# **School of Computing and Informatics**

## **Summary**

The School of Computing and Informatics (CMIX) was formed in 2011, based on the wellestablished computer science and engineering programs and the emerging informatics program. The School offers seven degrees across three programs, described below. As of Spring 2020, the School has 29 full-time faculty members, which includes 20 tenure-track/tenured and 4 instructors, 5 emergency temporary instructors. The School also has one adjunct instructor and one professor emeritus. All the tenured/tenure-track faculty members are active researchers and hold graduate faculty status. The School is supported by two administrative assistants and two system administrators.

## **Programs and Degrees**

The School has the following academic programs:

- The Computer Science Program (CMPS)
- The Informatics Program (INFX), and
- The Center for Advanced Computer Studies (CACS).

It offers the following degrees:

- BS in Computer Science
- BS in Informatics
- MS in Informatics
- MS and Ph.D. in Computer Science, and
- MS and Ph.D. in Computer Engineering.

## **Enrollment and Graduation**

Figure 1 presents the enrollment in each year. It is measured as the number of students who declared one of our degrees as their major In the Fall semester of the corresponding year. The data shows an increase in enrollment across all programs, except MS Computer Science.



Figure 1 Enrollment across the various programs over the five years.

Figure 2 presents the number of degrees awarded in the preceding four years. Here too the overall trend is positive.



**Figure 2** Number of degrees awarded across each of the seven degrees awarded by the School. Comparing the input (enrollment) and output (degrees awarded) it is evident that there is significant attrition in our BS programs.

Figure 3 presents retention rate in our BS programs for the class of Fall 2010. In this cohort, about 47% completed their degree over the next 10 years and about 57% dropped out of the majors, of which 43% dropped out in the first two years.



Figure 3 Longitudinal data of retention rate of BS Computer Science. <u>Research Productivity</u>

The school's productivity in research shows upward trends in all measures: number and size of research grants, number of publications, and number of professional recognitions.

#### **New Research Projects**

Figure 4 shows the number of new research grants in each of the five years. It shows that the total new grants from external sources, that is excluding those from the University, has hovered around 8 and 9.



Figure 4 Number of research grants from all sources.

Figure 5 shows the distribution of new research dollars from projects worth under \$1M, and Figure 6 shows the data for projects over \$1M. The data shows that federal agencies are the predominant source of research funds, followed by the state, and then the industry.



Figure 5 New research dollars from small research projects

We have received three projects worth over \$1M, one worth over \$10M from the State and two worth about \$8M from NSF, summarized in Figure 6. (These projects have not been included in Figure 5 for doing so would skew the chart in favor of the larger projects.)



Figure 6 New research dollars from large projects (>\$1M)

#### **Scholarly Publications**

Figure 7 shows distribution of peer-reviewed research papers. It shows our research productivity has more than doubled over the five years, growing from 38 publications in 2016 to 81 in 2020. With 20 research faculty, that constitutes over 4 research papers a year.



Figure 7 Peer-reviewed research papers

Figure 8 presents the distribution of books and edited volumes. Here we see a 3X increase going from one in 2016 to three in 2020.



Figure 8 Distribution of books and edited volumes

#### **Professional Recognitions**

Figure 9 shows the final measure of research productive we present is recognition by peers, as measured in invitations to speak and awards. Here our numbers hover between 15 and 24.



# Publications, Presentations, Editorships, and Talks

#### **Books Published**

- Jin, M., Gu, X., He, Y., & Wang, Y. (eds). (2018). Conformal Geometry: Computational Algorithms and Engineering Applications. Cham, Switzerland: Springer International. doi:10.1007/978-3-319-75332-4
- Kulshreshth, A., & LaViola, J.J. (eds). (2018). Designing Immersive Video Games Using 3DUI Technologies. Human-Computer Interaction Series. Cham, Switzerland: Springer International. doi:10.1007/978-3-319-77953-9
- 3. **Raghavan, V.**, Aluru, S., Karypis, G., Miele, L., & **Wu, X.** (eds). (2017). 2017 IEEE International Conference on Data Mining (ICDM), 2017, New Orleans, LA, November 18-21, 2017. Los Alamitos, CA: IEEE Computer Society.
- 4. Gottumukkala, R., Ning, X., Dong, G., **Raghavan, V.**, Aluru, S., Karypis, G., Miele, L., & Wu, X., (eds). (2017). 2017 IEEE International Conference on Data Mining Workshops (ICDMW), New Orleans, LA, November 18-21, 2017. Los Alamitos, CA: IEEE Computer Society.
- 5. **Wu, X.**, Ozsu, T., Hendler, J., & Lu, R. (eds). (2017). 2017 IEEE International Conference on Big Knowledge (ICBK), August 9-10, 2017, Hefei, China. Los Alamitos, CA: IEEE Computer Society.
- Bonchi, F., Domingo-Ferrer, J., Baeza-Yates, R.A., Zhou, Z.-H., & Wu, X. (2016). 2016 IEEE 16<sup>th</sup> International Conference on Data Mining (ICDM), Barcelona, Spain, December 12-15, 2016. Los Alamitos, CA: IEEE Computer Society.
- Najjar, M.A., Ghantous, M., & Bayoumi, M. (eds). (2014). Video Surveillance for Sensor Platforms: Algorithms and Architectures. Lecture Notes in Electrical Engineering. 114. New York, NY: Springer. doi:10.1007/978-1-4614-1857-3
- 8. Elarabi, T., Abdelgawad, A., & **Bayoumi, M.** (eds). (2014). *Real-Time Heterogeneous Video Transcoding for Low-Power Applications*. Cham, Switzerland: Springer. doi:10.1007/978-3-319-06071-2
- 9. **Dasgupta, S.** (2014). *It Began with Babbage: The Genesis of Computer Science*. New York, NY: Oxford University Press.
- 10. **Dasgupta, S.** (2014). *Computer Science: A Very Short Introduction*. New York, NY: Oxford University Press.
- Jin, M., Gu, X., He, Y., Wang, Y. (eds). (2014). Conformal Geometry: Computational Algorithms and Engineering Applications. Cham, Switzerland: Springer. doi:10.1007/978-3-319-75332-4
- 12. Dasgupta, S. (2013). The Golden Jubilee. Bhopal, India: Amaryllis

## **Book Chapters**

- 1. **Jin, M.**, & Wu, H. (2019). Localization in 3D Surface Wireless Sensor Networks. *Encyclopedia of Wireless Networks*. ISBN 978-3-319-78263-8
- 2. **Maida, A. S.** (2016). Cognitive computing and neural networks: reverse engineering the brain. In: Gudivada, V. N., Raghavan, V. J., Govindaraju, V. (eds) *Handbook of*

*Statistics: Cognitive Computing: Theory and Applications.* **35**, 39-78. New York: Elsevier. doi:10.000.000

- 3. **Najafi, M. H.**, Faraji, S. R., Li, B., Lilja, D. J., & Bazargan, K. (2020). Stochastic-binary convolutional neural networks with deterministic bit-streams. Hardware Architectures for Deep Learning, 79, Publisher: IET.
- 4. Woodworth, J. W. & **Borst, C. W.** (2019). Volume Lenses for VR, *In: VR Developer Gems, Ed. William Sherman, A K Peters/CRC Press, 2019,* pp. 437–452.
- 5. Woodworth, J. W. & **Borst, C. W.** (2019). Using the Kinect for Head-tracked Perspective and Pointing in Stationary VR Displays, *In: VR Developer Gems, Ed. William Sherman, A K Peters/CRC Press, 2019,* pp. 71–86.
- 6. Hao, B., & **Hei, X**. (2019). Voice liveness detection for medical devices. In *Design* and *Implementation of Healthcare Biometric Systems* (pp. 109-136). IGI Global.
- Zobaed, S. M., & Amini Salehi, M. (2018). Big Data in the Cloud. In: Zomaya, A., Sakr, S. (eds). *Encyclopedia of Big Data Technologies*. Cham, Switzerland: Springer. doi:10.1007/978-3-319-63962-8\_40-1
- Jin, M., & Wu, H. (2018) Localization in 3D Surface Wireless Sensor Networks. In: Shen, X., Lin, X., Zhang, K. (eds). *Encyclopedia of Wireless Networks*. Cham, Switzerland: Springer. doi:10.1007/978-3-319-32903-1
- Xie, Y., Le, L., Zhou, Y., & Raghavan, V.V. (2018). Chapter 10: Deep Learning for Natural Language Processing. In: Gudivada, V.N., & Rao, C.R. (eds). Computational Analysis and Understanding of Natural Languages: Principles, Methods and Applications. Handbook of Statistics, 38, 317-328. Amsterdam: Elsevier. 10.1016/bs.host.2018.05.001
- Poola, D., Amini Salehi, M., Ramamohanarao, K., & Buyya, R. (2017). Chapter 15: A Taxonomy and Survey of Fault-Tolerant Workflow Management Systems in Cloud and Distributed Computing Environments. In: Mistrik, I., Bahsoon, R., Ali, N., Heisel, M., Maxim, B. (eds). *Software Architecture for Big Data and the Cloud*, 285-320. Cambridge, MA: Elsevier. doi:10.1016/B978-0-12-805467-3.00015-6
- Maida, A. (2016). Chapter 2: Cognitive Computing and Neural Networks: Reverse Engineering the Brain. In: Gudivada, V.N., Raghavan, V.V., Govindaraju,V., Rao, C. R. (eds). *Cognitive Computing: Theory and Applications. Handbook of Statistics*, 35, 39-78. Oxford, England: Elsevier. doi:10.1016/bs.host.2016.07.011
- Pusala, M.K., Amini Salehi, M., Katukuri, J.R., Xie, Y., & Raghavan, V.V. (2016). Massive Data Analysis: Tasks, Tools, Applications and Challenges. In: Pyne, S., Rao, B., Rao, S. (eds). *Big Data Analytics*, 11-40. New Delhi, India: Springer. doi:10.1007/978-81-322-3628-3
- LeDoux, C. & Lakhotia, A. (2015). Malware and Machine Learning. In: Yager, R., Reformat, M., Alajlan, N. (eds). *Intelligent Methods for Cyber Warfare. Studies in Computational Intelligence*, 563, 1-42. Cham, Switzerland: Springer. doi:10.1007/978-3-319-08624-8\_1
- Shah, B., Benton, R., Wu, Z., & Raghavan, V.V. (2015). A Comprehensive Granular Model for Decision Making with Complex Data. In: Pedrycz, W., Chen, S. M. (eds). *Granular Computing and Decision-Making. Studies in Big Data*, 10, 33-46. Cham, Switzerland: Springer. doi:10.1007/978-3-319-16829-6\_2
- 15. Gudivada, V.N., Rao, D., & **Raghavan, V.V.** (2015). Chapter 9: Big Data Driven Natural Language Processing Research and Applications. In: Govindaraju, V.,

Raghavan, V.V., Rao, C.R. (eds). *Big Data Analytics. Handbook of Statistics*, **33**, 203-238. Oxford, England: Elsevier. doi:10.1016/B978-0-444-63492-4.00009-5

#### **Edited Volumes**

- 1. Abbas, H., Suguri, H., Yan, Z., Allen, W., & **Hei, X**. (2020). IEEE Access Special Section: Security Analytics and Intelligence for Cyber Physical Systems. *IEEE Access*, *8*, 208195-208198.
- 2. Fernandes, S., Lin, H., Martis, R., Islam, A. (eds). (2020). *Applications of deep learning for multimedia*. *Multimedia Tools and Applications*. **79**, 10953, Springer. doi:10.1007/s11042-020-08785-x
- Borst, C. W., Kulshreshth, A. K., Bruder, G., Serafin, S., Sandor, C., Johnsen, K., Ye, J., Roth, D. & Jung, S. (2019). *7th ACM Symposium on Spatial User Interaction*, New Orleans, Oct. 2019. Isbn: 9781450369756
- 4. Gudivada, V. N., **Raghavan, V. V.** and Berti-Equille, L. (Guest Editors). (2019). Special Issue on Data Quality in Big Data: Problems and Solutions, IEEE Trans. on Big Data. Los Alamitos, CA: IEEE Computer Society.
- 5. Martis, R., Lin, H., Gurupur, V. Islam, A., Fernandes, S. (eds). (2018). [Special Issue] *Recent Advances in Big Data Analytics, Internet of Things and Machine Learning. Future Generation Computer Systems*, 81.
- 6. **Wu, X.** Editor-in-Chief, Springer Book Series on Advanced Information and Knowledge Processing (AI & KP), 2016-Present.
- 7. **Raghavan, V.V.** Editor-in-Chief. Technical Committee Bulletin, IEEE-CS for Intelligent Informatics, 2015.
- 8. Raghavan, V.V. Co-Editor-in-Chief. Web Intelligence Journal, 2015-Present.
- 9. **Raghavan, V.V.**, Gudivada, V. N., & Baeza-Yates, R., (Eds). (2015). [Special Issue] *IEEE Computer: Big Data Management*, **48**(3).
- 10. Govindaraju, V., **Raghavan, V.V.**, Rao, C.R. (eds). (2015). *Big Data Analytics. Handbook of Statistics*, **33**. Oxford, England: Elsevier.
- 11. Gudivada, V. N., **Raghavan, V.V.**, Govindaraju, V., Rao, C.R. (eds). (2015) *Cognitive Computing: Theory and Applications. Handbook of Statistics*, **35**, Oxford, England: Elsevier.

# Journal Papers (Published or Accepted)

- 1. Denninnart, C., Gentry, J., Mokhtari, A., **Amini Salehi**, **M.** (2020), Efficient Task Pruning Mechanism to Improve Robustness of Heterogeneous Computing Systems, *Journal of Parallel and Distributed Computing (JPDC)*, Volume 142, Aug. 2020, Pages: 46–61.
- 2. Mohamed, M. A., & Chaudhry, B. (2020). Challenges of Microchip Implantation in People with Disabilities for Inclusive Sustainable Development. *The International Journal of Technology, Knowledge, and Society*, 16 (2), pp. 1-14.
- 3. Walsh, C. G., **Chaudhry, B.**, Dua, P., Goodman, K. W., Kaplan, B., Kavuluru, R., ... & Subbian, V. (2020). Stigma, biomarkers, and algorithmic bias: recommendations for precision behavioral health with artificial intelligence. JAMIA open, **3**(1), pp. 9-15.

- 4. **Chen, L.**, Feng, Y., Li, B., & Li, B. (to appear in 2021). A Case for Pricing Bandwidth: Sharing Datacenter Networks with Cost Dominant Fairness. *IEEE Transactions on Parallel and Distributed Systems*, **32**(5), 1256-1269. doi:10.1109/TPDS.2020.3045709
- 5. **Campora III, J. & Chen, S.** (2020). Taming Type Annotations in Gradual Typing. *ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA'20), PACMPL*, vol. 4 (OOPSLA), 191:1–191:30.
- 6. **Chen, S. &** Wu, B. (2020). Efficient Counter-factual Type Error Debugging. *Science of Computer Programming*, Vol. 200, Pages 1-24. doi: 10.1016/j.scico.2020.102544.
- 7. He, Y., Wu, B., Wu, D., Beyazit, E., **Chen, S.**, & Wu, X. Toward Mining Capricious Data Streams: A Generative Approach. *IEEE Transactions on Neural Networks and Learning Systems*, 2020. doi: 10.1109/TNNLS.2020.2981386.
- 8. Song, B., & **Hei, X**. (2020). Models and strategies on reopening lockdown societies due to COVID-19. *OSF Prepr*, *10*.
- 9. Ping, Y., Hao, B., **Hei, X**., Wu, J., & Wang, B. (2020). Maximized Privacy-Preserving Outsourcing on Support Vector Clustering. *Electronics*, **9**(1), 178.
- Haque, M., Ling, E., Islam, A. & Tozal, M. (2020). Predicting Domain Specific Personal Attitudes and Sentiment. *International Journal of Semantic Computing*, 14(02), 199-222. doi: 10.1142/S1793351X20400073
- 11. Wang, W., **Islam, A.**, Moh'd, A., Soto, A., & Milios, E. (2020). Nonuniform language in technical writing: Detection and correction. *Natural Language Engineering*, 1-22. doi:10.1017/S1351324920000133
- 12. Li, X., Ban, B., Yang, Y., & **Jin, M.** (2020). Localization of Networks on 3D Terrain Surfaces. *IEEE Transactions on Mobile Computing (TMC)*, to appear. DOI: 10.1109/TMC.2020.3029249
- Ban, B., Wu, H., & Jin, M. (2020). Resilient Routing for Wireless Sensor Networks on High Genus Surfaces. *IEEE Transactions on Mobile Computing (TMC)*, to appear. DOI: 10.1109/TMC.2020.2974195
- Ban, B., Li, X., & Jin, M. (2020). Resilient Greedy Routing on GPS-free Surface Sensor Networks. *International Journal of Distributed Sensor Networks (IJDSN)*, to appear. http://doi.org/10.1177/1550147720913810
- Khalil, K., Eldash O., Kumar, A., & Bayoumi M. (2020). Machine Learning-based Approach for Hardware Faults Prediction, *IEEE Transactions on Circuits and Systems I*, Volume 67 (11), 3880-3892. doi: 10.1109/TCSI.2020.3010743
- Khalil, K., Eldash O., Kumar, A., & Bayoumi M. (2020). Intelligent Fault-Prediction Assisted Self-Healing for Embryonic Hardware, *IEEE Transactions on Biomedical Circuits and Systems*, Volume 14 (4), 852-866, doi: 10.1109/TBCAS.2020.2995784
- Sarkar S., Totaro, M. W., Kumar, A., & Elgazzar, K. (2020). Real-Time Object Processing and Routing for Intelligent Drones: A Novel Approach. *Computer*, Volume 53(12), 80-89, doi: 10.1109/MC.2020.2981908
- 18. Black, P., Gondal I., Vamplew, P., and Lakhotia, A. (2020). Function Similarity Using Family Context. *Electronics* 9 (7) 1163. doi:10.3390/electronics9071163
- Hosseini, M., Kattragada, S., Wojtkiewicz, J., Gottumukkala, R., Maida, A., Chambers, T. L. (2020) Direct normal irradiance forecasting using multivariate gated recurrent units. *Energies*, 13, 3914, doi:10.3390/en13153914.

