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## EMPLOYMENT

- Assistant Professor** Area of Information Systems and Quantitative Sciences, Lubbock, TX 08/2019 – Present  
Rawls College of Business, Texas Tech University
- Research Associate** Artificial Intelligence Lab, University of Arizona Tucson, AZ 08/2014 – 05/2019

## EDUCATION

- Doctor of Philosophy** Management Information Systems University of Arizona 2014-2019  
**Minor:** Computational Linguistics
- Bachelor of Management** Information Management and Information Systems Tsinghua University 2010-2014  
**Minor:** Computer Technology

## RESEARCH SUMMARY

My research interests lie in data science with a special focus on mobile health analytics. Senior citizens face many chronic physical and mental conditions that hinder their independent living, including frailty, diabetes, Parkinson's disease, dementia, falls, etc. While senior care has many facets, my research focuses on health analytics using motion sensor data. I develop deep learning frameworks to detect and prevent falls, and monitor and assess chronic conditions, which help senior citizens' independent living and support physicians' diagnoses. In addition, I also apply data science methodologies in cybersecurity, online community, and e-commerce contexts, among others.

## JOURNAL PUBLICATIONS, PUBLISHED AND FORTHCOMING

1. **Yu, S.**, Chai, Y., Chen, H., Sherman, S., & Brown, R. (2021). Wearable Sensor-based Chronic Condition Severity Assessment: An Adversarial Attention-based Deep Multisource Multitask Learning Approach. **Forthcoming in *MIS Quarterly***.
2. **Yu, S.**, Chai, Y., Chen, H., Brown, R., Sherman, S., & Nunamaker, J. (2021). Fall Detection with Wearable Sensors: A Hierarchical Attention-based Convolutional Neural Network Approach. **Forthcoming in *Journal of Management Information Systems (JMIS)***.
3. **Yu, S.**, Zhu, H., Jiang, S., Zhang, Y., Xing, C., & Chen, H. (2019). Emoticon Analysis for Chinese Social Media and E-commerce: The AZemo System. *ACM Transactions on Management Information Systems (TMIS)*, 9(4), 16.
4. Samtani, S., Zhu, H., & **Yu, S.** (2019). Fear Appeals and Information Security Behaviors: An Empirical Study on Mechanical Turk. *AIS Transactions on Replication Research (TRR)*, 5(5), 1-22.
5. **Yu, S.**, Chen, H., & Brown, R. (2018). Hidden Markov Model-Based Fall Detection with Motion Sensor Orientation Calibration: A Case for Real-Life Home Monitoring. *IEEE Journal of Biomedical and Health Informatics (JBHI)*, 22(6), 1847-1853.
6. Samtani, S., **Yu, S.**, Zhu, H., Patton, M., Matherly, J., & Chen, H. (2018). Identifying Supervisory Control and Data Acquisition (SCADA) Devices and their Vulnerabilities on the Internet of Things (IoT): A Text Mining Approach. *IEEE Intelligent Systems*, 33(2), 63-73.

## JOURNAL PUBLICATIONS UNDER REVIEW

1. Chai, Y., **Yu, S.**, Samtani, S., Liu, H., & Chen, H. Motion Sensor-Based Motor Threat Prevention for Senior Care: A Hidden Markov Model with Generative Adversarial Network (HMM-GAN) Approach. **Revised and Resubmitted for Fourth Round Review at *Information Systems Research (ISR)***.
2. Chai, Y., **Yu, S.**, Qian, Y., Liu, X., Li, J., Jiang, Y., & Liu, Y. A Bayesian Deep Recommender System for Uncertainty-aware Online Physician Recommendation. **Under Review at *IEEE Transactions on Knowledge***

*Discovery and Engineering (TKDE).*

## **SELECTED WORKING JOURNAL PAPERS**

1. **Yu, S.**, Zhu, H., & Chen, H. Motion Sensor-Based Health Profiling for Senior Care: Adaptive Time-aware Convolutional Long Short-Term Memory (ATCLSTM). **Targeted at *Journal of Management Information Systems (JMIS)*.**
2. Li, W., **Yu, S.**, Chau, M., & Chen, H. Disease Progression Assessment in Mobile Health: A Deep Temporal Multimodal Learning with Entropy Regularization Approach. **Targeted at *MIS Quarterly*.**
3. **Yu, S.**, Chai, Y., & Wen, W. Interpretable Recommender System for Freelancers: A Deep Graph Convolutional Network Approach. **Targeted at *Management Science*.**

