. February 8, 2019.
60. "[ISDS Faculty Reaches New Heights in the Fall of 2018: Papers Published in Prestigious Journals, Research Presented, Awards Given](#)" Muma College of Business. February 5, 2019.
61. "[Eller's Artificial Intelligence Lab Celebrates 30<sup>th</sup> Anniversary](#)" Eller College of Management. January 22, 2019.
62. "[Research: Identification of Cyber Threats Across Non-English DarkNet Marketplaces](#)" Deep.Dot.Web. December 27, 2018.
63. "[What is Threat Intelligence Monitoring?](#)" RSI Security, November 8, 2018. Research Mention.
64. "[Cyber defense research designation could improve research opportunities](#)" Arizona Daily Wildcat. August 30, 2017.
65. "[Post-Snowden: More Conversations About Privacy, Cyber Security Innovation at the University of Arizona](#)" Aired on April 8, 2016.
  - a. "[Cybersecurity at the University of Arizona: Regents' Professor Hsinchun Chen Featured on Arizona Public Media](#)" Eller College of Management. April 25, 2019.

## **PROFESSIONAL AFFILIATIONS AND SOCIETIES**

1. Association for Information Systems (AIS), Member
  - Special Interest Groups (SIG) Artificial Intelligence and Autonomous (AIAA) and Security (SEC)
2. Association for Computing Machinery (ACM), Member
3. Institute of Electrical and Electronics Engineers (IEEE), Member
  - Technical Committee on Security and Privacy
4. Institute for Operations Research and the Management Sciences (INFORMS), Member
5. International Neural Network Society (INNS), Member

## **SELECTED PROFESSIONAL CONSULTING, COLLABORATIONS, AND EXPERT SERVICES**

1. Taiwan Semiconductor Manufacturing Company (TSMC) AI4BI Consultant. 2022 – Present.
2. Indiana University (Faculty Expert on Cybersecurity, CTI, AI, and Dark Web). 2021 – Present.
3. Executive Advisory Council Member, National AI Cybersecurity Information Sharing and Analysis Organization. 2022 – Present.
4. Executive Advisory Council Member, CompTIA Information Sharing and Analysis Organization (CompTIA ISAO). 2021 – Present.
5. Founding member, Technology Solutions Provider ISAO (TSP-ISAO; now CompTIA ISAO). 2019 – 2020.
6. University of Arizona, MIS Department (CTI and AI for Cybersecurity Consultant). 2019 – 2020.
7. Cyber Florida (Faculty Expert on Cybersecurity, CTI, AI, and Dark Web). 2019 – 2020.
8. University of Arizona, Artificial Intelligence (AI) Lab (Faculty Collaborator). 2018 – Present.

9. University of South Florida, Muma College of Business (Cybersecurity Faculty Expert). 2018 – 2020.

## **PROFESSIONAL CERTIFICATIONS**

1. Mental First Aider (from the National Council for Mental Wellbeing). 2022 – 2025.
2. Information Systems Security Professional (CNSS certificate number 4011)
3. Senior Systems Manager (CNSS certificate number 4012)
4. Systems Administrator (CNSS certificate number 4013)
5. Risk Analyst (CNSS certificate number 4016)

## **PROFESSIONAL DEVELOPMENT PARTICIPATION: WORKSHOPS AND TRAININGS**

1. Junior Faculty Consortium. International Conference on Information Systems. December 15, 2019.
2. SEC 460: Enterprise Threat and Vulnerability Assessment. The SANS Institute. (August 25 – August 30, 2019).
3. Pre-Americas Conferences on Information Systems (AMCIS) MIS Quarterly Author Workshop. 2018.
4. Post- International Conference on Information Systems (ICIS) MIS Quarterly Reviewer Workshop. 2017.
5. Practical Threat Intelligence. Black Hat USA. July 30 – 31, 2016.
6. Bypassing Security Defenses – Secret Penetration Testing Techniques. Black Hat USA. August 1 – 2, 2015.

## **RELEVANT TECHNOLOGY SKILLS**

1. **Databases:** Oracle 11g, MySQL, PL/SQL
2. **Programming Languages:** Java, Python
3. **Visualization tools:** Tableau, Spotfire, Gephi
4. **Data mining tools:** RapidMiner, SPSS Modeler, WEKA, scikit-learn
5. **Major deep learning toolkits:** PyTorch, Keras
6. **Security tools:** Kali Linux, Shodan, NMap, Burpsuite, Nessus, Metasploit
7. **Big Data Technologies:** Hadoop and Spark

## **PERSONAL**

US Citizen (born in Queens, New York; security clearance eligible), unmarried