- 20. Najafi, M. H., Jenson, D., Lilja, D. J., & Riedel, M. D. (2019). Performing stochastic computation deterministically. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, 27(12), 2925-2938.
- 21. Le, L., Xie, Y. and **Raghavan, V. V. (2020).** KNN Loss and Deep KNN. *Fundamenta Informaticae*.
- 22. Sigdel, P., Yuan, X. and Tzeng, N.F., (2020). Realizing Best Checkpointing Control in Computing Systems. *IEEE Transactions on Parallel and Distributed Systems*, **32**(2), pp. 315-329.
- Sarkar, S., Totaro, M., Kumar, A., Elgazzar, K. (2020). Real-Time Object Processing and Routing for Intelligent Drones: A Novel Approach (COVER FEATURE INTELLIGENT AUTONOMOUS SYSTEMS). *IEEE Computer*, Volume 53(12), 80-89. doi: 10.1109/MC.2020.2981908
- 24. Haque, M. E., Ling, E. C., Islam, A., & **Tozal, M. E.** (2020). Predicting Domain Specific Personal Attitudes and Sentiment. International Journal of Semantic Computing, 14(02), 199–222. https://doi.org/10.1142/s1793351x20400073
- P. Srinuan, X. Yuan, and N.-F. Tzeng. (2020). Cooperative Memory Expansion via OS Support for Networked Computing Systems, *IEEE Transactions on Parallel and Distributed Systems*, vol. 31, no. 11, pp. 2650-2667, November 2020.
- 26. X. Xiang, P. Sigdel, and N.-F. Tzeng. (2020). Bufferless Network-on-Chips with Bridged Multiple Subnetworks for Deflection Reduction and Energy Savings, *IEEE Transactions on Computers*, vol. 69, no. 4, pp. 577-590, April 2020.
- 27. Yan, H., Hu, L., Xiang, X., Liu, Z., and **Yuan, X**. (2020). PPCL: Privacy-Preserving Collaborative Learning for Mitigating Indirect Information Leakage, to appear in *Information Science*.
- Srinuan, P., Yuan, X., and Tzeng, N. (2020). Cooperative Memory Expansion via OS Kernel Support for Networked Computing Systems, IEEE Transactions on Parallel and Distributed Systems, vol. 31, no. 10, pp.2650–2667.
- 29. Li, W., Yuan, X., H., K. Li, X. Zhou, Qi and Xu, R. (2020). Endpoint-flexible Coflow Scheduling across Geo-distributed Datacenters, **IEEE Transactions on Parallel and Distributed Systems**, vol. 31, no. 10, pp. 2466–2481.
- Tian, F., Yu, Y., Yuan, X. Lyu, B., and Gui, G. (2020). Predicted Decoupling for Coexistence between WiFi and LTE in Unlicensed Band, IEEE Transactions on Vehicular Technology, vol. 69, no. 4, pp. 4130 – 4141.
- Jiang, N., Tian, F., Li, J. Yuan, X. and Zheng, J. (2020). MAN: Mutual Attention Neural Networks Model for Aspect-level Sentiment Classification in SIoT, IEEE Internet of Things Journal, vol. 7, no. 4, pp. 2901–2903.
- 32. Yin, X., Hu, X., Chen, Y., **Yuan**, X. and Li, B. (2020). Signed-PageRank: An Efficient Influence Maximization Framework for Signed Social Networks, to appear in IEEE Transactions on Knowledge and Data Engineering.
- 33. Pham, H., Woodworth, J., **Amini Salehi**, **M.** (2019), Survey on Secure Search Over Encrypted Data on the Cloud, *Journal of Concurrency and Computation: Practice and Experience (CCPE)*, Volume 31, Issue 17.
- 34. Woodworth, J., **Amini Salehi**, **M.** (2019). S3BD: Secure Semantic Search over Encrypted Big Data in the Cloud, *Journal of Concurrency and Computation: Practice and Experience (CCPE)*, Volume 31, Issue 11.
- 35. Darwich, M., Amini Salehi, M., Beyazit, E., Bayoumi, M. (2019). Cost Efficient Cloud-

Based Video Streaming Based on Quantifying Video Stream Hotness, Volume 62, Issue 5, pages: 641–656.

- 36. Li, X., Amini Salehi, M., Joshi, Y., Darwich, M., Landreneau, B., Bayoumi, M. (2019). Performance Analysis and Modelling of Video Stream Transcoding Using Heterogeneous Cloud Services, in *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Volume 30, Issue 4, pages: 910 922, Apr. 2019
- Chen, L., Feng, Y., Li, B., & Li, B. (2019). Promenade: Proportionally Fair Multipath Rate Control in Datacenter Networks with Random Network Coding. *IEEE Transactions on Parallel and Distributed Systems*, 30(11), 2536-2546. doi:10.1109/TPDS.2019.2915638
- Chen, L., Liu, S., Li, B., & Li, B. (2019). Scheduling Jobs across Geo-Distributed Datacenters with Max-Min Fairness. *IEEE Transactions on Network Science and Engineering*, 6(3), 488-500. doi:10.1109/TNSE.2018.2795580
- Wu, B., Campora III, J., He, Y., Schlecht, A., & Chen, S. (2019). Generating Precise Error Specifications for C: A Zero Shot Learning Approach. ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA'19), PACMPL, vol. 3 (OOPSLA), 160:1–160:30.
- 40. Sukreep, S., Elgazzar, K., **Chu, C. H.**, Mongkolnam, P., & Nolkoolkit, C. (2019). iCARE: A fall and activity recognition system using smart devices. International Journal of Computer and Communication Engineering, **8**, 18–31.
- 41. Ping, Y., Hao, B., Li, H., Lai, Y., Guo, C., Ma, H., ... & Hei, X. (2019). Efficient training support vector clustering with appropriate boundary information. *IEEE Access*, 7, 146964-146978.
- 42. Ping, Y., Hao, B., **Hei, X**., Tu, Y., Du, X., & Wu, J. (2019). Feature Fusion and Voiceprint-Based Access Control for Wireless Insulin Pump Systems. *IEEE Access*, 7, 121286-121302.
- Zhang, S., Cao, H., Ye, Z., Zhang, Y., & Hei, X. (2019). An outlier detection scheme for dynamical sequential datasets. *Communications in Statistics-Simulation and Computation*, 48(5), 1450-1502.
- Iqbal, R., Hall, J., Lee, J., & Islam, A. (2019). Enabling real-time audio-video inputs for Internet of Things operational policy enforcement. *Internet of Things*, 6, 1-11. doi: 10.1016/j.iot.2019.02.001
- Khalil, K., Eldash O., Kumar, A., & Bayoumi M. (2019). Economic LSTM Approach for Recurrent Neural Networks, Volume 66 (11), 1885-1889, doi: 10.1109/TCSII.2019.2924663
- Khalil, K., Eldash O., Kumar, A., & Bayoumi M. (2019). Self-healing hardware systems: A review", Microelectronics Journals, Volume 93, https://www.sciencedirect.com/science/article/pii/S0026269219302782
- Elsayed, N., Maida, A. S., Bayoumi, M. (2019) Reduced-gate convolutional long shortterm memory using predictive coding for spatiotemporal prediction. *Computational Intelligence*, 36, 910-939. doi:10.1111/coin.12277
- 48. Tavanaei, A., Ghodrati, W., Kheradpisheh, S. R., Masquelier, T., **Maida**, A. (2019) Deep learning in spiking neural networks, *Neural Networks*, **111**, 47-63.
- 49. Tavanaei, A., **Maida, A.** (2019) BP-STDP: Approximating backpropagation through spike timing dependent plasticity. *Neurocomputing*, **330**, 39-47.

- 50. Li, B., **Najafi, M. H.**, & Lilja, D. J. (2019). Low-cost stochastic hybrid multiplier for quantized neural networks. *ACM Journal on Emerging Technologies in Computing Systems (JETC)*, **15**(2), 1-19.
- 51. Gudivada, V. N., **Raghavan, V.V**., Berti-Equille, L. (2019). Special Issue on Data Quality in Big Data. *Problems and Solutions, IEEE Trans. on Big Data*, **Volume**(n)
- 52. A., G. C., Iosifidis, A., **Raghavan, V. V.** and Gottumukkala, R. N. (2019). Deep Multiview Learning to Rank. *IEEE Trans. on Knowledge and Data Engineering*, https://doi.org/10.1109/TKDE.2019.2942590
- Venna, S. R., R. N., Tavanaei, Raghavan V. V., Maida, S. and Nichols, S. (2019). A Novel Data-Driven Model for Real-Time Influenza Forecasting. *IEEE Access, Vol 7, No. 1, pp. 7691-7701.* DOI: 10.1109/ACCESS.2018.2888585
- Duggimpudi, M. B., Jian Chen, A., Raghavan, V. V. (2019). Spatio-Temporal Outlier Detection Algorithms Based on Computing Behavioral Outlierness Factor. *Data & Knowledge Engineering (DKE), An Elsevier Journal,* Vol. 122, pp. 1 - 24. https://doi.org/10.1016/j.datak.2017.12.001
- 55. Xiang, X., Sigdel, P., & Tzeng, N. F. (2019). Bufferless Network-on-Chips With Bridged Multiple Subnetworks for Deflection Reduction and Energy Savings. *IEEE Transactions on Computers*, 69(4), pp. 577-590.
- 56. Wolverton, C., Guidry-Hollier, B., **Totaro, M.**, Slatten, L-A. (2019). Developing a Method to Valuate the Collection of Big Data. *International Journal of Business and Social Science*, **Volume 9**(8), 1-9. doi: 10.4018/IJSDS.2019010101
- 57. Yuan, X., Yuan, X., Li, B., and Wang, C.(2019). *Enabling Encrypted Boolean Queries in Geographically Distributed Databases*, **IEEE Transactions on Parallel and Distributed Systems**, vol. 31, no. 3, pp. 634–646.
- 58. Qin, X., Yuan, X., Hou, Y.T., Lou, W. and Reed, J. (2019). *Joint user-AP association and resource allocation in multi-AP 60 GHz WLAN*, IEEE Transactions on Vehicular Technology, vol. 68, no. 6, pp. 5696–5710.
- 59. Yuan, X., Yuan, X., Li, B. and Wang, C. (2019). *Toward secure and scalable computation in Internet of Things data applications*, **IEEE Internet of Things Journal**, vol. 6, no. 2, pp. 3753–3763.
- 60. You, D., Wu, X., Shen, L., He, Y., **Yuan, X.**, Chen, Z., Deng, S. and Ma, C. (2019). *Online streaming feature selection via conditional independence*, **Applied Sciences**.
- Darwich, M., Amini Salehi, M., Beyazit, E., & Bayoumi, M. (2018). Cost-Efficient Cloud-Based Video Streaming Through Measuring Hotness. *The Computer Journal*, 62(5), 614-656. doi:10.1093/comjnl/bxy057
- Li, X., Amini Salehi, M., Bayoumi, M., Tzeng, N., & Buyya, R. (2018). Cost-Efficient and Robust On-Demand Video Transcoding Using Heterogeneous Cloud Services. *IEEE Transactions on Parallel and Distributed Systems*, 29(3), 556-571. doi:10.1109/TPDS.2017.2766069
- 63. Chen, L., Feng, Y., Li, B., & Li, B. (2018). Efficient Performance-Centric Bandwidth Allocation with Fairness Tradeoff. *IEEE Transactions on Parallel and Distributed Systems*, **29**(8), 1693-1706. doi:10.1109/TPDS.2018.2808202
- 64. Chen, L., Liu, S., Li, B., & Li, B. (2018). Scheduling Jobs across Geo-Distributed Datacenters with Max-Min Fairness. *IEEE Transactions on Network Science and Engineering*, Early Access. doi:10.1109/TNSE.2018.2795580

- 65. Campora, J., Chen, S., & Walkingshaw, E. (2018). Casts and costs: Harmonizing safety and performance in gradual typing. *Proceedings of the ACM on Programming Languages*, **2**(ICFP), 98. doi:10.1145/3236793
- 66. Chen, S., & Erwig, M. (2018). Systematic identification and communication of type errors. *Journal of Functional Programming*, **28**, e2. doi:10.1017/S095679681700020X
- Shan, L., Guo, B., Weng, D., Liu, Z., & Chu, C.H. (2018). Posteriori assessment of fracture propagation in refractured vertical oil wells by pressure transient analysis. *Journal of Petroleum Science and Engineering*, 168, 8-16. doi:10.1016/j.petrol.2018.05.010
- 68. Zhang, S., Cao, H., Yang, S., Zhang, Y., & Hei, X. (2018). Sequential Outlier Criterion for Sparsification of Online Adaptive Filtering. *IEEE Transactions on Neural Networks and Learning Systems*, **29**(11), 5277-5291. doi:10.1109/TNNLS.2018.2795719
- Zhang, S., Cao, H., Ye, Z., Zhang, Y., & Hei, X. (2018). An outlier detection scheme for dynamical sequential datasets. *Communications in Statistics - Simulation and Computation*, 48(5),1450-1052. doi:10.1080/03610918.2017.1414249
- Mei, J., Islam, A., Moh'd, A., Wu, Y., & Milios, E. (2018). Statistical learning for OCR error correction. *Information Processing & Management*, 54(6), 874-887. doi:10.1016/j.ipm.2018.06.001
- 71. Mei, J., Islam, A., Moh'd, A., Wu, Y., & Milios, E. (2018). MiBio: A dataset for OCR post-processing evaluation. *Data in Brief*, **21**, 251-255. doi:10.1016/j.dib.2018.08.099
- 72. Rakib, M., Islam, A., & Milios, E. (2018). Improving Text relatedness by incorporating Phrase relatedness with Word Relatedness. *Computational Intelligence*, **34**(3), 939-966. doi:10.1111/coin.12152
- 73. Tavanaei, A. & **Maida, A.S.** (2018). Taining a hidden Markov model with a Bayesian spiking neural network. *Journal of Signal Processing Systems*, **90**, 211-220. doi:10.1007/s11265-016-1153-2
- 74. Tavanaei, A., Masquelier, T., & Maida, A. (2018). Representation learning using eventbased STDP. *Neural Networks*, **105**, 294-303. doi:10.1016/j.neunet.2018.05.018
- Venna, S., Tavanaei, A., Gottumukkala, R., Raghavan, V., Maida, A., & Nichols, S. (2018). A novel data-driven model for real-time influenza forecasting. *IEEE Access*, 7, 7691-7701. doi:10.1109/access.2018.2888585
- Austin, W. & Totaro, M. (2018). Gender Differences in the Effects of Internet Access on Work Absenteeism in the US. *International Journal of Business and Social Science*, 9(8). doi:10.30845/ijbss.v9n8p1
- 77. Nur, A.Y. & **Tozal, M.E.** (2018). Identifying Critical Autonomous Systems in the Internet. *The Journal of Supercomputing*, **74**(10), 4965-4985. doi:10.1007/s11227-018-2336-3
- 78. Nur, A.Y. & **Tozal, M.E.** (2018). Geography and Routing in the Internet. *ACM Transactions on Spatial Algorithms and Systems*, **4**(4), 11. doi:10.1145/3239162
- 79. **Tozal, M.E.** (2018). Policy-Preferred Paths in AS-level Internet Topology Graphs. *Theory and Applications of Graphs*, **5**(1), 3. doi:10.20429/tag.2018.050103
- 80. Nur, A.Y. & **Tozal, M.E.** (2018). Cross-AS (X-AS) Internet Topology Mapping. *Computer Networks*, **132**, 53-67. doi:10.1016/j.comnet.2018.01.011
- 81. Nur, A.Y. & **Tozal, M.E.** (2018). Record route IP traceback: Combating DoS Attacks and the Variants. *Computers & Security*, **72**, 13-25. doi:10.1016/j.cose.2017.08.012

- Sigdel, P. & Tzeng, N.-F. (2018). Coalescing and Deduplicating Incremental Checkpoint Files for Restore-Express Multi-Level Checkpointing. *IEEE Transactions* on Parallel and Distributed Systems, 29(12), 2713-2727. doi:10.1109/TPDS.2018.2844210
- Shu, W. & Tzeng, N.-F. (2018). NUDA: Non-Uniform Directory Architecture for Scalable Chip Multiprocessors. *IEEE Transactions on Computers*, 67(5), 740-747. doi:10.1109/TC.2017.2773061
- You, D., Wu, X., Shen, L., He. Y., Yuan, X., Chen, Z., Deng, S., & Ma, C. (2018). Online streaming feature selection via conditional independence. *Applied Sciences*, 8(12), 2548. doi:10.3390/app8122548
- Zeng, H., Qin, X., Yuan, X., Tian, F., Hou, Y.T., Lou, W., & Midkiff, S.F. (2018). On multicast throughput in multi-hop MIMO networks with interference alignment. *IEEE Transactions on Vehicular Technology*, 67(7), 6627-6641. doi:10.1109/TVT.2018.2817365
- Tian, F., Chen, X., Liu, S., Wang, K., Yuan, X., & Yang, Z. (2018). Secrecy Rate Optimization in Wireless Multi-hop Full Duplex Networks. *IEEE Access*, 6, 5695-5704. doi:10.1109/ACCESS.2018.2794739
- Tian, F., Yuan, X., Hou, Y.T., Lou, W., & Yang, Z. (2018). Cost minimization for cooperative traffic relaying between primary and secondary networks. *IEEE Transactions on Mobile Computing*, 17(9), 2014-2027. doi:10.1109/TMC.2018.2795607
- Tian, F., Chen, X., Liu, S., Wang, K., Yuan, X., & Yang, Z. (2018). On Full Duplex Scheduling for Energy Efficiency Maximization in Multi-Hop Wireless Networks. *IEEE* Access, 6, 2604-2614. doi:10.1109/ACCESS.2017.2784398
- 89. Zeng, H., Qin, X., **Yuan, X.**, Shi, Y., Hou, Y.T., & Lou, W. (2018). Cooperative interference neutralization in multi-hop wireless networks. *IEEE Transactions on Communications*, **66**(2), 889-903. doi:10.1109/TCOMM.2017.2768066
- Jalaian, B., Yuan, X., Shi, Y., Tian, F., Hou, Y.T., Lou, W., Midkiff, S.F., & Dasari, V. (2018). On the integration of SIC and MIMO DoF for interference cancellation in wireless networks. *Wireless Networks*, 24, 2357-2374. doi:10.1007/s11276-017-1472-7
- Zhang, J., Sheng, V.S., Li, T., & Wu, X. (2018). Improving Crowdsourced Label Quality Using Noise Correction. *IEEE Transactions on Neural Networks and Learning Systems*, 29(5), 1675-1688. doi:10.1109/TNNLS.2017.2677468
- Huang, J., Li, G., Huang, Q., Wu, X. (2018). Joint Feature Selection and Classification for Multilabel Learning. *IEEE Transactions on Cybernetics*, 48(3), 876-889. doi:10.1109/TCYB.2017.2663838
- 93. Yang, C., Liu, H., McLoone, S., Chen, C.L.P., Wu, X. (2018). A Novel Variable Precision Reduction Approach to Comprehensive Knowledge Systems. *IEEE Transactions on Cybernetics*, 48(2), 661-674. doi:10.1109/TCYB.2017.2648824
- Wang, Q., Sheng, V.S., Wu, X. (2018). Document-Specific Keyphrase Candidate Search and Ranking. *Expert Systems with Applications*, 97, 163-176. doi:10.1016/j.eswa.2017.12.031
- Wang, J., Wu, X., Li, L. (2018). A Framework for Semantic Connection based Topic Evolution with DeepWalk. *Intelligent Data Analysis*, 22, 211-237. doi:10.3233/IDA-163282

