

# Benjamin M. Ampel

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Department of Management Information Systems  
University of Arizona McClelland Hall

Eller College of Management  
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## ACADEMIC EMPLOYMENT

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Duration	Title	Organization
2024-Present	Assistant Professor of Computer Information Systems	Georgia State University
2021-2024	Adjunct Lecturer (Limited Term)	University of Arizona
2018-2024	Research Associate, Artificial Intelligence Lab	University of Arizona
2018-2021	NSF CyberCorps Scholarship-for-Service Fellow	University of Arizona

\*Note: NSF = National Science Foundation

## EDUCATION

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**Ph.D.**, Management Information Systems (MIS), University of Arizona, 2024

- **Dissertation Title:** Securing Cyberspace: AI-Enabled Cyber-Adversary Defense
- **Committee Members:** Dr. Hsinchun Chen (Chair), Dr. Sue Brown, Dr. Jay F. Nunamaker Jr.
- **Minor:** Cognitive Science, advised by Dr. Mary Peterson

**M.S.**, Management Information Systems (MIS), University of Arizona, 2019

**B.S.B.A.**, Management Information Systems (MIS), University of Arizona, 2017

## PUBLICATIONS

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### Journal Publications (4 total)

1. **B. Ampel**, S. Samtani, H. Zhu, and H. Chen, "Creating Proactive Cyber Threat Intelligence with Hacker Exploit Labels: A Deep Transfer Learning Approach," *Management Information Systems Quarterly (MISQ)*, 48:1, 137-166, 2024.
2. **B. Ampel**, S. Samtani, H. Zhu, H. Chen, and J. F. Nunamaker, "Improving Threat Mitigation Through a Cybersecurity Risk Management Framework: A Computational Design Science Approach," *Journal of Management Information Systems (JMIS)*, 41:1, 236-265, 2024.
3. Y. Gao, **B. Ampel**, S. Samtani, "Evading Anti-Phishing Models: A Field Note Documenting an Experience in the Machine Learning Security Evasion Competition 2022," *ACM Digital Threats: Research and Practice (DTRAP)*, 5:1, Article 7, 2024.
4. **B. Ampel** and S. Ullman, "Why Following Friends Can Hurt You: A Replication Study," *AIS Transactions on Replication Research (TRR)*, 9:1, Article 6, 2023.

### Journal Manuscripts Under Review (3 total)

1. **B. Ampel**, S. Samtani, and H. Chen, "Adversarially Robust Phishing Generation and Detection: A Large Language Model Approach," *Under Second Round Review at Information Systems Research (ISR)*.
2. **B. Ampel**, C. Heng, J. Hu, H. Chen, "Large Language Models for Conducting Advanced Text Analytics Information Systems Research," *Under Second Round Review at ACM Transactions on Management Information Systems (TMIS)*.
3. **B. Ampel**, "A Computational Design Framework for Targeted Disruption of Hacker Communities," *Under First Round Review at Information Systems Frontiers (ISF)*.

### Journal Manuscripts in Progress (4 total)

1. **B. Ampel**, S. Samtani, H. Chen, “Automatically Detecting Phishing Calls: A Large Audio Model Approach,” *Targeted at Management Information Systems Quarterly (MISQ)*.
2. **B. Ampel**, S. Samtani, H. Chen, “Automated Hacker Threat Reporting: A Knowledge Enhanced Summarization Approach,” *Targeted at Management Information Systems Quarterly (MISQ)*.
3. **B. Ampel**, S. Samtani, “Enhancing Hacker Asset Analytics: A Retrieval Augmented Generation Approach” *Targeted at Journal of Management Information Systems (JMIS)*.
4. R. Kirklin, **B. Ampel**, H. Chen, “Short Messaging Service Phishing Detection: An Ensemble Large Language Model Approach” *Targeted at Journal of Management Information Systems (JMIS)*.