## **REFEREED CONFERENCE PROCEEDINGS** (\* indicates that I was the presenting author)

1. \***Yu, S.** (2021, December). Motion Sensor-Based Health Profiling for Parkinson's Disease: A Deep Learning Approach. *Proceedings of 2021 International Conference on Information Systems (ICIS)*. Austin, TX.
2. \***Yu, S.**, Chen, H., Brown, R., & Sherman, S. (2018, June). Motion Sensor-Based Assessment on Fall Risk and Parkinson's Disease Severity: A Deep Multi-source Multi-task Learning (DMML) Approach. *Proceedings of 2018 IEEE International Conference on Health Informatics (ICHI)*. New York City, NY.
3. Maimoon, L., Chuang, J., Zhu, H., **Yu, S.**, Peng, K. S., Prayakarao, R., Bai, J., Zeng, D., Li, H., Lu, H., & Chen, H. (2016, December). SilverLink: Developing an International Smart and Connected Home Monitoring System for Senior Care. *Proceedings of 2016 International Conference on Smart Health (ICSH)*. Haikou, China.
4. \***Yu, S.**, & Chen, H. (2016, November). Fall Detection with Orientation Calibration Using a Single Motion Sensor. *Proceedings of 2016 International Conference on Wireless Mobile Communication and Healthcare (MobiHealth)*. Milan, Italy.
5. Samtani, S., **Yu, S.**, Zhu, H., Patton, M., & Chen, H. (2016, September). Identifying SCADA Vulnerabilities using Passive and Active Vulnerability Assessment Techniques. *Proceedings of 2016 IEEE Conference on Intelligence and Security Informatics (ISI)*. Tucson, AZ.
6. Chuang J., Maimoon L., \***Yu, S.**, Zhu, H., Nybroe, C., Hsiao, O., Li, H., Lu, H., & Chen, H. (2015, November). SilverLink: Smart Home Health Monitoring for Senior Care. *Proceedings of 2015 International Conference on Smart Health (ICSH)*. Phoenix, AZ.
7. \***Yu, S.**, Zhu, H., Jiang, S., & Chen, H. (2014, July). Emoticon Analysis for Chinese Health and Fitness Topics. *Proceedings of 2014 International Conference on Smart Health (ICSH)*. Beijing, China.

## **GRANT WRITING EXPERIENCE**

1. **Year:** 2019. **Funding Source:** National Science Foundation. **Grant Title:** SCH: INT: Deep Learning-based Mobile Analytics and Health Technology Acceptance Model for Chronic Care: A Case for Parkinson's Disease Risk Assessment. **Funding Amount:** \$1.2M. **Status:** Rejected. **Role:** Primary Grant Writer.
2. **Year:** 2018. **Funding Source:** National Science Foundation. **Grant Title:** SCH: INT: Deep Learning-based Mobile Analytics and Health Technology Acceptance Model for Chronic Care: A Case for Parkinson's Disease Risk Assessment. **Funding Amount:** \$1M. **Status:** Rejected. **Role:** Primary Grant Writer.
3. **Year:** 2017. **Funding Source:** National Science Foundation. **Grant Title:** STTR Phase II: Advanced Analytics for Health Progression Monitoring and Fall Detection in a Novel Home Health Monitoring System. **Funding Amount:** \$750,000. **Status:** Rejected. **Role:** Assisting Grant Writer.
4. **Year:** 2016. **Funding Source:** National Science Foundation. **Grant Title:** STTR Phase I: Advanced Analytics for Health Progression Monitoring and Fall Detection in a Novel Home Health Monitoring System. **Funding**