- 96. Hada, R., Wu, H., & Jin, M. (2018). Scalable Minimum-Cost Balanced Partitioning of Large-Scale Social Networks: Online and Offline Solutions. *IEEE Transactions on Parallel & Distributed Systems*, 29, 1636-1649. doi:10.1109/TPDS.2017.2694835
- Lin, Y., Hu, Q., Liu, J., Li, J., & Wu, X. (2017). Streaming Feature Selection for Multi-Label Learning based on Fuzzy Mutual Information. *IEEE Transactions on Fuzzy Systems*, 25, 1491-1507. doi:10.1109/TFUZZ.2017.2735947
- Yu, K., Wu, X., Ding, W., Mu, Y., & Wang, H. (2017). Markov Blanket Feature Selection using Representative Sets. *IEEE Transactions on Neural Networks and Learning Systems*, 28, 2775-2788. doi:10.1109/TNNLS.2016.2602365
- 99. Fang, B., Jia, Y., Li, X., Li, A., & Wu, X. (2017). Big Search in Cyberspace. *IEEE Transactions on Knowledge and Data Engineering*, 29, 1793-1805. doi:10.1109/TKDE.2017.2699675
- 100. Hong, R., He, C., Ge, Y., Wang, M., & Wu, X. (2017). User Vitality Ranking and Prediction in Social Networking Service: A Dynamic Network Perspective. *IEEE Transactions on Knowledge and Data Engineering*, 29, 1343-1356. doi:10.1109/TKDE.2017.2672749
- 101. Wang, H., Zhang, P., Zhu, X., Tsang, I., Chen, L., Zhang, C. & Wu, X. (2017). Incremental Subgraph Feature Selection for Graph Classification. *IEEE Transactions on Knowledge and Data Engineering*, 29, 128-142. doi:10.1109/TKDE.2016.2616305
- 102. Zhou, P., Hu, X., Li, P., & Wu, X. (2017). Online Feature Selection for Highdimensional Class-imbalanced Data. *Knowledge-Based Systems*, 136, 187-199. doi:10.1016/j.knosys.2017.09.006
- 103. Zhang, Y., Chu, G., Li, P., Hu, X., & Wu, X. (2017) Three-Layer concept drifting detection in text data streams. *Neurocomputing*, 260, 393-403. doi:10.1016/j.neucom.2017.04.047
- 104. Zhang, J., Sheng, V.S., Li, Q., Wu, J., & Wu, X. (2017). Consensus Algorithms for Biased Labeling in Crowdsourcing. *Information Sciences*, 382, 254-273. doi:10.1016/j.ins.2016.12.026
- 105. Xu, D., Wu, J., Li, D., Tian, Y., Zhu, X., & Wu, X. (2017). SALE: Self-adaptive LSH encoding for multi-instance learning. *Pattern Recognition*, 71, 460-482. doi:10.1016/j.patcog.2017.04.029
- 106. Amini Salehi, M., Rozier, E., & Zonouz, S. (2017). RESeED: A Secure Regular-Expression-based Search over Encrypted Data in Storage Cloud. [Special Issue] *Cloud and Fog Computing, Software: Practice & Experience*, doi:10.1002/spe.2473
- 107. Burstein, K., Forsyth, C.J., Biggar, R., Hsu, S., Dick, S., Zeanah, P. (2017). A *Theoretical Model* for Preparing Incarcerated Youth for Careers in an Increasingly Technological World: Computational Logic as a Vehicle for Improving Human Decision-making Skills. *Journal of Criminal Justice Education*. 28, 411-427. doi:10.1080/10511253.2016.1257731
- 108. Xiang, X.-Y., Ghose, S., Mutlu, O., & Tzeng, N.-F. (2016). Model for Application Slowdown Estimation in On-Chip Networks and Its Use for Improving System Fairness and Performance. 2016 IEEE 34<sup>th</sup> International Conference on Computer Design (ICCD), 456-463. doi:10.1109/ICCD.2016.7753327
- 109. Shu, W. & Tzeng, N.-F. (2016). Relinquishment Coherence for Enhancing Directory Efficiency in Chip Multiprocessors. 2016 IEEE 34th International Conference on Computer Design (ICCD), Scottsdale, AZ, October 2-5, 2016, 372-375.

doi:10.1109/ICCD.2016.7753306

- 110. Xiang, X.-Y. & Tzeng, N.-F. (2016). Deflection Containment for Bufferless Networkon-Chips. 2016 IEEE International Parallel and Distributed Processing Symposium (IPDPS), Chicago, IL, May 23-27, 2016, 113-122. doi:10.1109/IPDPS.2016.17
- 111. Totaro, M.W. (2016). Computing and Network Systems Administration, Operations Research, and System Dynamics Modeling: A Proposed Research Framework. *The Journal on Systemics, Cybernetics and Informatics*, 14(6), 83-88.
- 112. Yu, K., Ding, W., & Wu, X. (2016). LOFS: A library of online streaming feature selection. *Knowledge-Based Systems*, **113**, 1-3. doi:10.1016/j.knosys.2016.08.026
- 113. Amini Salehi, M., Smith, J., Maciejewski, A.A., Siegel, H.J., Chong, E.K.P., Apodaca, J., Briceno, L.D., Renner, T., Shestak, V., Ladd, J., Sutton, A., Janovy, D., Govindasamy, S., Alqudah, A., Dewri, R., Prakash P. (2016). Stochastic-based Robust Dynamic Resource Allocation for Independent Tasks in a Heterogeneous Computing System. *Journal of Parallel and Distributed Computing*, 97, 96-111. doi:10.1016/j.jpdc.2016.06.008
- 114. Tanner, J.R., Noser, T.C., **Totaro, M.W.**, & Pham, T.-N. (2016). Business Students' Performance in Undergraduate Business Statistics: Is There Really a Connection to Mathematical Skills? *Journal of Business and Economic Perspectives*, **2016**(2), 76-87.
- 115. Prachyabrued, M. & Borst, C.W. (2016). Design and Evaluation of Visual Interpenetration Cues in Virtual Grasping. *IEEE Transactions on Visualization and Computer Graphics*, 22, 1718-1731. doi:10.1109/TVCG.2015.2456917
- 116. Amini Salehi, M., Smith, J., Maciejewski, A. A., Siegel, H. J. (2016). Stochastic-based robust dynamic resource allocation for independent tasks in a heterogeneous computing system. *Journal of Parallel and Distributed Computing*, 97, 96-111. doi:10.1016/j.jpdc.2016.06.008
- 117. **Zhao, D.**, Wang, Y., Wu, H. & Kikkawa, T. (2015). *I*(*Re*)<sup>2</sup>-WiNoC: Exploring scalable wireless on-chip micronetworks for heterogeneous embedded many-core SoCs. *Journal of Digital Communications and Networks*, **1**, 46-56. doi:10.1016/j.dcan.2015.01.003
- 118. Kumar, A., Shelar, A., Etheredge, J., Prakash, S., Sharma, S., & (2015). Analytical Hierarchical Process based System for Image Fusion. *Signal & Image Processing Journal*, 6, 1-14. doi:10.5121/sipij.2015.6501
- 119. Zhou, H., Wu, H., Xia, S., & Jin, M. (2015). Localized and Precise Boundary Detection in 3D Wireless Sensor Networks. *IEEE/ACM Transactions on Networking*, 23, 1742-1754. doi:10.1109/TNET.2014.2344663
- 120. Yang, Y., Jin, M., Zhao, Y., & Wu, H. (2015). Distributed Information Storage and Retrieval in 3D Sensor Networks with General Topologies. *IEEE/ACM Transactions on Networking*, 23, 1149-1162. doi:10.1109/TNET.2014.2317809
- 121. Bible, P. W., Kanno, Y., Wei, L., Brooks, S.R., O'Shea, J.J., Morasso, M., Loganantharaj, R. & Sun, H.-W. (2015). ChIP-Seq Data Analysis Beyond Peak Calling: A User Friendly and Powerful Java Platform, PAPST, for Co-Localization Analysis. *PLOS ONE*, 10(5), e0127285. doi:10.1371/journal.pone.0127285
- 122. Tavanaei, A. & Maida, A.S. (2015). A Minimal Spiking Neural Network to Rapidly Train and Classify Handwritten Digits in Binary and 10-Digit Tasks. *International Journal of Advanced Research in Artificial Intelligence (IJARAI)*, 4(7). doi:10.14569/IJARAI.2015.040701

- 123. Dalla Preda, M., Giacobazzi, R., Lakhotia, A., & Mastroeni, I. (2015). Abstract Symbolic Automata: Mixed syntactic/semantic similarity analysis of executables. Proceedings of the 42<sup>nd</sup> ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, 329-341. doi:10.1145/2676726.2676986
- 124. Pourmohammad, S., Fekih, A., & Perkins, D. (2015). Stable Queue Management in communications networks. *Control Engineering Practice*, 37, 67-79. doi:10.1016/j.conengprac.2015.01.001
- 125. Gottumukkala, R.N., Venna, S.R., & Raghavan, V.V. (2015). Feature Article: Visual analytics of time-evolving large graphs. *IEEE Intelligent Informatcs Bulletin*, 16, 10-16.
- 126. Jangjaimon, I. & Tzeng, N.-F. (2015). Effective Cost Reduction for Elastic Clouds under Spot Instance Pricing through Adaptive Checkpointing. *IEEE Transactions on Computers*, 64, 396-409. doi:10.1109/TC.2013.225
- 127. Liu, Y., Han, Y., Yang, Z., & Wu, H. (2015). Efficient Data Query in Intermittently-Connected Mobile Ad Hoc Social Networks. *IEEE Transactions on Parallel and Distributed Systems*, 26, 1301-1312. doi:10.1109/TPDS.2014.2320922
- 128. Zhu, C., Wu, S., Han, G., Shu, L., & Wu, H. (2015). A Tree-Cluster Based Data Gathering Algorithm for Industrial WSNs with a Mobile Sink. *IEEE Access*, 3, 381-396. doi:10.1109/ACCESS.2015.2424452
- 129. Rezaei, A., Daneshtalab, M., Safaei, F., & Zhao, D. (2015). Hierarchical approach for hybrid wireless Network-on-chip in many-core era. *Computers & Electrical Engineering*, 51, 225-234. doi:10.1016/j.compeleceng.2015.10.007
- 130. Amini, E., Jeddi, Z., Khattab, A., & **Bayoumi**, M.A. (2015). Performance Evaluation and Design Optimization for Flexible MIMD ECC Crypto Architecture. *Journal of Low Power Electronics*, **11**, 1-15. doi:10.1166/jolpe.2015.1364
- Jangjaimon, I. & Tzeng, N. F. (2015). Effective Cost Reduction for Elastic Clouds under Spot Instance Pricing through Adaptive Checkpointing, *IEEE Transactions on Computers*, 64, 396-409. doi:10.1109/TC.2013.225

# **Conference Papers (Refereed)**

- 1. Hussain, R., Pakravan, A., & Amini Salehi, M. (2020). Analyzing the Performance of Smart Industry 4.0 Applications on Cloud Computing Systems, *in Proceedings of the 22nd IEEE International Conference on High Performance Computing and Communications (HPCC '20)*, Fiji, Dec. 2020.
- 2. Wu, S., Denninnart, C., Li, X., Wang, Y., & Amini Salehi, M. (2020). Descriptive and Predictive Analysis of Aggregating Functions in Serverless Clouds: the Case of Video Streaming, *in Proceedings of the 22nd IEEE International Conference on High Performance Computing and Communications (HPCC '20)*, Fiji, Dec. 2020.
- 3. Ghatreh-Samani, D., Denninnart, C., Bacik, J., & Amini Salehi, M. (2020). The Art of CPU-Pinning: Evaluating and Improving the Performance of Virtualization and Containerization Platforms, *in Proceedings of the 49th International Conference on Parallel Processing (ICPP '20)*, Edmonton, Canada, Aug. 2020
- 4. Mokhtari, A., Denninnart, C., & Amini Salehi, M. (2020). Autonomous Task Dropping Mechanism to Achieve Robustness in Heterogeneous Computing Systems, in 29th Heterogeneity in Computing Workshop (HCW 2019), *in the Proceedings of the IPDPS* 2019 Workshops & PhD Forum (IPDPSW), New Orleans, USA, May 2020

- Rahman, Y., Asish, S. M., Fisher, N. P, Bruce, E. C., Kulshreshth, A. K., & Borst, C. W. (2020). Exploring Eye Gaze Visualization Techniques for Identifying Distracted Students in Educational VR, *IEEE VR 2020*, pp. 868-877.
- 6. Yoshimura, A. & **Borst, C. W.** (2020). Evaluation and Comparison of Desktop Viewing and Headset Viewing of Remote Lectures in VR with Mozilla Hubs, *International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments (ICAT-EGVE)*, doi:10.2312/egve.20201259.
- Amrani, M. Z. E. A, Borst, C. W., & Achour, N. (2020). Fuzzy Logic Classifier and Conditional Responses Algorithm for Gestural Input Game, *International Conference on Intelligent Systems and Computer Vision (ISCV)*, doi 10.1109/ISCV49265.2020.9204114
- 8. Woodworth, J., Broussard, D., & **Borst, C. W.** (2020). Designing Tools to Improve Collaborative Interaction in a VR Environment for Teaching Geosciences Interpretation, *Mensch und Computer 2020 - Workshopband*. doi: 10.18420/muc2020-ws122-326
- 9. Yoshimura, A. & **Borst, C. W.** (2020). Remote Instruction in Virtual Reality: A Study of Students Attending Class Remotely from Home with VR Headsets, *Mensch und Computer 2020 Workshopband*. doi: 10.18420/muc2020-ws122-355
- Zhang, Y., Lou, J., Chen, L., Yuan, X., Li, J., Johnsten, T., & Tzeng, N. (2020). Towards Poisoning the Neural Collaborative Filtering-Based Recommender Systems. *Proceedings of the 25th European Symposium on Research in Computer Security* (ESORICS 2020), September 14-18, 2020.
- Sultana, A., Chen, L., Xu, F., & Yuan, X. (2020). E-LAS: Design and Analysis of Completion-Time Agnostic Scheduling for Distributed Deep Learning Cluster. *Proceedings of the 49th International Conference on Parallel Processing (ICPP 2020)*, August 17-20, 2020.
- 12. Guo, Y., Liu, f., Cai, Z., Chen, L., & Xiao, N. (2020). FEEL: A Federated Edge Learning System for Efficient and Privacy-Preserving Mobile Healthcare. *Proceedings* of the 49th International Conference on Parallel Processing (ICPP 2020), August 17-20, 2020.
- 13. Li, J., & Chen, L. (2020). A Concurrent Weighted Communication Scheme for Blockchain Transaction. *Proceedings of the IEEE INFOCOM 2020 Workshop on Edge Computing Security and Blockchain*, July 6-9, 2020.
- He, Y., Chen, S., Nguyen, T., Wade, B., & Wu, X. (2020). Deep Matrix Tri-Factorization: Mining vertex-wise interactions in multi-space attributed graphs. In: *Proceedings of the 2020 SIAM International Conference on Data Mining*, pages 334342. SIAM, 2020.
- Hossen, M. I., Tu, Y., Rabby, M. F., Islam, M. N., Cao, H., & Hei, X. (2020). An Object Detection based Solver for Google's Image reCAPTCHA v2. In 23rd International Symposium on Research in Attacks, Intrusions and Defenses ({RAID} 2020). pp. 269-284.
- 16. **Hsu, S.**, Laisi, A., Beisafar, M. (2020). Supply Chain Finance with Blockchain Technology, *International Forum on Knowledge Assets Dynamics*, Matera, Italy.
- 17. Rizk, R., Rizk, D., Tida, V., **Hsu, S.** (2020) "War on "Fact Check" -- the Path to Magic 270", IDaaS on Disinformation -- Social-Cybersecurity in Times of Crisis and Change; Carnegie Mellon University IDaaS Center.

- Haque, M., Ling, E., Islam, A., & Tozal, M. (2020). Predicting Personal Attitudes Using Contextual Microblog Activity Logs. In: *Proceedings IEEE 14th International Conference on Semantic Computing (ICSC)*, pp. 263-270. San Diego, CA, USA: IEEE. doi: 10.1109/ICSC.2020.00055
- Haque, M., Zobaed, S., Hussain, R., & Islam, A. (2020). Adaptive and Concurrent Garbage Collection for Virtual Machines. In: *Proceedings of the 53rd Hawaii International Conference on System Sciences*, pp. 1707-1716. Maui, Hawaii, USA. doi: 10.24251/HICSS.2020.211
- Asadi, S., & Najafi, M. H. (2020, July). LDFSM: a low-cost bit-stream generator for lowdiscrepancy stochastic computing: late breaking results. In: *Proceedings of the 57th ACM/EDAC/IEEE Design Automation Conference*. pp. 1-2.
- 21. Asadi, S., & Najafi, M. H. (2020, September). Accelerating Deterministic Stochastic Computing with Context-Aware Bit-stream Generator. In: *Proceedings of the 2020 on Great Lakes Symposium on VLSI*. pp. 157-162.
- 22. **Najafi, M. H.**, Jenson, D., Lilja, D. J., and Riedel, M. D. (2020). Performing Stochastic Computation Deterministically. In: *IEEE International Symposium on Circuits and Systems (ISCAS)*, Seville, Spain, 2020. pp. 1-1, doi: 10.1109/ISCAS45731.2020.9180521.
- 23. Hojabr, R., Givaki, K., Pourahmadi, K., Nooralinejad, P., Khonsari, A., Rahmati, D., & Najafi, M. H. (2020, October). TaxoNN: A Light-Weight Accelerator for Deep Neural Network Training. In: 2020 IEEE International Symposium on Circuits and Systems (ISCAS). pp. 1-5. IEEE.
- 24. Alam, M. R., **Najafi, M. H.**, & TaheriNejad, N. (2020). Exact In-Memory Multiplication Based on Deterministic Stochastic Computing. In: 2020 IEEE International Symposium on Circuits and Systems (ISCAS). pp. 1 - 5. IEEE.
- 25. Jalilvand, A. H., **Najafi, M. H.,** & Fazeli, M. (2020). Fuzzy-logic using unary bit-stream processing. In: 2020 IEEE International Symposium on Circuits and Systems (ISCAS). pp. 1-5. IEEE.
- 26. **Najafi, M. H.**, Faraji, S. R., Bazargan, K., & Lilja, D. (2020). Energy-Efficient Pulse-based Convolution for Near-Sensor Processing. In: 2020 IEEE International Symposium on Circuits and Systems (ISCAS). pp. 1-5. IEEE.
- Gupta, S., Imani, M., Sim, J., Huang, A., Wu, F., Najafi, M. H., & Rosing, T. (2020, March). Scrimp: A general stochastic computing architecture using reram in-memory processing. In: 2020 Design, Automation & Test in Europe Conference & Exhibition, pp. 1598-1601. IEEE.
- 28. Asadi, S., **Najafi, M. H.**, (2020) A Low-Cost FSM-based Bit-Stream Generator for Low-Discrepancy Stochastic Computing", The 29th International Workshop on Logic & Synthesis (IWLS).
- 29. Riahi Alam, M., **Najafi, M. H.**, and TaheriNejad, N. (2020). Exact Stochastic Computing Multi- plication in Memristive Memory, (2020) Computation-In-Memory: from Device to Applications Work- shop (CIMW), Grenoble, France.
- Y., J. C. and Raghavan, V. (2020). Learning with Partial Multi-Outlooks. In: 2020 International Joint Conference on Neural Networks (IJCNN), pp. 1 - 8. Glasgow, UK: Publisher. https://ieeexplore.ieee.org/document/9207633
- 31. Khare, S., **Totaro, M.**, (2020). Ensemble Learning for Detecting Attacks and Anomalies in IoT Smart Home. *3rd International Conference on Data Intelligence and Security*, November 2020. South Padre Island, Texas, USA.