#### **Refereed Conference Proceedings (12 total, \* Indicates I was Lead Presenter)**

1. **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,” Proceedings of 2023 IEEE International Conference on Intelligence and Security Informatics (ISI), North Carolina, October 2023 (**Recipient of Best Paper Award**).
2. **B. Ampel\***, K. Otto, S. Samtani, H. Zhu, and H. Chen, “Disrupting Ransomware Actors on the Bitcoin Blockchain: A Graph Embedding Approach,” Proceedings of 2023 IEEE International Conference on Intelligence and Security Informatics (ISI), North Carolina, October 2023.
3. **B. Ampel\***, Y. Gao, J. Hu, S. Samtani, and H. Chen, “Benchmarking the Robustness of Phishing Email Detection Systems,” Proceedings of the Americas’ Conference on Information Systems (AMCIS), Panama, August 2023.
4. **B. Ampel\***, “The Effect of Consensus Algorithm on Ethereum Price and Volume,” Proceedings of the Americas’ Conference on Information Systems (AMCIS), Panama, August 2023.
5. C. Marx, **B. Ampel**, B. Lazarine, “The Influence of AI Agent Recommendations on Escalation of Commitment,” Proceedings on the International Conference on Information Systems (ICIS), Austin, Texas, 6December 2021.
6. T. Vahedi, **B. Ampel**, S. Samtani, and H. Chen, “Identifying and Categorizing Malicious Content on Paste Sites: A Neural Topic Modeling Approach,” Proceedings of 2021 IEEE International Conference on Intelligence and Security Informatics (ISI), San Antonio, Texas, November 2021.
7. K. Otto, **B. Ampel**, S. Samtani, H. Zhu, and H. Chen, “Exploring the Evolution of Exploit-Sharing Hackers: An Unsupervised Graph Embedding Approach,” Proceedings of 2021 IEEE International Conference on Intelligence and Security Informatics (ISI), San Antonio, Texas, November 2021.
8. **B. Ampel\*** and H. Chen, “Distilling Contextual Embeddings into A Static Word Embedding for Improving Hacker Forum Analytics,” Proceedings of 2021 IEEE International Conference on Intelligence and Security Informatics (ISI), San Antonio, Texas, November 2021.
9. **B. Ampel\***, S. Samtani, H. Zhu, S. Ullman, and H. Chen, "Labeling Hacker Exploits for Proactive Cyber Threat Intelligence: A Deep Transfer Learning Approach," Proceedings of 2020 IEEE International Conference on Intelligence and Security Informatics (ISI), Washington, D.C., November 2020 (**Recipient of Best Paper Award**).
10. 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," Proceedings of 2020 IEEE International Conference on Intelligence and Security Informatics (ISI), Washington, D.C., November 2020.
11. 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," Proceedings of 2020 IEEE International Conference on Intelligence and Security Informatics (ISI), Washington, D.C., November 2020.
12. **B. Ampel**, M. Patton and H. Chen, "Performance Modeling of Hyperledger Sawtooth Blockchain," Proceedings of 2019 IEEE International Conference on Intelligence and Security Informatics (ISI), Shenzhen, China, July 2019.

#### **Refereed Workshop Papers (No Proceedings, 2 total, \* Indicates I was Lead Presenter)**

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 2023.

2. **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 2021.

## GRANT WRITING EXPERIENCE

1. **Year:** 2023. **Funding source:** NSF. **Grant Title:** “Cybersecurity Scholarship-for-Service Renewal at The University of Arizona: The AZSecure AI4Cyber SFS Program” **Funding Amount:** \$3M. **Role:** Lead Grant Writer. **Status:** Awarded.
2. **Year:** 2021. **Funding source:** NSF. **Grant Title:** “D-ISN: Detecting and Disrupting Key Actors and Emerging Stolen Virtual Products in Dark Web Networks: A Multi-Disciplinary Deep Learning Approach” **Funding Amount:** \$1M. **Role:** Assisting Grant Writer. **Status:** Rejected (Low Competitive).
3. **Year:** 2020. **Funding source:** NSF. **Grant Title:** “D-ISN: Identifying and Disrupting Illicit Dark Web Hacker Community Networks: An Explainable AI Approach” **Funding Amount:** \$1M. **Role:** Assisting Grant Writer. **Status:** Rejected (Low Competitive).

