

# Anitha Chennamaneni

## CONTACT

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## EDUCATION

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<b>Doctor of Philosophy</b> (Major: Information Systems, Minor: Computer Science) The University of Texas at Arlington, Arlington, TX	2006
<b>Master of Business Administration</b> , Emphasis: Information Systems Southern Illinois University, Carbondale, Illinois	1997

## HONORS / AWARDS RECEIVED

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- Beck Family Senior Faculty Endowed Fellowship Award, 2019
- Distinguished Graduate Faculty Award, 2015, 2023
- Outstanding Faculty Quantitative Scholarship Award Finalist, 2023
- Outstanding Faculty Qualitative Scholarship Award Finalist, 2023
- Outstanding Graduate Faculty Research Award, May 2013
- Outstanding Graduate Faculty Scholarship Award Finalist, May 2014
- Outstanding Graduate Faculty Scholarship Award Finalist, May 2013
- Graduate Faculty, 2008 - present

## TEACHING INTERESTS

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- Cybersecurity, Information Security & Risk Management, Digital Forensics, Artificial Intelligence and Machine Learning, Big Data Analytics, Advanced Database Management, Management Information Systems, IT Project Management, Systems Analysis & Design, Management Information Systems, Programming Languages

## RESEARCH INTERESTS

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- Cybersecurity, IT Security & Privacy, Artificial Intelligence, Digital Forensics, Encryption, Cryptography, Deep Learning, Internet of Things (IoT), Data Analytics,

Machine Learning, Knowledge Management, Business Analytics, Social Networking Technologies

## **PROFESSIONAL EXPERIENCE**

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- **Department Chair, Computer Information Systems**, Texas A&M University-Central Texas, June 2012 – Present
- **Director of the Center for Cybersecurity Innovation**, Texas A&M University-Central Texas, September 2021 – Present
- **Chair, Institutional Review Board**, Texas A&M University-Central Texas, January 2015 – May 2019
- **Professor of Computer Information Systems**, Texas A&M University-Central Texas, September 2023 – Present
- **Associate Professor of Computer Information Systems**, Texas A&M University-Central Texas, September 2014 – August 2023
- **Assistant Professor of Computer Information Systems**, Texas A&M University-Central Texas, September 2009 – August 2014
- **Assistant Professor of Computer Information Systems**, Tarleton State University-Central Texas, August 2008 – August 2009
- **Lecturer, Dept. of Information Systems & Operations Management**, University of Texas, Arlington, Aug 2007-Dec 2007
- **Senior Applications Developer**, The Neiman Marcus Group, Dallas, May 2002 – August 2008
- **Software Analyst and Programmer**, JP Mobile Inc, Dallas, Oct 1998 – March 2002
- **Programmer / Analyst**, Dallas Market Center, Dallas, Oct 1997 – Aug 1998

## **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

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- Member, Association for Information Systems
- Member, Association for Computing Machinery
- Member, Institute of Electrical and Electronics Engineers
- Member, Women in Cybersecurity
- Member, Decision Science Institute
- Member, Federation of Business Disciplines

## **SCHOLARLY ACTIVITIES**

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### **Funded Grants / Contracts**

- **Chennamaneni, A. (Principal Investigator)**, Murphy, W (Co-PI): NSF grant: Collaborative Research: HCC: Buenas - Giving All a Seat at the Table Using Mixed Reality, National Science Foundation, \$199,971.00, 2023-2026.
- **Chennamaneni, A. (Principal Investigator)**, Harvey, T (9/2023 – 9/2027). Project: Development of Artificial Intelligence (AI) & Deep Learning (DL) based techniques and solutions for threat detection and protection against cyber-attacks. Project funded by the United States Air Force Research Laboratory (AFRL) and the Department of Homeland Security (DHS). Amount \$2,750,000.
- **Chennamaneni, A. (Principal Investigator)**, Harvey, T (9/2019 – 9/2023). Project: Hardware Integrity Verification Utilizing Scanning Electron Microscopy. Project funded by the United States Air Force Research Laboratory (AFRL) and the Department of Homeland Security (DHS) Science and Technology (S&T). Amount Funded \$4,201,009.
- Khoja, F. **Chennamaneni, A. (Co-PI)**, Phelps S.(2022). Curriculum development & teaching grant for developing undergraduate stackable certificates in Data Analytics. Texas Higher Education Coordinating Board (Consortium grant with Temple College) for Accelerating Credentials of Purpose and Value Grant program in Data Analytics (undergraduate and L1 certificates) **\$333,570**.
- Khoja, F. **Chennamaneni, A. (Co-PI)**, Gonela V. (2022). Curriculum development & teaching grant for developing a graduate-level certificate in applied data analytics. Texas Higher Education Coordinating Board grant for Accelerating Credentials of Purpose and Value Grant program in Applied Data Analytics (graduate certificate programs) **\$201,000.00**
- **Chennamaneni, A. (Co-Principal Investigator)** (2021) TEES Research grant (Awarded First prize) for 2021-2023 period. Project Title: A DeepDefense Approach for Next-Gen Cyber-Resilient Interdependent Critical Infrastructure Systems. Other members include Abhijit Nag (A&M Central Texas), Eman Hamad (Texas A&M University-Commerce) Mohsen Aghashahi(Texas A&M University-San Antonio), and Erdogen Dogdu (Angelo State University). Amount \$10,000.