- 32. Khare, S., Sarkar, S., **Totaro, M.**, (2020). Comparison of Sensor-Based Datasets for Human Activity Recognition in Wearable IoT. *3rd International Conference on Data Intelligence and Security*, November 2020. South Padre Island, Texas, USA.
- 33. Ghosh, B., Dutta, I., Carlson, A., and **Totaro, M.**, (2020). Mathematical Modeling and Prediction of Neural Network Training based on RC Circuits. *2020 IEEE International Symposium on Networks, Computers and Communications (ISNCC'20)*, Montreal, Canada, October 2020.
- 34. Ghosh, B., Dutta, I., **Totaro, M.**, Bayoumi, M. (2020). A Survey on the Progression and Performance of Generative Adversarial Networks. *2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT)*, Kharagpur, India, October 2020.
- 35. Ghosh, B., Dutta, I., Carlson, A., **Totaro, M.**, and Bayoumi, M. (2020). An Empirical Analysis of Generative Adversarial Network Training Times with Varying Batch Sizes. *The 11th IEEE Annual Ubiquitous Computing, Electronics and Mobile Communication Conference,* New York, USA, October 2020.
- 36. Ghosh, B., Dutta, I., Carlson, A., **Totaro, M.**, and Bayoumi, M. (2020). Generative Adversarial Networks in Security: A Survey. *The 11th IEEE Annual Ubiquitous Computing, Electronics and Mobile Communication Conference,* New York, USA, October 2020.
- Sarkar, S., Totaro, M., Kumar, A. (2020). An Intelligent Framework for Prediction of a UAV's Flight Time. 2020 16th International Conference on Distributed Computing in Sensor Systems (DCOSS), May 2020.
- Vemavarapu P.V., Tozal M.E., Borst, C.W. (2020) Near-Optimal Concentric Circles Layout. In: Bebis G. et al. (eds) Advances in Visual Computing. ISVC 2020. Lecture Notes in Computer Science, vol 12510. Springer, Cham. https://doi.org/10.1007/978-3-030-64559-5\_45
- Y. He, X. Yuan, N.-F. Tzeng, and X. Wu. (2020). Active Learning with Multi-Granular Graph Auto-Encoder," *Proceedings of 20<sup>th</sup> IEEE International Conference on Data Mining (ICDM 2020)*, November 2020. (Acceptance rate of 19.7% for regular and short papers)
- E. Beyazit, Y. He, N.-F. Tzeng, and X. Wu. (2020). Online Learning to Accelerate Neural Network Inference with Traveling Classifiers, *Proceedings of 24<sup>th</sup> European Conference on Artificial Intelligence (ECAI 2020)*, August/September 2020. (Acceptance rate of 26.8% for full papers)
- 41. J. Liu, **X. Yuan**, S. Kompella, and **N.-F. Tzeng**. (2020). AoI and Throughput Tradeoffs in Routing-aware Multi-hop Wireless Networks, *Proceedings of 39<sup>th</sup> IEEE International Conference on Computer Communications (INFOCOM 2020)*, July 2020. (Acceptance rate of 19.8%)
- 42. J. Liu, Y. Zhang, J. Lian, **X. Yuan, and N.-F. Tzeng**. (2020). Instant AoI Optimization in IoT Networks with Packet Combination, *Proceedings of 17<sup>th</sup> IEEE International Conference on Sensing, Communication and Networking (SECON 2020)*, June 2020.
- 43. Zhang, Y., Lou, J., **Chen, L., Yuan, X.**, Li, J., Johnsten, T. and **Tzeng, N-F.** (2020). *Toward Poisoning Neural Collaborative filtering-based Recommender Systems*, accepted by European Symposium on Research in Computer Security (ESORICS) 2020.

- 44. Beyazit, E., Tuncel, D., **Yuan, X. Tzeng, N-F.** and Wu, X. (2020). *Learning Interpretable Representations with Informative Entanglements*, accepted by IJCAI 2020, July 11-17, 2020, Yokohama, Japan.
- 45. Lou, J., Yuan, X., Kompella, S. and Tzeng, N-F. (2020). *AoI and Throughput Tradeoff in Routing-aware Multi-hop Wireless Networks*, accepted by IEEE INFOCOM, 2020, Toronto, Canada, July 6–9, 2020.
- 46. Li, W., **Yuan, X.**, W. Ou. H. Qi, Zhou, X., Chen, S. and Xu, R. (2020). *Efficient Coflow Transmission for Distributed Stream Processing*, accepted by IEEE INFOCOM 2020, Toronto, Canada, July 6–9, 2020.
- Hussain, R., Amini Salehi, M., Kovalenko, A., Feng, Y., & Semiari, O. (2019.) Federated Edge Computing for Disaster Management in Remote Smart Oil Fields, *in Proceedings of the 21st International Conferences on High Performance Computing and Communications (HPCC '19)*, Zhangjiajie, China, Aug. 2019
- 48. Zobaed, SM., Ahmad, S., Gottumukkala, R., & Amini Salehi, M. (2019). ClustCrypt: Privacy-Preserving Clustering of Unstructured Big Data in the Cloud, *in Proceedings of the 21st IEEE International Conference on High Performance Computing and Communications (HPCC '19)*, Zhangjiajie, China, Aug. 2019
- 49. Ahmad, S., Zobaed, SM., Gottumukkala, R., & Amini Salehi, M. (2019). Edge Computing for User-Centric Secure Search on Cloud-Based Encrypted Big Data, *in Proceedings of the 21st IEEE International Conference on High Performance Computing and Communications (HPCC '19)*, Zhangjiajie, China, Aug. 2019
- 50. Gentry, J., Denninnart, C., & Amini Salehi, M. (2019). Robust Dynamic Resource Allocation via Probabilistic Task Pruning in Heterogeneous Computing Systems, *in Proceedings of the 33rd IEEE International Parallel & Distributed Processing Symposium (IPDPS '19)*, Rio de Janeiro, Brazil, May 2019 (PDF)
- 51. Veillion, V., Denninnart, C., & Amini Salehi, M. (2019). F-FDN: Federation of Fog Computing Systems for Low Latency Video Streaming, *in Proceedings of the 3rd IEEE International Conference on Fog and Edge Computing (ICFEC '19)*, Larnaca, Cyprus, May 2019
- 52. Kovalenko, A., Hussain, R., Semiari, O., & Amini Salehi, M. (2019). Robust Resource Allocation Using Edge Computing for Vehicle to Infrastructure (V2I) Networks, *in Proceedings of the 3rd IEEE International Conference on Fog and Edge Computing (ICFEC '19)*, Larnaca, Cyprus, May 2019
- 53. Denninnart, C., Gentry, J., & Amini Salehi, M. (2019). Improving Robustness of Heterogeneous Serverless Computing Systems Via Probabilistic Task Pruning, 28th Heterogeneity in Computing Workshop (HCW 2019), *in the Proceedings of the IPDPS* 2019 Workshops & PhD Forum (IPDPSW), Rio de Janeiro, Brazil, May 2019
- 54. Hussain, R., Amini Salehi, M., & Semiari, O. (2019). Serverless Edge Computing for Green Oil and Gas Industry, *in Proceedings of the 11th IEEE Green Technologies Conference*, Lafayette, LA, USA, Apr. 2019
- 55. Jung, S., **Borst, C. W.**, Hoermann, S., & Lindeman, R. (2020). Redirected Jumping: Perceptual Detection Rates for Curvature Gains, *ACM User Interface Software and Technology Symposium (UIST)*, pp. 1085–1092, 2019.
- 56. Katragadda, S., Gottumukkala, R., Venna, S., **Lipari, N.,** Gaikwad, S., Pusala, M., Chen, J., **Borst, C. W., Raghavan, V.,** & Bayoumi, M. (2019). VAStream: A Visual

Analytics System for Fast Data Streams, *PEARC '19 Proceedings of Practice and Experience in Advanced Research Computing*, Article #76, 8 pages, 2019.

- 57. Chaudhry, B. M., Faust, L., & Chawla, N. V. (2019, October). From Design to Development to Evaluation of a Pregnancy App for Low-Income Women in a Community-Based Setting. In Proceedings of the 21st International Conference on Human-Computer Interaction with Mobile Devices and Services. pp. 1-11.
- Chaudhry, B. M., Faust, L., & Chawla, N. V. (2019, June). Development and Evaluation of a Web Application for Prenatal Care Coordinators in the United States. *In International Conference on Design Science Research in Information Systems and Technology*. pp. 140-156. Springer, Cham.
- 59. Shao, W., Xu, F., Chen, L., Zheng, H., & Liu, F. (2019). Stage Delay Scheduling: Speeding up DAG-style Data Analytics Jobs with Resource Interleaving. *Proceedings of the 48th International Conference on Parallel Processing (ICPP 2019)*, Kyoto, Japan, August 5-8, 2019.
- 60. Zheng, H., Xu, F., **Chen, L.**, Zhou, Z., & Liu, F. (2019). Cynthia: Cost-Efficient Cloud Resource Provisioning for Predictable Distributed Deep Neural Network Training. *Proceedings of the 48th International Conference on Parallel Processing (ICPP 2019)*, Kyoto, Japan, August 5-8, 2019.
- 61. Chen, S. & Campora III, J. (2019). Blame Tracking and Type Error Debugging 3rd Summit on Advances in Programming Languages (SNAPL 2019) (SNAPL 2019), Pages 2:1-2:14, 2019.
- 62. He, Y., Wu, B., Wu, D., Beyazit, E., **Chen, S.**, & Wu, X. (2019). Online learning from capricious data streams: A generative approach. In: *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence, IJCAI-19*, pages 24912497.
- 63. Chen, S. & Wu, B. (2019). Efficient Counter-factual Type Error Debugging 2019 International Symposium on Theoretical Aspects of Software Engineering (TASE'19), Pages 99-106.
- 64. **Chu, C.H.** & Kolluru, R. (2019). Geospatial web portal for regional evacuation planning. In: *Eleventh International Conference on Advanced Geographic Information Systems, Applications, and Services*, Athens, Greece.
- 65. Tu, Y., Rampazzi, S., Hao, B., Rodriguez, A., Fu, K., & Hei, X. (2019, November). Trick or heat? Manipulating critical temperature-based control systems using rectification attacks. In *Proceedings of the 2019 ACM SIGSAC Conference on Computer and Communications Security* (pp. 2301-2315).
- 66. Rizk, D., Rizk, D., **Hsu, S.** (2019). Applied Layered-Security Model to IoMT. In: *Proceedings of the of IEEE Intelligence and Security Informatics*. Shenzhen, China.
- 67. Ayokomi Lasisi, **Hsu**, S. (2019). Consensus Mechanism in Enterprise Blockchain. In: *Proceedings of the of IEEE Intelligence and Security Informatics*. Shenzhen, China.
- Alattas, K., Islam, A., Kumar, A., & Bayoumi, M. (2019). Unsupervised Ranking of Numerical Observations based on Magnetic Properties and Correlation Coefficient. In: *Proceedings of the 52nd Hawaii International Conference on System Sciences*, pp. 1134-1143. Maui,Hawaii, USA. doi: 10.24251/HICSS.2019.139
- 69. Dang, A., Moh'd, A., **Islam, A.**, & Milios, E. (2019). Early Detection of Rumor Veracity in Social Media. In: *Proceedings of the 52nd Hawaii International Conference on System Sciences*, pp. 2355-2364. Maui,Hawaii, USA. doi: 10.24251/HICSS.2019.284

- Li, X., & Jin, M. (2019). Charger Scheduling Optimization Framework. *IEEE International Symposium on Network Computing and Applications (NCA'19)*. DOI: 10.1109/NCA.2019.8935036
- Hada, R., Jin, M., Xie, Y., & Le, L. (2019). Link Prediction Based Minimum Cost and Balanced Partition of Large Online Social Networks, *IEEE International Symposium on Network Computing and Applications (NCA'19)*, 2019. DOI: 10.1109/NCA.2019.8935044
- Black, P., Gondal, I., Vamplew, P., & Lakhotia, A. (2019). Evolved Similarity Techniques in Malware Analysis. In: 18th IEEE International Conference On Trust, Security And Privacy In Computing And Communications/13th IEEE International Conference On Big Data Science And Engineering (TrustCom/BigDataSE), pp. 404-410. IEEE. doi: 10.1109/TrustCom/BigDataSE.2019.00061.
- 73. Asadi, S., & **Najafi, M. H.** (2019). Context-Aware Number Generator for Deterministic Bit-stream Computing. In 2019 IEEE 30th International Conference on Application-specific Systems, Architectures and Processors (ASAP) (Vol. **2160**). pp. 140-140. IEEE.
- 74. Givaki, K., Hojabr, R., Najafi, M. H., Khonsari, A., Gholamrezayi, M. H., Gorgin, S., & Rahmati, D. (2019). Using Residue Number Systems to Accelerate Deterministic Bit-stream Multiplication. In 2019 IEEE 30th International Conference on Application-specific Systems, Architectures and Processors (ASAP). Vol. 2160. pp. 40-40. IEEE.
- Najafi, M. H., Faraji, S. R., Bazargan, K., & Lilja, D. (2019). Energy-efficient nearsensor convolution using pulsed unary processing. In: 2019 IEEE 30th International Conference on Application-specific Systems, Architectures and Processors (ASAP). Vol. 2160, pp. 36-36. IEEE.
- 76. Li, B., Hu, J., **Najafi, M. H.,** Koester, S., & Lilja, D. J. (2019). Low cost hybrid spin-CMOS compressor for stochastic neural networks. In Proceedings of the 2019 on Great Lakes Symposium on VLSI. pp. 141-146.
- 77. Hojabr, R., Givaki, K., Tayaranian, S. R., Esfahanian, P., Khonsari, A., Rahmati, D., & Najafi, M. H. (2019). Skippynn: An embedded stochastic-computing accelerator for convolutional neural networks. *In 2019 56th ACM/IEEE Design Automation Conference (DAC)*, pp. 1-6. IEEE.
- 78. **Najafi, M. H.,** Faraji, S. R., Li, B., Lilja, D. J., & Bazargan, K. (2019). Accelerating deterministic bit-stream computing with resolution splitting. *In 20th International Symposium on Quality Electronic Design (ISQED)*, pp. 157-162. IEEE.
- 79. Faraji, S. R., **Najafi, M. H.,** Li, B., Lilja, D. J., & Bazargan, K. (2019). Energy-efficient convolutional neural networks with deterministic bit-stream processing. In 2019 Design, Automation & Test in Europe Conference & Exhibition, pp. 1757-1762. IEEE.
- 80. Asadi, S., **Najafi, M. H.** (2019), Context-Aware Bit-stream Generator for Deterministic Unary Processing, 1st ISCA Workshop on Unary Computing (WUC), Phoenix, AZ.
- 81. Jalilvand, A. H., **Najafi, M. H.,** and Fazeli, M. (2019)., Fuzzy-logic Processing using Unary Bit- Streams, 1st ISCA Workshop on Unary Computing (WUC), Phoenix, AZ.
- 82. Givaki, K. Hojabr, R., **Najafi, M. H.**, Khonsari, A., Gorgin, S. and Rahmati, Dara, (2019, June) Accelerating Unary Bit-Stream Processing Using Residue Numbers, 1st ISCA Workshop on Unary Computing (WUC), Phoenix, AZ.
- 83. **Najafi, M. H.**, Faraji, S. Rasoul, Bazargan, K., Lilja, D. J., (2019) Energy-Efficient Pulse-based Convolution Engine for Near-Sensor Processing" (invited), 1st ISCA Workshop on Unary Computing (WUC), Phoenix, AZ.

- 84. Satya, K., Gottumukkala, R., Venna, S., Lipari, N., Gaikwad, S., Pusala, M., Chen, J., Borst, C. W., Raghavan, V. and Bayoumi, M. (2019). VAStream: A Visual Analytics System for Fast Data Streams. In: *Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines (learning)*, pp. 76–83. ACM, https://doi.org/10.1145/3332186.3332256
- 85. Haque, Md. E., Zobaed, S.M., **Tozal, M.E. and Raghavan, V.V.** (2019). Divergence Based Non-Negative Matrix Factorization for top-N Recommendations. In: *Proc. Of the* 52<sup>nd</sup> Annual Hawaii International Conference on System Sciences (HICSS 2019). Waikoloa, HI: http://hdl.handle.net/10125/59485
- 86. Khare, S., **Totaro, M.**, (2019). Internet of Things: An Overview. *Proceedings of the ICSCSP-2019 (International Conference on Soft Computing and Signal Processing),* Hyderabad, India, June 21-22, 2019.
- Sarkar, S., Totaro, M., Elgazzar, K. (2019). Leveraging the Cloud to Achieve Near Real-time Processing for Drone-Generated Data. *IEEE Women in Engineering (WIE) Forum USA East*, Pentagon City, VA, USA, DOI: 10.1109/WIEForum47344.2019.8981670, 21-23 Nov. 2019.
- Khare, S., Totaro, M., (2019). Big Data in IoT. Proceedings of the 10<sup>th</sup> ICCCNT 2019 (10th International Conference on Computing, Communication and Networking), Kanpur, India, July 6-8, 2019.
- Sarkar, S., Totaro, M. (2019). Intelligent Drone-Based Surveillance: Application to Parking Lot Monitoring and Detection. Unmanned Systems Technology XXI, 1102104 (13 May 2019); doi: 10.1117/12.2518320, Baltimore, Maryland, April 16-18, 2019.
- 90. Y. Zhang, H. Zhang, X. Yuan, and N.-F. Tzeng. (2019). TweetScore: Scoring Tweets via Social Attribute Relationships for Twitter Spammer Detection, *Proceedings of 14<sup>th</sup> ACM Asia Conference on Information, Computer and Communications Security (ASIACCS 2019)*, July 2019, pp. 379-390. (Acceptance rate of 17.1% for full papers)
- 91. Y. Zhang, H. Zhang, X. Yuan, and N.-F. Tzeng. (2019). Pseudo-honeypot: Toward Efficient and Scalable Spam Sniffer, *Proceedings of 49th IEEE/IFIP International Conference on Dependable Systems and Networks (DSN 2019)*, June 2019, pp. 435-446. (Acceptance rate of 21.4%)
- 92. Jiang, T. and **Yuan, X.** (2019). *Traceable Private Set Intersection in Cloud Computing*, IEEE Conference on Dependable and Secure Computing (IEEE DSC), Hangzhou, China, November 18–20, 2019.
- 93. Tareq, M.M.K., Semiari, O., Amini Salehi, M., & Saad, W. (2018). Ultra Reliable, Low Latency Vehicle-to-Infrastructure Wireless Communications with Edge Computing. In: 2018 IEEE Global Communications Conference (GLOBECOM), 1-7. New York: IEEE. doi:10.1109/GLOCOM.2018.8647367
- 94. Tareq, M., Semiari, O., Amini Salehi, M., & Saad, W. (2018). Ultra Reliable, Low Latency Vehicle-to-Infrastructure Wireless Communications with Edge Computing, *in Proceedings of IEEE Global Communications Conference (GLOBECOM '18)*, Abu Dhabi, UAE, Dec. 2018
- 95. Denninnart, C., **Amini Salehi, M.**, Toosi, A., & Li, X., (2018). Leveraging Computational Reuse for Cost- and QoS-Efficient Task Scheduling in Clouds. In: Pahl, C., Vukovic, M., Yin, J., Yu, Q. (eds). *Service-Oriented Computing. ICSOC 2018*.