## TEACHING EXPERIENCE

Role	Course	Method	Semester	# Students	School	TE Score
Lecturer	MIS 562: Cyber Threat Intelligence	Online	Fall 2023	24	UArizona	4.6/5
GTA	MIS 611D: Topics in Data Mining	In Person	Spring 2023	9	UArizona	-
GTA	MIS 464: Data Analytics	In Person	Spring 2023	39	UArizona	-
Lecturer	MIS 562: Cyber Threat Intelligence	Online	Fall 2022	40	UArizona	4.7/5
GTA	MIS 561: Data Visualization	Online	Summer 2022	33	UArizona	-
Lecturer	MIS 562: Cyber Threat Intelligence	Online	Fall 2021	13	UArizona	4.5/5
Lecturer	MIS 562: Cyber Threat Intelligence	Online	Summer 2021	30	UArizona	4.0/5

\*Note: GTA = Graduate Teaching Assistant, TE = Teaching Evaluation

## PROFESSIONAL ACTIVITIES

### Ad-hoc Reviewer of Journal Papers (6 Unique Journals)

Computers & Security, 2023-2024; Deviant Behavior (UDBH), 2023-2024; ACM Digital Threats: Research and Practice (DTRAP), 2022-2023; AIS Transactions on Replication Research (TRR), 2022; IEEE Transactions on Dependable and Secure Computing (TDSC), 2021; ACM Transactions on Management Information Systems (TMIS), 2019-2024.

### Conference Program Chair (1 Unique Conference Chaired)

Workshop on Artificial Intelligence-enabled Cybersecurity Analytics at KDD (AI4Cyber-KDD), 2024

### Conference Program Committees (3 Unique Conference Program Committees)

ACM Conference on Computer and Communications Security (CCS) AISEC Workshop 2021-2023; ICDM Data Mining for Cybersecurity, 2021; Workshop on Artificial Intelligence-enabled Cybersecurity Analytics at KDD (AI4Cyber-KDD), 2021-2023.

### Ad-hoc Reviewer of Refereed Conference Proceedings and Workshops (6 Unique Conferences)

INFORMS Workshop on Data Science (WDS), 2022; Hawaii International Conference on System Sciences (HICSS), 2021-2023; IEEE Deep Learning and Security Workshop (DLS), 2020; Pacific Asia Conference on Information Systems (PACIS), 2020-2023; International Conference on Information Systems (ICIS), 2020-2023; ICDM Workshop on Deep Learning for Cyber Threat Intelligence (DL-CTI), 2020.

### Other Service Activities

HICSS-58 (2025) Junior Faculty Consortium Planning Co-lead; Volunteer at AMCIS 2023; Volunteer at ICIS 2021.

### Invited Talks and External Presentations (5 Total)

1. **Event Title:** MIS 50th Academic Conference at The University of Arizona. **Presentation Title:** How Has Generative AI Affected Education, Research, And Practice? March 22, 2024. Tucson, Arizona.

2. **Event Title:** AI in Cybersecurity – Machine Learning / Deep Learning Data Analytics at HICSS-57.  
**Presentation Title:** Large Language Models for Advanced Text Analytics. January 3, 2024. Hawaii.
3. **Event Title:** Fall 2023 AI Bootcamp. **Presentation Title:** LLM Overview & Advanced Text Analytics. October 12, 2023. Virtual.
4. **Event Title:** International Conference on Secure Knowledge Management (SKM). **Presentation Title:** Deep Learning for The Detection of Vishing Calls. September 22, 2023. Virtual.
5. **Event Title:** AI in Cybersecurity – Machine Learning / Deep Learning Data Analytics at HICSS-56.  
**Presentation Title:** Analytics and Visualizations/UI in AI for Cybersecurity. January 3, 2023. Hawaii.

## **HONORS & AWARDS**

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- Best Paper Award. IEEE Intelligence and Security Informatics (ISI) (2023)
- Doctoral Consortium, International Conference on Information Systems (ICIS) (2023)
- Doctoral Consortium, Americas Conference on Information Systems (AMCIS) (2023)
- Paul S. and Shirley Goodman Scholarship (2023)
- Samtani-Garcia MIS PhD Commitment Scholarship (2022)
- James F. LaSalle Teaching Excellence Award (2022)
- Alan R. Dennis Travel Award (2022)
- Best Paper Award. IEEE Intelligence and Security Informatics (ISI) (2020)
- Nunamaker-Chen MIS Doctoral Scholarship Recipient (2020)
- National Science Foundation CyberCorps: Scholarship for Service Fellow (2018-2021)
- UArizona MIS Undergraduate Outstanding Senior (2017)