### ***PUBLICATIONS: PEER - REVIEWED JOURNAL ARTICLES***

1. Bowen, B., **Chennamaneni, A.**, Goulart, A., & Lin, D. “BLoCNet: a hybrid, dataset-independent intrusion detection system using deep learning”. International Journal of Information Security, 2023, 1-25.

2. Torre, D. **Chennamaneni, A** and Rodriguez, A "Privacy-Preservation Techniques for IoT Devices: A Systematic Mapping Study," *IEEE Access*, 2023, vol. 11, pp. 16323-16345.
3. Torre, D., Mesadieu, F\*. & **Chennamaneni, A**, “Deep Learning techniques to detect cybersecurity attacks: a systematic mapping study”. *Empir Software Eng* 28, 76 (2023). <https://doi.org/10.1007/s10664-023-10302-1>
4. Lorenz, S., Steinhour, S. **Chennamaneni, A**, Subhani, A & Torre, D. “Forensic Analysis of IoT Devices: Amazon Echo Show Family”. *Forensic Science International: Digital Investigation*, Volume 45, 2023, 301541, ISSN 2666-2817
5. **Chennamaneni, A**, and Gupta, B. "The privacy protection behaviours of the mobile app users: exploring the role of neuroticism and protection motivation theory." *Behaviour & Information Technology* (2022): 1-19.
6. Bhadauria, V. S., & **Chennamaneni, A**. (2022). Do desire, anxiety and personal innovativeness impact the adoption of IoT devices?. *Information and Computer Security*, 2022
7. Goulart, A., **Chennamaneni, A**., Torre, D., Hur, B., & Al-Aboosi, F. Y. (2022). On Wide-Area IoT Networks, Lightweight Security and Their Applications—A Practical Review. *Electronics*, 11(11), 1762.
8. Gupta, B. & **Chennamaneni, A**. "Understanding Online Privacy Protection Behavior of the Older Adults: An Empirical Investigation" *Journal of Information Technology Management* Volume XXIX, Number 3, 2018.
9. Teng, J. Wood, C. **Chennamaneni, A**. & Song, S "Achieving Knowledge Management (KM) Success: Examining A Task-KM Strategy Fit Model", *Journal of Information Technology Management*, Volume XXV, Number 1, 2014, pp. 20 – 31.
10. **Chennamaneni, A**. Teng, J. & Raja, M.K. "A unified model of knowledge sharing behaviours: theoretical development and empirical test", *Behaviour & Information Technology*, Volume 31, Issue 11, 2012, pp. 1097-1115.
11. **Chennamaneni, A** & Teng, J. “ Types of Human Needs That Motivate Knowledge Sharing In Organizations: A Comprehensive Empirical Study Based On the ERG Theory”, *Journal of Information Technology Management*, Volume XXIII, Number 3, 2012, pp. 65 – 80
12. **Chennamaneni, A**. Tunenkova, N & Vert, G. "Information Systems Security Education – An e-Learning approach", *Communications of Global Information Technology*, Volume 4, 2012, pp.10 -16
13. Vinekar, V. Teng, J. & **Chennamaneni, A**. “The Interaction of Business Intelligence and Knowledge Management in Organizational Decision-Making”, *Journal of International Technology and Information Management*, Volume 18, Issue 2, 2009, pp.143 – 159.