*Lecture Notes in Computer Science*, **11236**, 828-836. Cham, Switzerland: Springer. doi:10.1007/978-3-030-03596-9 59

- 96. Hussain, R.F., Amini Salehi, M., Kovalenko, A.B., Salehi, S., & Semiari, O. (2018). Robust resource allocation using edge computing for smart oil field. In: Arabnia, H.R., Iwata, M., Joe, K., Nishikawa, H., Shouno, H., Tinetti, F.G. (eds). Proceedings of the 2018 International Conference on Parallel and Distributed Processing Techniques and Applications, 204-210. CSREA Press.
- 97. Borst, C.W., Lipari, N.G., & Woodworth, J.W. (2018). Teacher-Guided Educational VR: Assessment of Live and Prerecorded Teachers Guiding Virtual Field Trip. 2018 *IEEE Conference on Virtual Reality and 3D User Interfaces (VR)*, 467-474. New York: IEEE. doi:10.1109/VR.2018.8448286
- 98. Chaudhry, B.M., Faust, L. & Chawla, N.V. (2018). Towards an Integrated mHealth Platform for Community-based Maternity Health Workers in Low-Income Communities. In: Proceedings of the 12<sup>th</sup> EAI International Conference on Pervasive Computing Technologies for Healthcare, 118-127. New York: ACM. doi:10.1145/3240925.3240938
- Gao, Y., Chen, L., & Li, B. (2018) Post: Device Placement with Cross-Entropy Minimization and Proximal Policy Optimization. In: Advances in Neural Information Processing Systems 31 (NIPS 2018). NIPS Proceedings.
- 100. Gao, Y., Chen, L., & Li, B. (2018). Spotlight: Optimizing Device Placement for Training Deep Neural Networks. In: Proceedings of the 35<sup>th</sup> International Conference on Machine Learning, PMLR, 80, 1676-1684.
- 101. Liu, S., Chen, L., & Li, B. (2018). Siphon: Expediting Inter-Datacenter Coflows in Wide-Area Data Analytics. In: *Proceedings of the 2018 USENIX Annual Technical Conference (USENIX ATC 2018)*, 507-518.
- 102. Liu, S., Chen, L., Li, B., & Carnegie, A. (2018). A Hierarchical Synchronous Parallel Model for Wide-Area Graph Analytics. In: *IEEE INFOCOM 2018 - IEEE Conference* on Computer Communications, 531-539. New York: IEEE. doi:10.1109/INFOCOM.2018.8486361
- 103. Campora, J., Chen, S., Erwig, M., & Walkingshaw. E. (2018). Migrating gradual types. In: *Proceedings of the ACM on Programming Languages*, 2(POPL), 15. New York: ACM. doi:10.1145/3158103
- 104. Pratt, M.A., & Chu, C.H. (2018). Predicting hospital safety measures using patient experience of care responses. In: *Proceedings of the 7<sup>th</sup> International Conference on Pattern Recognition Applications and Methods*, 1(ICPRAM), 371-378. doi:10.5220/0006588403710378
- 105. Tu, Y., Lee, I., Lin, Z., & Hei, X. (2018). Injected and Delivered: Fabricating Implicit Control over Actuation Systems by Spoofing Inertial Sensors. In: *Proceedings of the* 27<sup>th</sup> USENIX Conference on Security Symposium. 1545-1462. Berkley, CA: USENIX Association.
- 106. Hao, B., Hei, X., Tu, Y., Du, X., & Wu J. (2018). A Voice Print based Access Control Scheme for Wireless Insulin Pump System. In: 2018 IEEE 15<sup>th</sup> International Conference on Mobile Ad Hoc and Sensor Systems (MASS), 245-253. New York: IEEE. doi:10.1109/MASS.2018.00046
- 107. Zhao, J., Kong, K., **Hei**, X., Tu, Y., & Du, X. (2018). A Visible Light Channel based Access Control Scheme for Wireless Insulin Pump Systems. *2018 IEEE International*

*Conference on Communications (ICC)*, 1-6. New York: IEEE. doi:10.1109/ICC.2018.8422827

- 108. Chi, K., Wu, L., Du, X., Yin, G., Wu, J., Ji, B., & Hei, X. (2018), Enabling Fair Spectrum Sharing between Wi-Fi and LTE-Unlicensed. 2018 IEEE International Conference on Communications (ICC), 1-6. New York: IEEE. doi:10.1109/ICC.2018.8422827
- 109. Hsu, S.H.Y., Dick, S. (2018). A Workaround of EHR A Logistics/Reporting System Development. In: *Proceedings of the 51<sup>st</sup> Annual Hawaii International Conference on System Sciences*, 8, 5750-5759. doi:10.24251/HICSS.2018.393
- 110. Mei, J., Jiang, X., Islam, A., Moh'd, A., & Milios, E. (2018). Integrating Global Attention for Pairwise Text Comparison. In: *Proceedings of the 2018 ACM Symposium* on Document Engineering, 49. New York: ACM. doi:10.1145/3209280.3229119
- 111. Pfeil, K., Taranta, E.M., Kulshreshth, A., Wisniewski, P., & LaViola, J.J. (2018) A Comparison of Eye-Head Coordination Between Virtual and Physical Realities. In: *Proceedings of the 15<sup>th</sup> ACM Symposium on Applied Perception*, 18. New York: ACM. doi:10.1145/3225153.3225157
- 112. Lakhotia, A., Notani, V., & LeDoux, C. (2018). Malware Economics and its Implication to Anti-Malware Situational Awareness. In: 2018 International Conference On Cyber Situational Awareness, Data Analytics And Assessment (Cyber SA), 1-8. New York: IEEE. doi:10.1109/CyberSA.2018.8551388
- 113. Arrott, A., Lakhotia, A., Leitold, F., & LeDoux, C. (2018). Cluster analysis for deobfuscation of malware variants during ransomware attacks. In: 2018 International Conference On Cyber Situational Awareness, Data Analytics And Assessment (Cyber SA), 1-9. New York: IEEE. doi:10.1109/CyberSA.2018.8551432
- 114. Tavanaei, A., Kirby, Z., & Maida, A. (2018). Training spiking ConvNets by STDP and gradient descent. In: 2018 International Joint Conference on Neural Networks (IJCNN), 1643-1650. New York: IEEE. doi:10.1109/IJCNN.2018.8489104
- 115. Gaudet, C., Maida, A. (2018). Deep quaternion networks. In: 2018 International Joint Conference on Neural Networks (IJCNN), 1565-1572. New York: IEEE. doi:10.1109/IJCNN.2018.8489651
- 116. Tavanaei, A., Gottumukkala, R., Maida, A., & Raghavan, V. (2018). Unsupervised learning for rank aggregation using parameterized function optimization. In: 2018 International Joint Conference on Neural Networks (IJCNN), 3632-3639. New York: IEEE. doi:10.1109/IJCNN.2018.8489160
- 117. Ellsayed, N., Maida, A., & Bayoumi, M. (2018). Empirical activation function effects on convolutional LSTM learning. In: 2018 IEEE 30<sup>th</sup> International Conference on Tools with AI (ICTAI), 336-343. New York: IEEE. doi: 10.1109/ICTAI.2018.00060
- Beyazit, E., Hosseini, M., Maida, A., & Wu, X. (2018). Learning simplified decision boundaries from trapezoidal data streams. In: Kůrková V., Manolopoulos Y., Hammer B., Iliadis L., Maglogiannis I. (eds). *Artificial Neural Networks and Machine Learning*. *ICANN 2018. Lecture Notes in Computer Science*, 11139, 508-517. Cham, Switzerland, Springer. doi:10.1007/978-3-030-01418-6\_50
- 119. Najafi, M.H., Lilja, D.J., & Riedel, M. (2018). Deterministic methods for stochastic computing using low-discrepancy sequences. In: *Proceedings of the International Conference on Computer-Aided Design*, 51. New York: ACM. doi:10.1145/3240765.3240797

- 120. Katragadda, S., Gottumukkala, R.N., Pusala, M.K., & Raghavan V.V. (2018). Distributed Real Time Link Prediction on Graph Streams. In: Skhiri, S. (ed). 2018 IEEE International Conference on Big Data, 2912-2917. New York: IEEE. doi:10.1109/BigData.2018.8621934
- 121. Le, L., Xie, Y., & Raghavan, V.V. (2018). Deep Similarity-Enhanced K Nearest Neighbors. In: Tsumoto, S., Slezak, D., Hong, T., & Wang, S.L.(eds). 2018 IEEE International Conference on Big Data, 2643-2650. New York: IEEE. doi:10.1109/BigData.2018.8621894
- 122. Ayhan, M.S. & Raghavan, V.V. (2018). Efficient and Automatic Subspace Relevance Determination via Multiple Kernel Learning for High-dimensional Neuroimaging Data. In: Wang S., et al. (eds). *Brain Informatics. BI 2018. Lecture Notes in Computer Science*, 11309, 226-238. Cham, Swizerland: Springer. doi:10.1007/978-3-030-05587-5 22
- 123. Haque, M., Tozal, M., & Islam, A. (2018). Helpfulness Prediction of Online Product Reviews. In: Proceedings of the 2018 ACM Symposium on Document Engineering, 35. New York, ACM. doi:10.1145/3209280.3229105
- 124. Li, W, Yuan, X., Li, K., Qi, H., & Zhou, X. Leveraging Endpoint Flexibility When Scheduling Coflows across Geo-distributed Datacenters. In: *IEEE INFOCOM - IEEE Conference on Computer Communications*, 873-881. (2018). New York: IEEE. doi:10.1109/INFOCOM.2018.8486319
- 125. Woodworth, J.W. & Borst, C.W. (2017). Design of a practical TV interface for teacherguided VR field trips. In: 2017 IEEE 3<sup>rd</sup> Workshop on Everyday Virtual Reality (WEVR), 1-6. New York: IEEE. doi:10.1109/WEVR.2017.7957713
- 126. Mei, J., Islam, A., Moh'd, A., Wu, Y., Milios, E. (2017). Post-Processing OCR Text using Web-Scale Corpora. In: *Proceedings of the 2017 ACM Symposium on Document Engineering*, 117-120. New York: ACM. doi:10.1145/3103010.3121032
- 127. Tavanaei, A. & Maida, A.S. (2017). Multi-layer unsupervised learning in a spiking convolutional network. In: *International Joint Conference on Neural Networks (IJCNN)*, 2023-2030. New York: IEEE. doi:10.1109/IJCNN.2017.7966099
- 128. Abbady, S., Ke, C., Lavergne, J., Chen, J., Raghavan, V.V. & Benton, R.G. (2017). Online Mining for Association Rules and Collective Anomalies in Data Streams. Second Workshop on Real-time and Stream Processing in Big Data. In: 2017 IEEE International Conference on Big Data (Big Data), 2370-2379. New York: IEEE. doi:10.1109/BigData.2017.8258192
- 129. Pusala, M.K., Benton, R.G., Raghavan, V.V. & Gottumukkala, R.N. (2017). Supervised approach to rank predicted links using interestingness measures. In: 2017 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 1085-1092. New York: IEEE. doi:10.1109/BIBM.2017.8217807
- 130. Singh, S., Xu, W. & Raghavan, V.V. (2017) Descriptor based protein structure representation using triangular spatial relationships in 3-D. In: 2017 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 1114-1118. New York: IEEE. doi:10.1109/BIBM.2017.8217812
- 131. Cinar, M.S., Genç, B., Sever, H. & Raghavan, V.V. (2017). Analyzing Structure of Terrorists Networks by Using Graph Metrics. In: 2017 IEEE International Conference on Big Knowledge (ICBK), 9-16. New York: IEEE. doi:10.1109/ICBK.2017.24

- 132. Nasser A., Sever H. & Raghavan V.V. (2017). Utilization Rough Sets for Intrusion Detection, Position Paper. In: Joint 17<sup>th</sup> World Congress of International Fuzzy Systems Association and 9<sup>th</sup> International Conference on Soft Computing and Intelligent Systems (IFSA-SCIS 2017), 286.
- 133. Katragadda, S., Benton, R.G. & Raghavan, V.V. (2017). Sub-Event Detection from Tweets, Special Session on Datastream Mining. In: 2017 International Joint Conference on Neural Networks (IJCNN), 2128-2135. New York: IEEE. doi:10.1109/IJCNN.2017.7966112
- 134. Sharif, M.A. & Raghavan, V.V. (2017). Link Prediction Based Hybrid Recommendation System using User-Page Preference Graphs. In: 2017 International Joint Conference on Neural Networks (IJCNN), 1147-1154. New York: IEEE. doi:10.1109/IJCNN.2017.7965981
- 135. Katragadda, S., Benton, R.G. & Raghavan, V.V. (2017). Framework for Real-Time Event Detection using Multiple Social Media Sources. In: *Proceedings of the 50<sup>th</sup>* Annual Hawaii International Conference on System Sciences, 1716-17265. doi:10.24251/hicss.2017.208
- 136. Darwich, M., Beyazit, E., Amini Salehi, M., Bayoumi, M. (2017). Cost Efficient Repository Management for Cloud-Based On-Demand Video Streaming. In: 2017 5<sup>th</sup> IEEE International Conference on Mobile Cloud Computing, Services, and Engineering (MobileCloud), 39-44. New York: IEEE. doi:10.1109/MobileCloud.2017.23
- 137. Shawahna, A., Haque, M.E., Tozal, M.E. (2017). Energy Harvesting in Wireless Sensor Networks with Efficient Landmark Selection using Mobile Actuator. In: 2017 Annual IEEE Systems Conference (SysCon), 1-8. New York: IEEE. doi:10.1109/syscon.2017.7934761
- 138. Tozal, M.E. (2017). Autonomous System Ranking by Topological Characteristics: A Comparative Study. In: 2017 Annual IEEE Systems Conference (SysCon), 1-8. New York: IEEE. doi:10.1109/SYSCON.2017.7934814
- 139. Xiang, X.-Y., Ghose, S., Mutlu, O., Tzeng, N.-F., Peng, L., & Shi, W. (2017). Carpool: A Bufferless NoC with Adaptive Multicast and Hotspot Alleviation. In: *Proceedings of* the International Conference on Supercomputing, 19. New York: ACM. doi:10.1145/3079079.3079090
- 140. He, J., Li, L., Wu, X. (2017). A Self-Adaptive Sliding Window Based Topic Model for Non-uniform Texts. In: 2017 IEEE International Conference on Data Mining (IDCM), 147-156. New York: IEEE. doi:10.1109/ICDM.2017.24
- 141. Qiang, J., Chen, P., Wang, T., Wu, X. (2017). Topic Modeling over Short Texts by Incorporating Word Embeddings. In: Kim, J., Shim, K., Cao, L., Lee, J. G., Lin, X., Moon, Y. S. (eds). Advances in Knowledge Discovery and Data Mining. PAKDD 2017. Lecture Notes in Computer Science, 10235, 363-374. Cham, Switzerland: Springer. doi10.1007/978-3-319-57529-2\_29
- 142. Wang, Q., Sheng, V.S., Wu, X. (2017). Keyphrase Extraction with Sequential Pattern Mining. In: *Proceedings of the 31<sup>st</sup> AAAI Conference on Artificial Intelligence*, 5003-5004.
- 143. Woodworth J.W., Ekong S., Borst C.W. (2017). Virtual field trips with networked depth-camera-based teacher, heterogeneous displays, and example energy center application. In: 2017 IEEE Virtual Reality (VR), 471-472. New York: IEEE. doi:10.1109/VR.2017.7892384