**Amount:** \$225,000. **Status:** Awarded. **Role:** Assisting Grant Writer.

## TEACHING EXPERIENCE

<b>Instructor</b>	<b>ISQS 5342:</b> Big Data Security <b>Class Size:</b> 11 (In-Person), 42 (Online), 46 (Online) <b>Overall Teaching Evaluation:</b> 4.4/5.0, 4.1/5.0, 4.1/5.0 <b>Note:</b> I designed this new MSDS course.	Texas Tech University	Spring 2021
<b>Instructor</b>	<b>ISQS 3360:</b> Information Security <b>Class Size:</b> 14 (Online) <b>Overall Teaching Evaluation:</b> 5.0/5.0 <b>Note:</b> I designed this new undergraduate course.	Texas Tech University	Fall 2020
<b>Instructor</b>	<b>ISQS 3345:</b> Data Analytics Tools <b>Class Size:</b> 47 (In-Person) <b>Overall Teaching Evaluation:</b> 4.4/5.0	Texas Tech University	Fall 2019
<b>Teaching Assistant</b>	<b>MIS 611D:</b> Topics in Data and Web Mining <b>Class Size:</b> 10	University of Arizona	Spring 2019
<b>Teaching Assistant</b>	<b>MIS 464:</b> Data Analytics <b>Class Size:</b> 28	University of Arizona	Spring 2019
<b>Instructor</b>	<b>MIS 111:</b> Computers and the Internetworked Society <b>Class Size:</b> 24 <b>Overall Teaching Evaluation:</b> 4.3/5.0	University of Arizona	Summer 2017

## INVITED TALKS AND EXTERNAL PRESENTATIONS

1. University of Texas at Austin. **Presentation Title:** Fall Risk Prediction with Mobile Health Analytics: A Deep Learning Approach. Austin, TX. November 14, 2018.
2. Texas Tech University. **Presentation Title:** Fall Risk Prediction with Mobile Health Analytics: A Deep Learning Approach. Lubbock, TX. October 26, 2018.
3. Florida State University. **Presentation Title:** Fall Risk Prediction with Mobile Health Analytics: A Deep Learning Approach. Tallahassee, FL. October 11, 2018.
4. 2016 University of Arizona Bio5 Wearables Workshop. **Poster Title:** Fall Detection with Orientation Calibration Using a Single Motion Sensor. Tucson, AZ. August 12, 2016.
5. 2015 University of Arizona – Tsinghua University Business Analytics Workshop. **Presentation Title:** Emoticon Analysis for Chinese Social Media: The AZEmo System. Tucson, AZ. May 19 – 21, 2015.
6. 2014 University of Arizona – Tsinghua University Business Analytics Workshop. **Presentation Title:** Emoticon Analysis for Chinese E-Commerce Websites. Beijing, China. May 5 – 7, 2014.

## PROFESSIONAL SERVICE

1. **Session Chair** – International Conference on Information Systems (ICIS), 2021, Austin, TX.
2. **Associate Editor** – Pacific Asia Conference on Information Systems (PACIS), 2021, Virtual.
3. **Reviewer** – International Conference on Information Systems (ICIS), 2021, 2020, 2019, 2017.
4. **Reviewer** – Pacific Asia Conference on Information Systems (PACIS), 2021, 2020.
5. **Reviewer** – *Information Systems Frontiers*, 2021.
6. **Reviewer** – *Electronic Commerce Research and Applications*, 2021, 2019.

# Shuo Yu, Ph.D.

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**Last CV Update:** January 19, 2022

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7. **Reviewer** – *ACM Transactions on Management Information Systems (TMIS)*, 2021, 2020, 2019.
8. **Reviewer** – *Information Technologies and Management*, 2020.
9. **Reviewer** – *Information Processing & Management*, 2020.
10. **Reviewer** – *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2020.
11. **Reviewer** – *IEEE Journal of Biomedical and Health Informatics (JBHI)*, 2020.
12. **Reviewer** – *MDPI Sensors*, 2020.
13. **Reviewer** – *Electronic Commerce Research*, 2018.

## AWARDS

1. INFORMS Information Systems Society (ISS) Nunamaker-Chen Dissertation Award (NCDA), Third Runner-up, 2019.
2. Doctoral Consortium Fellow, International Conference on Information Systems (ICIS), 2018.
3. Doctoral Consortium Fellow, Conference on Health IT and Analytics (CHITA), 2018.
4. Doctoral Consortium Fellow, Americas Conference on Information Systems (AMCIS), 2018.
5. Nunamaker-Chen Doctoral Student Scholarship, University of Arizona, 2014.