***PUBLICATIONS – PEER-REVIEWED CONFERENCE PROCEEDINGS***

1. Vyas, P, Vyas, G, and **Chennamaneni, A**, "Detection of Malicious Bots on Twitter through BERT Embeddings-based Technique" (2023). AMCIS 2023 Proceedings. 6.
2. Hammad, E. Nag A. **Chennamaneni, A**. Aghashahi, M and Dogdu, E “A Deep-Defense Approach for Next-Gen Cyber-Resilient Inter-Dependent Critical Infrastructure Systems”, 2021 Resilience Week (RWS), October 2021
3. **Chennamaneni, A** and Bhadauria, V, "Era of Ambivalent IoT: Are we secure?" (2020). Proceedings of the Americas Conference on Information Systems, AMCIS 2020
4. **Chennamaneni, A** and Gupta, B, "Privacy Concerns of Mobile App Users: An Empirical Study" (2020). Proceedings of the Americas Conference on Information Systems, AMCIS 2020
5. Nag, A, and **Chennamaneni, A**, "A Survey on Emerging Trends of Cyber Threats to Academic Research" (2020). Proceedings of the Americas Conference on Information Systems AMCIS 2020.
6. Gupta, B. & **Chennamaneni, A**. "Information Sharing Behavior of the Older Adults: An Empirical Study of Their Online Privacy Concerns" Proceedings of the Americas Conference on Information Systems, Boston, MA, August 10-12, 2017.
7. Gupta, B. Sharma, S & **Chennamaneni, A**. “Twitter Sentiment Analysis: An Examination of Cybersecurity Attitudes and Behavior, Proceedings of the Pre-ICIS (International Conference on information Systems) Decision Support and Analytics (SIGDSA) Innovation in data Analytics Symposium, Dublin, Ireland Dec 10<sup>th</sup>-11<sup>th</sup>, 2016.
8. Singh, M & **Chennamaneni, A** “Big Data Analytics for Supply Chain Innovation” Proceedings of the Americas Conference on Information Systems, AMCIS 2016, San Diego, CA, USA, August 11-14, 2016
9. **Chennamaneni, A**. and Taneja, A. “Communication Privacy Management and Self-Disclosure on Social Media - A Case of Facebook,” Proceedings of the Americas Conference on Information Systems, Puerto Rico, August 13-15, 2015
10. **Chennamaneni, A** & Brown, J “Use of Educational Data Mining and Intelligent Agents to provide Adaptable, Personalized Computer Science Education in e-Learning Environment”, Proceedings of the Second Workshop on AI-supported

- Education for Computer Science (AIEDCS) held at Intelligent Tutoring Systems, Honolulu, Hawaii, June 5-9, 2014
11. Brown, J. and **Chennamaneni, A.** “Towards an Integrated Framework for Applying the Agile Project Methodology to Manage Task Uncertainty in Disaster Management”, Proceedings of the 19th Americas Conference on Information Systems, Chicago, Illinois, August 15-17, 2013.
  12. **Chennamaneni, A** & Brown, J “Improving Knowledge Management in E-Learning: A Contingent Framework for Efficient Knowledge Transfer”, Proceedings of the 2013 International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government, Las Vegas, Nevada, July 22-25, 2013.
  13. Vert, G. **Chennamaneni, A.** & Iyengar, S. “A Theoretical Model for Probabilistically Based Hardware State Variable Detection of Unknown Malware Operations Utilizing Creation of Self Organizing Taxonomies for Counter Attack and Mitigation”, The 2012 International Conference on Security and Management (SAM'12), Las Vegas, USA, July 16 – 19, 2012
  14. **Chennamaneni, A.** Tunenkova, N & Vert, G. “Information Systems Security Education – An e-Learning approach”, 13th Global Information Technology Management Association World Conference, Bangalore, India, June 17-19, 2012.
  15. **Chennamaneni, A.** & Teng, J. "An Empirical Study of the Existence, Relatedness, and Growth Needs (ERG) Theory in Knowledge Sharing Behaviors of Knowledge Workers”, Proceedings of the IADIS International Conference on Information Systems, Berlin, Germany, March 10-12, 2011.
  16. **Chennamaneni, A** and Teng, J. “An Integrated Framework for Effective Tacit Knowledge Transfer”, Proceedings of the 17th Americas Conference on Information Systems, Detroit, Michigan, August 4 – 8, 2011
  17. Vert, G. **Chennamaneni, A.** & Iyengar, S, “Integrating a New Contextual Model Paradigm with the Set Based Data Modeling Method to Create an Advanced Capability Data Repository”, Proceedings of the 2011 International Conference on Information & Knowledge Engineering, IKE 2011, Las Vegas Nevada, USA, July 18-21, 2011.
  18. Hughes, K. & **Chennamaneni, A.** “Building a Contextual Sensor Network Using Automated Bots”, Proceedings of the 2010 International Conference on Information & Knowledge Engineering, IKE 2010, July 12-15, 2010, Las Vegas Nevada, USA
  19. Mahlke, R. & Vert, G. & **Chennamaneni, A.** “Applying Contextual Processing to Traffic Signal Control Systems”, Proceedings of the 2010 International