- 144. Vemavarapu, P.V., Borst, C.W. (2017). Indirect touch interaction with stereoscopic displays using a two-sided handheld touch device. 2017 IEEE Symposium on 3D User Interfaces (3DUI), 209-210. New York: IEEE. doi:10.1109/3DUI.2017.7893345
- 145. Woodworth, J.W., Borst, C.W. (2017). Visual Cues to aid 3D Pointing in a Virtual Mirror. In: 2017 IEEE Symposium on 3D User Interfaces (3DUI), 251-252. New York: IEEE. doi:10.1109/3DUI.2017.7893366
- 146. Tavanaei, A., Maida, A.S., Kaniymattam, A., & Loganantharaj, R. (2016). Towards recognition of protein function based on its structure using deep convolutional networks. In: 2016 IEEE International Conference on Bioinformatics & Biomedicine (BIBM), 145-149. New York: IEEE. doi:10.1109/BIBM.2016.7822509
- 147. Edgington, P.D. & Maida, A.S. (2016). Exact particle filter modularization improves runtime performance. In: Kaminka, G.A., et al. (eds). *Frontiers in Artificial Intelligence and Applications*, 285(ECAI 2016), 1397-1405. Amsterdam: IOS Press. doi:10.3233/978-1-61499-672-9-1397
- 148. Tavanaei, A., Masquelier, T., & Maida, A.S. (2016). Acquisition of visual features through probabilistic spike-timing-dependent plasticity. In: 2016 International Joint Conference on Neural Networks (IJCNN), 307-314. New York: IEEE. doi:10.1109/IJCNN.2016.7727213
- 149. Li, P.-P., He, L., Hu, X., Zhang, Y., Li L., Wu X. (2016). Concept Based Short Text Stream Classification with Topic Drifting Detection. In: 2016 IEEE 16<sup>th</sup> International Conference on Data Mining (ICDM), 1009-1014. New York: IEEE. doi:10.1109/icdm.2016.0128
- 150. Xiang, X.-Y. & Tzeng, N.-F. (2016) Deflection Containment for Bufferless Networkon-Chips. 2016 IEEE International Parallel & Distributed Processing Symposium (IPDPS), 113-122. New York: IEEE. doi:10.1109/IPDPS.2016.17
- 151. Shu, W. & Tzeng, N.-F. (2016). Relinquishment Coherence for Enhancing Directory Efficiency in Chip Multiprocessors. In: 2016 IEEE 34<sup>th</sup> International Conference on Computer Design (ICCD), 372-375. New York: IEEE. doi:10.1109/ICCD.2016.7753306
- 152. Xiang, X.-Y., Ghose, S., Mutlu, O., & Tzeng, N.-F. (2016). Model for Application Slowdown Estimation in On-Chip Networks and Its Use for Improving System Fairness and Performance. In: 2016 IEEE 34<sup>th</sup> International Conference on Computer Design (ICCD), 456-463. New York: IEEE. doi:10.1109/ICCD.2016.7753327
- 153. Woodworth, J., Amini Salehi, M., Raghavan, V. (2016). S3C: An Architecture for Space-Efficient Semantic Search over Encrypted Data in the Cloud. In: 2016 IEEE International Conference on Big Data (Big Data), 3722-3731. New York: IEEE. doi:10.1109/BigData.2016.7841040
- 154. Li, X., Amini Salehi, M., Bayoumi, M. (2016). VLSC: Video Live Streaming Using Cloud Services. In: 2016 IEEE International Conferences on Big Data and Cloud Computing (BDCloud), Social Computing and Networking (SocialCom), Sustainable Computing and Communications (SustainCom) (BDCloud-SocialCom-SustainCom), 595-600. New York: IEEE. doi:10.1109/BDCloud-SocialCom-SustainCom.2016.93
- 155. Li, X., Amini Salehi, M., Bayoumi, M. (2016). High Performance On-demand Video Transcoding Using Cloud Services. In: 2016 16<sup>th</sup> IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid), 600-603. New York: IEEE. doi:10.1109/CCGrid.2016.50

- 156. Xiangbo, Li, Amini Salehi, M., Bayoumi, M., Buyya, R. (2016). CVSS: A Cost-Efficient and QoS-Aware Video Streaming Using Cloud Services. 2016 16<sup>th</sup> ACM/IEEE International Conference on Cluster, Cloud and Grid Computing (CCGrid), 106-115. New York: IEEE. doi:10.1109/CCGrid.2016.49
- 157. Dang, A., Moh'd, A., Islam, A., Minghim, R., Smit, M., Milios, E. (2016). Reddit Temporal N-gram Corpus and its Applications on Paraphrase and Semantic Similarity in Social Media using a Topic-based Latent Semantic Analysis. In: *Proceedings of COLING 2016, the 26<sup>th</sup> International Conference on Computational Linguistics: Technical Papers*, 3553-3564.
- 158. Ban, B., Jin, M., & Wu, H. (2016). Optimal Marching of Autonomous Networked Robots. In: 2016 IEEE 36<sup>th</sup> International Conference on Distributed Computing Systems (ICDCS), 149-158. New York: IEEE. doi:10.1109/ICDCS.2016.51
- 159. Wang, W., Moh'd, A., Islam, A., Soto, A., & Milios, E. (2016). Non-uniform Language Detection in Technical Writing. In: *Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing*, 1892-1900. doi:10.18653/v1/D16-1194
- 160. Chen, S. & Erwig, M. (2016). Principal Type Inference for GADTs. In: Proceedings of the 43<sup>rd</sup> Annual ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages, 416-428. New York: ACM. doi:10.1145/2837614.2837665
- 161. Chen, S., Erwig, M., & Walkingshaw, E. (2016). A Calculus for Variational Programming. In: Krishnamurthi, S. & Lerner, B.S. (eds). 30<sup>th</sup> European Conference on Object-Oriented Programming (ECOOP 2016), 6:1-6:28. Germany: Schloss Dagstuhl. doi:10.4230/LIPIcs.ECOOP.2016.6
- 162. Ritter, K.A., Chambers, T.L., Borst, C.W. (2016). Work in Progress: Networked Virtual Reality Environment for Teaching Concentrating Solar Power Technology. In: 2016 ASEE Annual Conference & Exposition, 16819. doi:10.18260/p.27024
- 163. Lipari, N.G., Borst, C.W., & Tozal, M.E. (2016). Visual Analytics Using Graph Sampling and Summarization on Multitouch Displays. In: Bebis, G., et al. (eds). *Advances in Visual Computing. ISVC 2016. Lecture Notes in Computer Science*, 10072, 462-471. Cham, Switzerland: Springer. doi:10.1007/978-3-319-50835-1\_42
- 164. Ekong, S., Borst, C.W., Woodworth, J., Chambers, T.L. (2016). Teacher-Student VR Telepresence with Networked Depth Camera Mesh and Heterogeneous Displays. In: Bebis, G., et al. (eds). Advances in Visual Computing. ISVC 2016. Lecture Notes in Computer Science, 10073, 246-258. Cham, Switzerland: Springer. doi:10.1007/978-3-319-50832-0 24
- 165. Lipari, N.G., Borst C.W. (2016). Toward Vibrotactile Rendering for Irregular 2D Tactor Arrays. In: 2016 IEEE Symposium on 3D User Interfaces (3DUI), 257-258. New York: IEEE. doi:10.1109/3DUI.2016.7460068
- 166. Javanmard, M., Amini Salehi, M., & Zonouz, S. (2015). TSC: Trustworthy and Scalable Cytometry. In 2015 IEEE 17<sup>th</sup> International Conference on High Performance Computing and Communications, 2015 IEEE 7<sup>th</sup> International Symposium on Cyberspace Safety and Security, and 2015 IEEE 12<sup>th</sup> International Conference on Embedded Software and Systems, 1356-1360. New York: IEEE. doi:10.1109/HPCC-CSS-ICESS.2015.125
- 167. **Borst, C.W.**, Ritter, K.A., Chambers, T.L. (2016). Virtual Energy Center for Teaching Alternative Energy Technologies. In: *2016 IEEE Virtual Reality (VR)*, 157-158. New York: IEEE. doi: 10.1109/VR.2016.7504701

- 168. Fathi, R., Amini Salehi, M., & Leiss, E.L. (2015). User-Friendly and Secure Architecture for Authentication of Cloud Services. In: 2015 IEEE 8<sup>th</sup> International Conference on Cloud Computing, 516-523. New York: IEEE. doi:10.1109/CLOUD.2015.75
- 169. Lipari N.G. & Borst C.W. (2015). Handymenu: Integrating Menu Selection into a Multi-Function Smartphone-based VR Controller. In: 2015 IEEE 3D User Interfaces (3DUI), 129-132. New York: IEEE. doi:10.1109/3DUI.2015.7131737
- 170. Khattab, A. & Bayoumi, M.A. (2015). An Overview of IEEE Standardization Efforts for Cognitive Radio Networks. 2015 IEEE International Symposium on Circuits and Systems (ISCAS), 982-982. New York: IEEE. doi:10.1109/ISCAS.2015.7168800
- 171. Singh, A., Chu, C.H., & Pratt, M.A. (2015). Saliency detection using geometric context contrast inferred from natural images. In: *Proceedings of the 10<sup>th</sup> International Conference on Computer Vision Theory and Applications*, 1, 609-616. doi:10.5220/0005316906090616
- 172. Singh, A., Chu, C.H., & Pratt, M.A. (2015). Learning to Predict Video Saliency Using Temporal Superpixels. In: *Proceedings of the International Conference on Pattern Recognition Applications and Methods*, 2, 201-209. doi:10.5220/0005206402010209
- 173. Hsu, S.H-Y., Gottumukkala, R., Benton, R.G. (2015). Real-Time Flu Monitoring System and Decision Informatics. In: 2015 48<sup>th</sup> Annual Hawaii International Conference on System Sciences, 2794-2803. New York: IEEE. doi:10.1109/HICSS.2015.338
- 174. Dalla Preda, M., Giacobazzi, R., Lakhotia, A., & Mastroeni, I. (2015). Abstract Symbolic Automata. In: *Proceedings of the 42<sup>nd</sup> ACM SIGPLAN-SIGACT Symposium* on Priciples of Programming Languages, 329-341. New York: ACM. doi:10.1145/2676726.2676986
- 175. Tavanaei, A. & Maida, A.S. (2015). Studying the interaction of a hidden Markov model with a Bayesian spiking neural network. In: 2015 IEEE 25<sup>th</sup> International Workshop on Machine Learning for Signal Processing, 1-6. New York: IEEE. doi:10.1109/MLSP.2015.7324350
- 176. Katragadda, S., Karnati, H., Pusala, M.K., Raghavan, V.V., & Benton, R.G. (2015). Detecting Adverse Drug Effects Using Link Classification on Twitter Data. In: 2015 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 675-679. New York: IEEE. doi:10.1109/BIBM.2015.7359767
- 177. Ali, E. & Raghavan, V.V. (2015). Extending SKOS: A Wikipedia-Based Unified Annotation Model for Creating Interoperable Domain Ontologies. In: Esposito, F., Pivert, O., Hacid, M. S., Rás, Z., Ferilli, S. (eds). Foundations of Intelligent Systems. ISMIS 2015. Lecture Notes in Computer Science, 9384, 364-370. doi:10.1007/978-3-319-25252-0 39
- 178. Luo, T., Kanhere, S., Tan, H-P., Wu, F., & Wu, H. (2015). Crowdsourcing with Tullock Contests: A New Perspective. In: 2015 IEEE International Conference on Computer Communications (INFOCOM), 2515-2523. New York: IEEE. doi:10.1109/INFOCOM.2015.7218641
- 179. Rezaei, A., Daneshtalab, M., Zhao, D., Safaei, F., & Wang, X. (2015). Dynamic Application Mapping Algorithm for Wireless Network-on-Chip. In: 2015 23<sup>rd</sup> Euromicro International Conference on Parallel, Distributed and Network-Based Processing, 421-424. New York: IEEE. doi:10.1109/PDP.2015.14

# **Other Research Activities**

#### **Unrefereed Publications**

- Islam, A., Henninger, M., **Chaudhry, B.** (2020). Strategies to Address COVID-19 Related Stressors in Healthcare Settings, Healthy Living by Society for Behavioral Medicine.
- Li, X., & Jin, M. (2020). A General Framework For Charger Scheduling Optimization Problems. arXiv:2009.14428
- You, Z., Yang, T., & Jin, M. (2020). Multi-Channel Deep 3D Face Recognition. arXiv:2009.14743
- Pfeffer, A., Ruttenberg, B., Kellogg, L., Howard, M., Call, C., O'Connor, A., Takata, G., Lakhotia, A., et al. (2017). Artificial Intelligence Based Malware Analysis." arXiv preprint arXiv:1704.08716.
- Gaudet, C., **Maida**, A. (2020). Generalizing complex/hypercomplex convolutions to vector map convolutions. arXiv:2009.04083, arxiv.org.
- Maida, A., & Hosseini, M. (2020) Hierarchical predictive coding models in a deep learning framework. arXiv:2005.03230, arxiv.org.
- Riahi Alam, M., **Najafi, M. H.**, & TaheriNejad, N. (2020). Sorting in Memristive Memory. arXiv preprint arXiv:2012.09918, under review in IEEE TVLSI.
- Chaudhry, B. (2019). Food for Thought. mHealth, 5(20).
- Hossein, M., **Maida, A. S.,** Hossein, M., & Gottumukkala, R. Inception-inspired LSTM for next-frame video prediction. arXiv:1909.05622v2. Also published as a student abstract: American Association of Artificial Intelligence, **34**(10), AAAI-20, doi:10.1609/aaai.v34i10.7176
- Chaudhry, B. M. (2018). Expecting great expectations when expecting. mHealth, 4.
- Chaudhry, B. M. (2017). Onto the bull's eye. mHealth, 3.

## **Pedagogical Innovations**

- Amini Salehi, M.,
  - Parallel and Distributed Computing, 2019
- Ducrest, F.,
  - Revised CMPS 359 Android Programming to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2020
  - Revised CMPS 360 Programming in Java to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2020
  - Revised CMPS 358 Programming in .Net/C# to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2019

- Revised CMPS 359 iOS Programming to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2019
- Revised CMPS 359 Android Programming to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2018
- Revised CMPS 360 Programming in Java to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2018
- Revised CMPS 358 Programming in .Net/C# to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2017
- Revised CMPS 359 iOS Programming to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2017
- Converted CMPS 261 to using the Java programming language, including developing new reference material, presentations, examples and assignments, 2016
- Revised CMPS 359 Android Programming to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2016
- Revised CMPS 360 Programming in Java to bring it up to date with industry practice, including revising and developing new reference material, presentations, examples and assignments, 2016
- Hsu, S.,
  - Online Teacher Certification, 2020
  - Online Course Design Certification, 2020
  - SAP ERP, HANA, Analytics participant; SAP coordinator on UL campus, 2020
  - Online Teacher Certification, 2019
  - Online Course Design Certification, 2019
  - SAP ERP, HANA, Analytics participant; SAP coordinator on UL campus, 2019
  - Online Teacher Certification, 2018
  - Online Course Design Certification, 2018
  - SAP ERP, HANA, Analytics participant; SAP coordinator on UL campus, 2018
  - Online Teacher Certification, 2017
  - Online Course Design Certification, 2017
  - o SAP ERP, HANA, Analytics participant; SAP coordinator on UL campus, 2017
  - Scrum Master Certification, 2016
  - "SAP ERP Initiative Center," STEP Grant, UL Lafayette, \$78,000, 2016
  - o SAP ERP, HANA, Analytics participant; SAP coordinator on UL campus, 2016

#### **Posters and Demonstrations**

• Khokhar, A., Yoshimura, A. & **Borst, C. W.**, Modified Playback of Avatar Clip Sequences Based on Student Attention in Educational VR, 2020 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), 2020, pp. 850-851, doi:10.1109/VRW50115.2020.00276

- Yoshimura, A. & **Borst, C. W.**, Evaluation of Headset-based Viewing and Desktopbased Viewing of Remote Lectures in a Social VR Platform, ACM Symposium on Virtual Reality Software and Technology (VRST), 2020. 3 pages, doi:10.1145/3385956.3422124
- Woodworth, J., Lipari, N., Borst, C. W., Evaluating Teacher Avatar Appearances in Educational VR, IEEE Virtual Reality, 2019, Osaka, Japan, 2019
- Najafi, M. H., New Views for Stochastic Computing: From Time-Encoding to Deterministic Processing, The 56th Design Automation Conference (DAC) PhD Forum, Las Vegas, NV, June, 2019.
- Najafi, M. H., New Views for Stochastic Computing: From Time-Encoding to Deterministic Processing, The 2019 Design, Automation, and Test in Europe (DATE) PhD Forum, Florence, Italy, March 2019.
- Alagurajah, J., X. Yuan, and Wu, X., Scale Invariant Learning from Trapezoidal Data Streams, ACM/SIGAPP Symposium on Applied Computing (SAC'20), Brno, Czech Republic, March 30-April 3, 2020.
- Du, C. and X. Yuan, EchoAuth: Gait-based Smart Home Intrusion Detection through Acoustic Sensing", 26th Annual Network and Distributed System Security Symposium (NDSS 2019), San Diego, California, Feb. 24-29, 2019
- Zhang, Y., Zhang, H. and **X. Yuan**, Toward Efficient Spammers Gathering in Twitter Social Networks, ACM Conference on Data and Application Security and Privacy (CODASPY 2019), Dallas, TX, USA, 2019.
- Woodworth, J. W., Broussard, D., & **Borst, C. W.**, Collaborative Interaction in Large Explorative Environments, ACM Spatial User Interaction (SUI) 2019, Article #34, 2 pages. doi:10.1145/3357251.3360017
- Yoshimura, A., Khokhar, A., & **Borst, C. W.**, Visual Cues to Restore Student Attention based on Eye Gaze Drift, and Application to an Offshore Training System, ACM Spatial User Interaction (SUI) 2019, Article #30, 2 pages. doi:10.1145/3357251.3360007
- Rahman, Y., Asish, S. M., Khokhar, A., **Kulshreshth, A. K., & Borst, C. W.,** Gaze Data Visualizations for Educational VR Applications, ACM Spatial User Interaction (SUI) 2019, Article #23, 2 pages. doi:10.1145/3357251.3358752
- Yoshimura, A., Khokhar, A., & **Borst, C. W.**, Eye-Gaze-Triggered Visual Cues to Restore Attention in Educational VR, IEEE VR 2019, pp. 1255–1256.
- Khokhar, A., Yoshimura, A., & **Borst, C. W.**, Pedagogical Agent Responsive to Eye Tracking in Educational VR, IEEE VR 2019, pp. 1018–1019.
- Buchupalli, U., Lasisi, A., **Hsu, S.** Exploration of CMS Open Payment Data -- Learning Techniques for Anomaly Detection of Relationships. Poster Presentation at the 6th Women in Cybersecurity, Pittsburg, 2019.
- Hossain, E., and **Kulshreshth, A.**, Exploring the Effects of Stereoscopic 3D on Gaming Experience Using Physiological Sensors, Proceedings of the ACM Spatial User Interactions (SUI 2019), October 2019.
- **Borst C.W.**, & Lipari N.G. Intercontinental networked VR demonstration (featured stage demo). Ignite SA Launch Event. Adelaide, Australia, October 3, 2017.

- **Borst, C.W.**, Lipari, N.G., Woodworth, J.W., &. Chambers, T.L. Immersive Virtual Reality Field Trip to a Solar Plant with a Live-Streamed Remote Teacher (invited stage demo). Smart Cities Innovation Summit. Austin, TX, June 28, 2017.
- **Borst, C.** & Ekong, S. Invited exhibition. Transforming Communities: Broadband Goals for 2017 and Beyond, Next Century Cities event at Google. Washington D.C., November 29-30, 2016.
- Sharif, M.A. & **Raghavan**, V.V. Scalable Hybrid Approach for Web Page Recommendation. 2015 Frontiers in Service Conference, Concurrent Session: Session 6-1. San Jose, CA, July 9-12, 2015.

#### Software or Systems Developed

• **Borst, C. W.** & Gottumukkala, R., Limited License and Option agreement for sensor data visualization tools, August 2018.