Conference on Information & Knowledge Engineering, IKE 2010, July 12-15, 2010, Las Vegas Nevada, USA

20. Vert, G. **Chennamaneni, A.** & Iyengar, S. “Mapping the Emerging Contextual Processing Paradigm and Taxonomic Classification onto Quality Selection Criteria for Data Sets Utilized in Data Mining”, Proceedings of the 2010 International Conference on Information & Knowledge Engineering, IKE 2010, July 12-15, 2010, Las Vegas Nevada, USA

### ***NON-REFEREED PUBLICATIONS / PRESENTATIONS***

1. **Chennamaneni, A.**, and Gupta, B, "An Examination of Factors Shaping the Mobile App Users' Security Protection Behaviors" (2023). AMCIS 2023 TREOs. 77.
2. **Chennamaneni, A, Taneja, A,** Iqbal, S & Akanfe, O. "The Effects of Information Privacy Concerns on Facebook User's Continuance Intention", Southwest Decision Sciences Institute (SWDSI) Conference, March 11 -- March 14, 2020, San Antonio, TX
3. **Chennamaneni, A,** & Bhaduria V. “Impact of Privacy and Security Concerns in the adoption of assistive IoT devices”. 50th Annual Meeting of the Decision Sciences Institute, Nov. 2019.
4. **Chennamaneni, A** & Orudzheva, L. “IT managers ethical predispositions and perception of accountability”. 50th Annual Meeting of the Decision Sciences Institute, Nov. 2019.
5. **Chennamaneni, A** & Shehryar I. "Privacy and Ethics for Internet of Things and Big Data", Southwest Decision Sciences Institute (SWDSI) Conference, Mar 13-16 2019 Houston, TX
6. Phillips B, **Chennamaneni A.,** Eruysal F. “The Impact of Business Intelligence and Analytics on Firm Performance, Presentation at South West Decision Sciences Conference, Little Rock, March 8 to 11, 2017
7. **Chennamaneni, A** & Taneja, A. Sense of Community, Privacy Management and Self-Disclosure on Facebook, South West Decision Sciences Conference, Oklahoma City, March 9-12<sup>th</sup>, 2016
8. **Chennamaneni, A.** “The Role of Information Technology in Keeping Homeless Youth Connected”, American Democracy Project Provost Lecture Series on Youth Homelessness, Killeen, Texas, October 29, 2015

9. **Chennamaneni, A** & Altman, B. “Challenges and Lessons Learned in Teaching Online Courses in CIS”, Texas Blackboard Users Group, Killeen, Texas, October 25-26, 2012
10. **Chennamaneni, A.** & Vert G. “Current Trends in Security Research and Training in Higher Education”, Secure world Expo, Dallas, November 2-3, 2011.
11. **Chennamaneni, A.** Larson, L. & Perschbach, J. “Virtualized IT Infrastructure for Student Experimentation in Network Security and Sustainable Computing”, 40th Annual Meeting of the Decision Sciences Institute, Nov. 2009.
12. **Chennamaneni, A.** & Teng, J. “Transferring Tacit Knowledge – Contingent Approach”, 39th Annual Meeting of the Decision Sciences Institute, Nov. 2008
13. **Chennamaneni, A.** Raja M.K. & Teng, J. “Determinants of Knowledge Sharing Behaviors: Developing and Testing an Integrated Theoretical Model”, 37<sup>th</sup> Annual Meeting of the Decision Sciences Institute, San Antonio, Nov. 2006
14. Vinekar, V. Teng, J. & **Chennamaneni, A.** “A Unified Framework of Knowledge Management and Business Intelligence”, 37<sup>th</sup> Annual Meeting of the Decision Sciences Institute, San Antonio, Nov. 2006

#### ***WHITE PAPER***

**Chennamaneni, A** & Harvey, T. "Hardware Integrity Verification Utilizing Scanning Electron Hardware Integrity, White paper submitted to Department of Homeland Security. Paper accepted

#### ***PANELIST***

What does your Department Chair expect of you? Lakshmi Iyer, Marie-Claude Boudreau, Susan Brown, Anitha Chennamaneni, Karlene Cousins, Leo Vijayarathy – AMCIS 2023