## Patents

- Liu, S., Chen, L., Li, B., Chen, J., & Chen, C. System and Method for Inter-Datacenter Communications. U.S. Patent 10628236, issued April 21, 2020.
- Lakhotia, A. "Improved System and Method for Identifying and Comparing Code by Semantic Abstractions," US Patent Number 10,747,880, August 18, 2020.
- Lakhotia, A. "Method for automatic creation of malware detection signature," US Patent Application 20200293656, Applied March 12, 2020.
- Najafi, M. H., Jamali-Zavareh, S, Lilja, D. J., Riedel, M., Bazargan, K., and Harjani, R, Stochastic Computation Using Pulse Width Modulated Signals", Granted U.S. Patent 10,740,686 B2, Date of Patent: Aug 2020.
- Najafi, M. H., Lilja, D. J., High-Quality Down-Sampling for Deterministic Bit-Stream Computing", U.S. Patent Application 16/352,933, Notice of Allowance Received.
- Najafi, M. H., Jalilvand, A. H., and Fazeli, M., Fuzzy Logic Utilizing Unary Bit-Stream Processing", Provisional U.S. Patent Application 63/036063, June 2020.
- Asadi, S.; **Najafi, M. H.**, Context-Aware Bit-Stream Generator for Deterministic Stochastic Computing, Provisional U.S. Patent Application Number, Filing Date: May 2020.
- Najafi, M. H., Faraji, S. R., Bazargan, K., and Lilja, D., Pulse-Based Convolution for Near-Sensor Processing", Provisional U.S. Patent Application 63/033,355, May 2020.
- Li, X., Amini Salehi, M., Bayoumi, M., Architecture and Method for High Performance on Demand Video Transcoding, U.S. Patent No. 10,298,969, 2019
- Gentry, J., Amini Salehi, M., Denninnart, C., System and Method for Increasing Robustness of Heterogeneous Computing Systems, 2019. (pending)
- Lilja, D. J., **Najafi, M. H.,** Riedel, M, and Bazargan, K., Polysynchronous Stochastic Circuits", Granted U.S. Patent 10,520,975 B2, Date of Patent: Dec 31, 2019.
- Najafi, M. H., Lilja, D. J., Riedel, M., Low-discrepancy Deterministic Bit-stream Processing Using Sobol Sequences", Provisional U.S. Patent Application 62/864,807, June 2019.
- Najafi, M. H., Faraji, S. R., Li, B., Lilja, D. J., and Bazargan, K., Resolution Splitting for Bit-Stream Processing", Provisional U.S. Patent Application 62/864,798, June 2019.

- Li, B., **Najafi, M. H.**, Lilja, D. J., Low-Cost Stochastic Hybrid Multiplier for Quantized Neural Networks", Provisional U.S. Patent App. 62/817,343, March 2019
- Raghavan, V. V., Method and System for Comparing Proteins in Three Dimensions, 16/654,349, Oct. 2019.
- Denninnart, C., Amini Salehi, M., Systems for Serverless Cloud Computing, 2018. (pending)
- Chen, L., Liu, S., Li, B., Chen, J., & Chen, C. System and Method for Scheduling Jobs in Distributed Datacenters. U.S. Patent 10108458, issued October 23, 2018.
- Najafi, M. H., Lilja. D. J., Riedel, M., and Bazargan, Kia, Sorting Networks using Unary Processing", U.S. Patent Application 16/674488, Pending, Nov 2018.
- Singh, S., **Raghavan, V.V.**, Xu, W. Method and System for Comparing Proteins in Three Dimensions. U.S. Non-provisional Patent Application No. 15/725,663. October 2017.
- Duggimpudi, M.B., **Raghavan, V.V.**, Moursy, A., Ali, E. Architecture and Method for Providing Insights in Wireless Networks Domain. U.S. Non-provisional Patent Application No. 15/724,495. October 2017.
- Amini Salehi, M., Buyya, R., Deepak, K.S., Pisipati, R.K. Methods and Systems for energy management in a virtualized datacenter. U.S. Patent #9213575, November 2015.
- **Raghavan, V.V.** System, method and computer program product for information sorting and retrieval using a language-modeling kernel function. Araicom Research L.L.C., US9177047. Issued November 3, 2015.

## **Keynote Presentations and Invited Talks**

- 1. **Campora, J.** Taming Type Annotations in Gradual Typing. OOPSLA 2020. Virtual. November 2020
- 2. **Chaudhry, B.** Tutorial on Designing Technologies for Older Adults. George Brown College Design Program.
- 3. Hsu, S., Fulbright Specialist in Rotation, 2020.
- 4. **Islam, A**. Text and NLP Problem: Text Similarity. Graduate seminar, School of Computer Science, University of Windsor, Windsor, Canada, April 15, 2020.
- 5. Jin, M. Introduction to Machine Learning. Invited talk at LSU, Baton Rouge, Louisiana, October 2020.
- 6. **Najafi, M. H.,** *Exact Stochastic Computing Multiplication in Memristive Memory.* 2nd National Informatic Conference, IPM, Virtual, Dec 24, 2020.
- 7. **Najafi, M. H.,** *Time-based Stochastic Processing for Near-Sensor AI*, ECE Department Colloquium, University of Minnesota, Virtual, Sep 17, 2020. (Invited Talk)
- 8. **Najafi, M. H.,** *Time-based Stochastic Processing for Near-Sensor AI*, ARM Research, Virtual, Aug 3, 2020.
- 9. **Najafi, M. H.,** *From Unary to Low-Discrepancy: Deterministic Bit-streams Revolutionize Stochastic Computing*. Workshop on Stochastic Computing for Neuromorphic Architectures (SCONA2020), Virtual, March 2020.
- 10. **Raghavan, V. V.** *Visual Analytics Support for Maintenance of Models Derived from Graph Big Data Streams.* Grambling State University, Feb. 2020.
- 11. Amini Salehi, M. Interactive Video Streaming via Special Purpose Serverless Clouds, 19th IEEE/ACM International Symposium in Cluster, Cloud, and Grid Computing (CCGrid '19), Larnaca, Cyprus, May 2019.

- 12. **Chaudhry, B.** Teaching Tablet Technology to Older Adults. International Conference on Human Computer Interaction.
- 13. **Chaudhry, B.** From Design to Development to Evaluation of a Pregnancy App for Low-Income Women in a Community-Based Setting. 21st International Conference on Human-Computer Interaction with Mobile Devices and Services, Oct 2019.
- 14. **Chaudhry, B.** Development and Evaluation of a Web Application for Prenatal Care Coordinators in the United States. International Conference on Design Science Research in Information Systems and Technology, Jun 2019, USA.
- 15. **Chaudhry, B.** Designing Sensor-Based System for Monitoring Quality of Pepper Mash Stored in Wooden Barrels, 14th International Conference on Design Science Research in Information Systems and Technology (DESRIST 2019, Jun 2019, USA.
- 16. **Chaudhry, B.** Towards an Integrated Tool for Care Coordination of Alzheimer's Patients in an Assisted Living Facility", 14th International Conference on Design Science Research in Information Systems and Technology (DESRIST 2019), Jun 2019, USA.
- 17. Chen, S. Variational Typing and Its Applications. CMU. Pittsburgh, PA, Sep. 2019.
- 18. **Hsu, S.,** Women in Cybersecurity conference program reviewer, 2019.
- 19. Hsu, S., Fulbright Specialist in Rotation, 2019.
- 20. Islam, A. Text and NLP Problem: Mapping Books to Time. Graduate seminar, School of Computer Science, University of Guelph, Oct. 29, 2019.
- Najafi, M. H., Energy Efficient Convolutional Neural Networks Using Stochastic Computing . Institute for Research in Fundamental Sciences (IPM), Tehran, IRAN, Dec. 19, 2019.
- 22. **Najafi, M. H.,** *Energy-Efficient Pulse-based Convolution Engine for Near-Sensor Processing*, First ISCA Workshop on Unary Computing (WUC), Phoenix, AZ, June 2019.
- 23. Najafi, M. H., *Fuzzy-Logic Processing using Unary Bit-streams*, First ISCA Workshop on Unary Computing (WUC), Phoenix, AZ, June 2019.
- 24. **Najafi, M. H.,** *Time-Based Computing with Stochastic Constructs*, Institute for Research in Fundamental Sciences (IPM), Tehran, IRAN, Jan. 3, 2019
- 25. Najafi, M. H., *Fast-Converging Deterministic Methods for Stochastic Computing*, University of Tehran, Tehran, IRAN, Jan. 2, 2019
- 26. **Raghavan, V. V.** *Streaming Graphs: A New paradigm for Big Data Streams.* Sciences Interdisciplinary Monthly Meetings (SIMM), College of Sciences, UL Lafayette, Sept. 2019.
- 27. **Raghavan, V. V.** *Laboratory for Internet Computing (LINC)- The TSR Team.* School of Computing and Informatics, UL Lafayette, Oct. 2019.
- 28. **Raghavan, V. V**. *Streaming Graphs: A New paradigm for Big Data Streams*. CUNY Graduate Center, Nov. 2019.
- 29. Amini Salehi, M. Edge Computing for Disaster Management in Smart Oil Fields. Southern Unconventional Resources Collaboratory of Excellence (SOURCE), Tuscaloosa Marine Shale Laboratory (TMSL) Project Kickoff Meeting. Louisiana Immersive Technologies Enterprise (LITE) Center, Lafayette, Louisiana, September 2018.
- 30. **Amini Salehi, M.** *Interactive Video Streaming Using Cloud Services*. Computer Engineering Department, Ferdowsi University. Mashhad, Iran, June 2018.
- 31. Chen, L. *Optimizing Big Data Analytics within and across Datacenters*. East Lake International Forum. Wuhan, China. December 26, 2018.

- 32. Bai, M., Dorri, B.M., Sanchez, P., **Hsu, S.** (2018). *Blockchain-based Community ATM*, Poster Presentation. 5<sup>th</sup> Women in Cybersecurity. Chicago, IL, March 23-24, 2018.
- Dorri, B.M., Hsu, S. (2018). *Cryptocurrencies in Blockchain Technology*, Presentation. Symposium of Cybersecurity and Big Data Analytics, 51<sup>st</sup> Annual Hawaii International Conference on System Sciences. Waikoloa Village, HI, January 2-6, 2018.
- 34. Jin, M. Geometry and Deep Learning. Gulf Coast Deep Learning Workshop. Lafayette, LA, October 2018.
- 35. Lakhotia, A. New Orleans Information Security Group (NolaSec), November 2018
- 36. Lakhotia, A. *Automatic generation of malware signatures*. Quarterly meeting of Antimalware Testing and Standards Organization (AMTSO). Reykjavik, Iceland, October 2018.
- 37. **Raghavan, V.V.** *Unsupervised Rank Aggregation Using Parameterized Function Optimization.* Department of Computer Science, East Carolina University. Greenville, NC, November 2018.
- 38. Yuan, X. *Exploring New Performance Limits of Wireless Networks*. Tianjin University. Tianjin, China, January 2018.
- 39. Yuan, X. *Exploring New Performance Limits of Wireless Networks*. Nanjing Post and Telecommunications University. Nanjing, Jiangsu Province, China, June 2018.
- 40. **Borst, C.W.** Panel Discussion. IgniteSA Researchers Workshop, University of South Australia. Adelaide, SA, Australia, October 4, 2017.
- 41. **Borst, C.W.** Remotely Guided VR Field Trips. Smart and Connected Communities Researcher's Summit. June 26, 2017, Austin, TX.
- 42. Lipari, N.& **Borst, C.W.** *3D Virtual Reality for Education*. The Network Innovators Community Event in conjunction with IEEE International Conference on Network Protocols. Toronto, ON, Canada, October 10, 2017.
- 43. **Borst, C.W.** *Swamp VR: Research Examples from Lafayette, Louisiana*. Seminar at the University of Canterbury. Christchurch, New Zealand, October 19, 2017.
- 44. **Raghavan, V.V.** *Graph mining based approaches to the Customer Churn Prediction problem* (Keynote). The 2017 IEEE ICDM Workshop on Data Mining for Services. New Orleans, LA, November 2017.
- 45. **Raghavan, V.V.** *A Framework for Real-Time Event Detection for Emergency Situations using Social Media Streams.* Data Science Initiative/Complex Systems Institute, University of North Carolina at Charlotte. Charlotte, NC, February 2017.
- 46. **Jin, M.** *Computational Conformal Geometry* (Invited talk). The 1<sup>st</sup> Mid-South Theory Day. Baton Rouge, LA, December 2016.
- 47. Amini Salehi, M. Optimal Resource Allocation in Heterogeneous Distributed Systems (Keynote). IEEE International Conference on Computer and Knowledge Engineering (ICCKE'15). Mashhad, Iran, October 2015.
- 48. **Amini Salehi, M.** *Research Trends in Cloud Computing and Big-data* (Invited). Computer Engineering Department, Ferdowsi University. Mashhad, Iran, July 2015.
- 49. Amini Salehi, M. Constructing Community Clouds for Natural Disaster Management (Invited). NSF Early Career Workshop. Seattle, WA, April 2015.
- 50. Amini Salehi, M. *Big Data Security for Unstructured Data on Cloud* (Invited). Sensor Cloud Lab, Computer Science Department, RMIT University. Melbourne, VIC, Australia, January 2015.

- 51. Lakhotia, A. *Defusing Targeted Cyberattacks using Malware Intelligence* (Presentation). 2015 Malware Reverse Engineering Workshop. Melbourne, Australia, October 2015.
- 52. Lakhotia, A. *Attacking and Defending Computer Programs* (Presentation). NICTA. Sydney, Australia, October 2015.
- 53. Lakhotia, A. *Harnessing Intelligence from Malware Repositories* (Presentation). Blackhat Briefings. Las Vegas, NV, August 2015.
- 54. Lakhotia, A. *Binary Analysis* (Presentation). 6<sup>th</sup> International Summer School on Software Protection. Rio de Janiero, Brazil, July 2015.
- 55. Lakhotia, A. *Extracting Intelligence from Malware* (Presentation). Graduate Seminar, Amrita University. Amritapuri, India, January 2015.
- 56. **Raghavan, V.V.** *Visual Analytics of Large Time-Varying Graphs.* C.G. Khatri Memorial Lecture, C.R. Rao Prize Conference at Penn State University. College Station, PA, May 2015.
- 57. **Raghavan, V.V.** *Visual Analytics of Large-scale Evolving Networks*. C.G. Khatri Memorial Lecture, Penn State University. College Station, PA, May 2015.
- 58. **Raghavan, V.V.** *Visual Analytics of Time-Evolving Large-scale Graphs.* CACS Seminar, University of Louisiana at Lafayette. Lafayette, LA, March 2015.
- 59. **Raghavan, V.V.** *Visual Analytics of Time-Evolving Large-scale Graphs*. Short Course, 2015 International Winter School on Big Data. Tarragona, Spain, January 26-30, 2015.
- 60. **Raghavan, V.V.** *Massive Data Analysis: Challenges and Applications* (Invited). University at Buffalo. Buffalo, NY, March 2015.
- 61. **Wu, H.** *3D Sensor Networks: Challenges and Solutions* (Invited). Department of Electrical and Computer Engineering, Virginia Tech University. Blacksburg, VA, October 2015.
- 62. **Zhao, D.** Five Forces Shaping Embedded Nanocomputing in Dark Silicon Era (Invited). Department of Electrical Engineering, University of Washington. Seattle, WA, September 2015.
- 63. **Zhao, D.** Hardware Security and Trustworthy Computing (Panelist Speaker). 25<sup>th</sup> ACM/IEEE Great Lakes Symposium on VLSI. PittsburghPA, May 2015.

## **Colloquia and Seminar Talks**

- 1. Borst, C.W. Student ACM organization seminar. February 11, 2017.
- 2. Jin, M. Computational Geometry and Applications. CACS Colloquium. March, 2016.
- 3. **Tozal, M.E.** *Interactive Visual Exploration of Large Graphs*. CVDI, NSF Industry/University Cooperative Research Center, IAB Meeting. Lafayette, LA, October 2015.
- 4. **Tozal, M.E.** *Graph Sampling, Summarization and Visualization.* CVDI, NSFIndustry/University Cooperative Research Center, IAB Meeting. Philadelphia, PA, April 2015.
- 5. Amini, M. Stochastic-Based Robust Dynamic Resource Allocation in Heterogeneous Distributed Computing System. CACS Colloquium. Lafayette, LA, April 25, 2015.
- 6. **Bayoumi, M.A.** . *The Treasures of CSCE 595*. CACS Colloquium. Lafayette, LA, Jamuary 16, 2015.
- 7. Lakhotia, A. *Harnessing Intelligence from Malware Repositories*. CACS Colloquium. Lafayette, LA, March 27, 2015.

8. **Raghavan, V.V.** *Visual Analytics of Time-evolving Large-Scale Graphs.* CACS Colloquium. Lafayette, LA, March 13, 2015.

#### **Other Academic/Research Activities**

- 1. **Borst, C. W.**, panelist, Situating Virtual Reality at Scale in the Field Potentials and Challenges, IEEE VR 2019, Osaka, Japan.
- 2. **Tozal, M.E.**, Record Route IP Traceback: Combating DoS Attacks and the Variants, UL Lafayette CACS Colloquium, Lafayette, LA, USA, 2019
- 3. Amini Salehi, M., Cloud-Based Interactive Video Streaming Service, in Proceedings of the 10th IEEE/ACM International Conference on Utility and Cloud Computing (UCC '17), Austin, Texas, Dec. 2017. (Invited Paper related to a tutorial on the same on the same topic in UCC '17).
- 4. Lipari, N. G. & Borst, C. W., 3D Virtual Reality for Education, The Network Innovators Community Event in conjunction with IEEE International Conference on Network Protocols, Oct 10, 2017, Toronto.
- 5. **Borst, C. W.**, panelist, Ignite SA Researchers Workshop, Oct. 4, 2017, University of South Australia.
- 6. **Borst, C. W.**, Remotely Guided VR Field Trips, Smart and Connected Communities Researcher's Summit, June 26, 2017, Austin, TX.
- 7. **Hsu, S.,** Hawaii International Conference on System Sciences (HICSS) reviewer, Hawaii, 2017.
- 8. **Tozal, M.E.**, Autonomous System Ranking by Topological Characteristics: A Comparative Study, IEEE Systems Conference, Montreal, Quebec, Canada, April 2017
- 9. **Borst, C. W.**, Collaborative Exploration in Networked VR Environments and Application to Remotely-Guided Classroom, presentation to the Smart Gigabit Community Monthly Meetup, 2016.
- 10. **Hsu, S.,** Hawaii International Conference on System Sciences (HICSS) reviewer, Hawaii, 2016.
- Tozal, M.E., Machine and Human Driven Enterprise Workforce Allocation, CVDI, NSF Industry/University Cooperative Research Center, IAB Meeting, Lafayette, LA, USA, October 2016
- 12. **Tozal, M.E.**, The Internet: A Global System of Interconnected Networks, IEEE Systems Conference, Orlando, FL USA, April 2016

# **Graduate Student Production**

- Nur, A.Y. *The implications of the Internet's topological structure for its efficiency, security, and reliability*, Ph.D. (Computer Science), dissertation directed by **Tozal, M.E.**, 2018.
- Bai, M. Performance-driven hierarchical design and management of networks-on-chip in many-core systems, Ph.D. (Computer Science), dissertation co-directed by. Bayoumi, M.A and Zhao, D., 2018.
- 3. Ban, B. Network resilience against dynamic changes, Ph.D. (Computer Science),

dissertation directed by Jin, M., 2018.

- 4. Shu, W. *Directory storage efficiency improvement for chip-microprocessors*, Ph.D. (Computer Science), dissertation directed by **Tzeng**, N.F., 2018.
- 5. Le, T.T. *Optimizing network-on-chip designs for heterogeneous many-core architectures,* Ph.D. (Computer Science), dissertation co-directed by **Bayoumi, M.A.** and. **Zhao, D**, 2018.
- Nasirian, N. Power-gating optimization in network-on-chip routers based on probabilistic analysis, Ph.D. (Computer Science), dissertation directed by Bayoumi, M.A., 2018.
- 7. Tavanaei, A. *Spiking neural networks and sparse deep learning*, Ph.D. (Computer Science), dissertation directed by **Maida**, A.S., 2018.
- 8. Reza, M.F. *Computation and communication optimization in many-core heterogeneous server-on-chip*, Ph.D. (Computer Science), dissertation co-directed by **Bayoumi**, M.A. and **Zhao**, **D**., 2017.
- 9. Duggimpudi, M.B. On algorithms for object ranking in databases with applications in spatio-temporal outlier detection and ontology-based insights generation, Ph.D. (Computer Science), dissertation directed by **Raghavan**, V.V., 2017.
- 10. Darwich, M. *Cost-efficient cloud-based video streaming through quantifying video stream hotness*, Ph.D. (Computer Science), dissertation co-directed by **Amini**, **M.** and **Bayoumi**, **M.A.**, 2017.
- 11. Ali, A. *High performance vision modules for autonomous vehicles*, Ph.D. (Computer Engineering), dissertation directed by **Bayoumi, M.A.**, 2017.
- 12. Xiang, X. *Contention alleviation in network-on-chips*, Ph.D. (Computer Engineering), dissertation directed by **Tzeng**, N.F., 2017.
- 13. Igbal, M.A. *Distributed security paradigm for resource-constrained wireless sensors in the context of Internet-of-things*, Ph.D. (Computer Science), dissertation directed by **Bayoumi, M.A.**, 2016.
- 14. Haddad, M.A. *Energy-pivotal solutions in green femtocell power control in hybrid-dense deployments*, Ph.D. (Computer Science), dissertation directed by **Bayoumi**, M.A., 2016.
- Katragadda, S. A framework for real-time event detection for emergency situations using social media streams, Ph.D. (Computer Science), dissertation directed by Raghavan, V.V., 2016.
- 16. Li, X. *High performance video transcoding using cloud services*, Ph.D. (Computer Engineering), dissertation co-directed by **Bayoumi**, M.A. and Amini Salehi, M., 2016
- 17. LeDoux, C. *Continuous auditing for locating evidence of targeted attacks*, Ph.D. (Computer Science), dissertation directed by Lakhotia, A., 2016.
- Dutta, A. A smart design framework for a novel reconfigurable multi-processor systemson-chip architecture, Ph.D. (Computer Science), dissertation directed by Bayoumi, M.A., 2016.
- 19. Han, Y. *Ultra-large-scale crowdsensing in device-to-device networks*, Ph.D. (Computer Science), dissertation directed by **Wu**, **H.**, 2016.
- 20. Bashar, A.E. Online distributed depository selection in opportunistic device-to-device networks, Ph.D. (Computer Science), dissertation directed by **Wu**, **H.**, 2016.
- 21. Elsayed, Z. *Early prediction of epilepsy seizure via VLSI BCI based system*, Ph.D. (Computer Engineering), dissertation directed by **Bayoumi**, M.A., 2016.

- 22. Shaban, M.E. Low complexity sub-Nyquist spectrum sensing for wideband cognitive radios, Ph.D. (Computer Engineering), dissertation directed by **Bayoumi, M.A.**, 2015
- Ali, E. A framework for building light weight ontologies based on semi-structured data for semantic annotation, Ph.D. (Computer Science), dissertation directed by Raghavan, V.V., 2015.
- 24. Sharif, M.A. *Large-scale, hybrid approaches for recommending pages based on user's previous click patterns and content*, Ph.D. (Computer Science), dissertation directed by **Raghavan, V.V.**, 2015.
- 25. Yasami, S. *Design of ultra low power RF amplifier for biomedical and space application*, Ph.D. (Computer Engineering), dissertation directed by **Bayoumi**, M.A., 2015.
- 26. Miles, C. *Elicitation of a program's behaviors*, Ph.D. (Computer Science), dissertation directed by Lakhotia, A., 2015.
- 27. Huang, B. *Towards a benchmarking and QoS framework for wireless mesh and cognitive radio networks*, Ph.D. (Computer Science), dissertation directed by **Perkins**, **D**., 2015.
- 28. Pourmohammad, S. *Stable queue management in communication networks based on feedback control theory*, Ph.D. (Computer Engineering), dissertation co-directed by Fekih, A. and **Perkins, D.**, 2015.
- 29. Edgington, P.D. *Modular Bayesian filters*, Ph.D. (Computer Science), dissertation directed by **Maida**, A.S., 2015.
- 30. Aghdam, S.M.S.J. *Silica aerogel: An alternative to micromachined air gap for thermal insulation of microheaters*, Ph.D. (Computer Engineering), dissertation co-directed by Madani, M. and **Tzeng, N.F.**, 2015.
- 31. Singh, S. *Protein 3D structure comparison using triangular spatial relationships*, Ph.D. (Computer Science), dissertation directed by **Raghavan**, V.V., 2015.
- 32. Gupta, A. *Neural networks for classification of MRI scans for Alzheimer's disease*, Ph.D. (Computer Science), dissertation directed by **Maida**, A.S., 2015.
- 33. Singh, A. *Multi-resolution superpixels for visual saliency detection in large image collection*, Ph.D. (Computer Science), dissertation directed by **Chu**, **C.H.**, 2015.
- 34. Liu, Y. *QoS-aware data query and dissemination in mobile opportunistic networks*, Ph.D. (Computer Engineering), dissertation directed by **Wu**, **H.**, 2014.
- 35. He, X. *MIMO signal processing in few-mode fiber optical communication systems*, Ph.D. (Computer Engineering), dissertation directed by **Pan**, **Z**., 2014.
- 36. Ayhan M.S., *A probabilistic biomarker for Alzheimer's disease*, Ph.D. (Computer Science), dissertation directed by **Raghavan**, V.V., 2014.
- 37. Chang-Yen, I. *Peer-to-peer architectures for data discovery, distribution and consistent replication*, Ph.D. (Computer Science), dissertation directed by **Tzeng**, N.F., 2014.
- Ayoubi, R. Smart image enhancement technique using cellular neural network for ultrasounds, Ph.D. (Computer Engineering), dissertation directed by Bayoumi, M.A., 2014.
- 39. Farah, S. *Dynamic load-based power and clock gating technique for high-speed digital circuits*, Ph.D. (Computer Engineering), dissertation directed by **Bayoumi**, M.A., 2014.
- 40. Jeddi, Z. *A lightweight authenticated symmetric encryption cipher for RFID systems*, Ph.D. (Computer Engineering), dissertation directed by **Bayoumi**, M.A., 2014.
- 41. Zhao, Y. Autonomous localization in 3D surface wireless sensor networks, Ph.D. (Computer Science), dissertation directed by **Wu**, **H**., 2014.

#### Journal Editorship

- **Borst, C. W.**, Research Topic Editor, Everyday Virtual and Augmented Reality: Methods and Applications, Frontiers in Virtual Reality, Frontiers, 2020-2021
- **Borst, C. W.**, Guest Editor, Special Issue 3D Human-Computer Interaction, Multimodal Technologies and Interaction, 2020-2021
- **Borst, C.,** Editorial Board (Associate Editor), Entertainment Computing journal (Elsevier), 2011-Present.
- **Borst, C.**, Organizing committee (posters co-chair) appointment for 2015, with some activities in 2014.
- **Borst, C.**, Reviewer, IEEE Transactions on Multimedia Computing, Communications, and Applications, 2014.
- Chaudhry, B., Column Editor, mHealth Journal, 2016 to Present
- Chaudhry, B., Artificial Intelligence in Medicine, Editorial Board Member, August 2018 – Present
- Chaudhry, B., Health Technology Journal, Editorial Board Member, January 2020 Present
- Hei, X., Associate Editor, IEEE ACCESS, 2020 to 2023
- Hei, X.S., Guest editor, IEEE ACCESS: Security Analytics and Intelligence for Cyber Physical Systems, 2018.
- Jin, M., Guest Editor of International Journal of Distributed Sensor Networks Green Wireless Sensor Networks, 2018.
- Jin, M., Associate Editor, Knowledge and Information Systems (KAIS), since 2017
- Jin, M., Guest Editor, International Journal of Distributed Sensor Networks Special Issue, 2016.
- Jin, M., Editorial Board Member, ISRN Computer Graphics, 2011-Present.
- Kulshreshth, A., Guest Editor, The Multimodal Technologies and Interaction (MTI) Journal for a special issue on 3D Human-Computer Interaction, 2019-Present
- Kulshreshth, A., Reviewer,
  - IEEE Computer Graphics and Applications
  - IEEE Transactions on Multimedia
  - Springer Journal of Virtual Reality
  - MDPI Sensors
  - MDPI Symmetry
  - Computers and Graphics
- Kumar, A., editor in chief, International Journal of Embedded Systems and Applications, ISSN: 1839-5171.
- Kumar, A., member of the editorial board, International Journal of Software Engineering and Applications, ISSN: 0976-2221.
- Kumar, S., member of the editorial board, Computer Game Development and Education: An International Journal.
- Lakhotia, A. Co-Editor in Chief, ACM Journal of Digital Threats: Research and Practice, 2018-Present.
- **Raghavan, V.V.**, Editor-in-Chief. Technical Committee Bulletin, IEEE-CS for Intelligent Informatics, 2015.

- Raghavan, V.V., Co-Editor-in-Chief. Web Intelligence Journal, 2015 Present.
- **Raghavan, V.V.**, Associate Editor, Big Data Mining and Analytics Journal, Tsinghua Univ. Press, 2018-Present.
- **Raghavan, V.V.**, Advisory Board member, International J. of Business Intelligence and Data Mining, 2018
- **Raghavan, V.V.**, Advisory Board member, International J. on Semantic Web and Information Systems, 2018
- **Raghavan, V.V.**, Advisory Board Member, International Journal of Big Data Intelligence, 2018
- Raghavan, V.V., Associate Editor, Journal of KSU- Computer and Information Sciences, King Saud Univ. Press, 2018
- Yuan, X., Associate Editor, IEEE Internet of Things Journal, 2020-Present.

## **Journal Referees**

- Amini Salehi, M., Reviewer, IEEE Transactions on Parallel and Distributed Systems (TPDS).
- Amini Salehi, M., Reviewer, IEEE Transactions on Cloud Computing (TCC).
- Amini Salehi, M., Reviewer, IEEE Transactions on Services Computing (TSC).
- Amini Salehi, M., Reviewer, ACM Transactions on Internet Technology (TOIT).
- Amini Salehi, M., Reviewer, Journal of Parallel and Distributed Systems (JPDC).
- Amini Salehi, M., Reviewer, Future Generation Computer Systems Journal (FGCS).
- Amini Salehi, M., Reviewer, Journal of Concurrency and Computation: Practice and Experience (CCPE).
- Amini Salehi, M., Reviewer, Journal of Computers (JCP).
- Amini Salehi, M., Reviewer, Journal of Computer Network (COMNET).
- Amini Salehi, M., Reviewer, Utility and Cloud Computing Conference (UCC).
- Amini Salehi, M., Reviewer, Cluster Cloud and Grid (CCGrid) Conference.
- Amini Salehi, M., Reviewer, Heterogeneity in Computing Workshop (HCW), in conjunction with International Parallel and Distributed Processing Symposium (IPDPS).
- Amini Salehi, M., Reviewer, International Conference on Computer and Knowledge Engineering (ICCKE).
- Borst, C., Reviewer, IEEE VR Journal Papers track, 2018.
- Borst, C., Reviewer, Entertainment Computing Journal (Elsevier), 2018.
- Borst, C., Reviewer, Computers & Education Journal (Elsevier), 2018.
- **Borst, C.**, Reviewer, Computers & Graphics Journal, SVR journal track submission (Elsevier), 2018.
- Borst, C., Reviewer, Frontiers in ICT, section Virtual Environments, 2018.
- Borst, C., Reviewer, Computer Animation and Virtual Worlds (Wiley), 2016.
- Borst, C., Reviewer, Computers & Graphics (Elsevier), 2016.
- **Borst, C.**, Reviewer, ACM CHI: Conference on Human Factors in Computing Systems, 2015.
- Borst, C., Book Proposal Reviewer for Morgan Kaufmann Publisher, 2015.
- Borst, C., Reviewer, IEEE Haptics, 2011-2016; 2018.
- Borst, C., Reviewer, IEEE Computer Graphics and Applications, 2014-2017.

- Borst, C., Reviewer, IEEE 3DUI conference, 2013, 2015-2016.
- Borst, C., Reviewer, IEEE VR conference, 2015.
- **Borst, C.**, ACM Transactions on Multimedia Computing, Communications and Applications, 2013.
- Borst, C., Journal of Graphics Tools, 2013.
- Borst, C., IEEE 3DUI conference, 2013.
- Borst, C., IEEE Haptics / Worldhaptics conference, 2013.
- Borst, C., Book Proposal Reviewer for Morgan Kaufmann Publisher.
- Chaudhry, B., Journal of Medical Internet Research
- Chen, L., IEEE Transactions on Mobile Computing
- Chen, L., IEEE Transactions on Service Computing
- Chen, L., Multimedia Systems
- Chen, L., CCF Transactions on Networking
- Chen, L., Frontiers of Computer Science
- Chu, C.H., IEEE Transactions on Pattern Analysis and Machine Intelligence.
- Chu, C.H., IEEE Transactions on Neural Networks.
- Chu, C.H., IEEE Transactions on Image Processing.
- Chu, C.H., IEEE Transactions on Geosciences and Remote Sensing.
- Chu, C.H., Referee, Journal of Electronic Imaging.
- Chu, C.H., Referee, Optical Engineering.
- Chu, C.H., Reviewer, IEEE International Conference of Acoustics, Speech, and Signal Processing, 2007-Present.
- Hei, X.S., IEEE/ACM Transactions on Networking.
- Hei, X.S., IEEE Transactions on Mobile Computing.
- Hei, X.S., IEEE Transactions on Wireless Communications.
- Hei, X.S., IEEE Transactions on Communications.
- Hei, X.S., IEEE Wireless Communications Magazine.
- Hei, X.S., IEEE Transactions on Vehicular Technology.
- Hei, X.S., IEEE Transactions on Parallel and Distributed Systems.
- Hei, X.S., IEEE Internet of Things Journal.
- Hei, X.S., CCF Transactions on Networking.
- Hei, X.S., Information Science.
- Hei, X.S., Journal of Computer Science and Technology.
- Hei, X.S., IEEE ACCESS.
- Hei, X.S., IEEE Journal of Biomedical and Health Informatics.
- Hei, X. S., IEEE Transaction on Mobile Computing.
- Hsu, S.H-Y., Journal of Business Research.
- Hsu, S.H-Y., Hawaii International Conference on System Sciences (HICSS).
- Hsu, S.H-Y., International Conference on Information Systems (ICIS).
- Islam, A., ACM Transactions on Internet Technology, 2018.
- Islam, A., Journal of Cloud Computing, 2018.
- Islam, A., Language Resources and Evaluation Journal, Springer, 2018.
- Islam, A., IEEE Consumer Electronics Magazine, 2018.
- Islam, A., Reviewer, Information Processing & Management (IPM), 2017.

- Islam, A., Reviewer, Language Resources and Evaluation Journal, Springer, 2016, 2017.
- Jin, M., IEEE/ACM Transactions on Networking (TON).
- Jin, M., IEEE Transactions on Parallel and Distributed Systems (TPDS).
- Jin, M., Computer Aided Design (CAD).
- Jin, M., Computer-Aided Geometric Design (CAGD).
- Jin, M., IEEE Transactions of Visualization and Computer Graphics (TVCG).
- Jin, M., IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI).
- Jin, M., Graphical Models.
- Jin, M., Geomatica Journal.
- Jin, M., Ad Hoc & Sensor Wireless Networks.
- Jin, M., International Journal of Sensor Networks (IJSNet).
- Kulshreshth, A., Springer Journal of Virtual Reality, 2018.
- Kulshreshth, A., Computer and Graphics Journal, 2018.
- Kulshreshth, A., Springer Journal of Multimedia Systems, 2018.
- Kulshreshth, A., International Journal of Human-Computer Studies, 2018
- Loganantharaj, R., IEEE/ACM Transactions on Computational Biology and Bioinformatics.
- Loganantharaj, R., International Journal of Bioinformatics Research and Applications (IJBRA).
- Maida, A., Ad hoc referee for IEEE Transactions on Neural Networks and Learning Systems, 2016.
- Maida, A., Ad hoc referee for IBM Journal of Research and Development, 2016.
- Najafi, M.H., IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS).
- Najafi, M.H., IEEE Transactions on Very Large-Scale Integration Systems (TVLSI).
- Najafi, M.H., ACM Transactions on Architecture and Code Optimization (TACO).
- Najafi, M.H., IET Computers & Digital Techniques.
- Najafi, M.H., IEEE Transaction on Computers (TC).
- **Perkins, D.**, Journal of Information Science and Engineering, sponsored by Academia Sinica, Taiwan, 2014.
- Perkins, D., IEEE Transactions on Wireless Communications.
- Perkins, D., IEEE Transactions on Networking.
- Perkins, D., Elsevier Journal on Pervasive and Mobile Computing.
- Perkins, D., Elsevier Computer Networks Journal.
- Perkins, D., The International Journal of Computer and Communications.
- Perkins, D., ACM Mobile Networks & Applications Journal (MONET).
- Raghavan, V.V., Review Board Member, Journal of Value Creation, 2015.
- Tozal, M.E., Journal of Information Security and Applications, Elsevier, 2018.
- Tozal, M.E., KSII Transactions on Internet and Information System, 2018.
- Tozal, M.E., Springer The Journal of Supercomputing, 2018.
- Tozal, M.E., Reviewer, IEEE Transactions on Networking, 2015.
- Tozal, M.E., Reviewer, IEEE Transactions on Parallel and Distributed Systems, 2015.
- Tozal, M.E., Reviewer, Elsevier Ad Hoc Networks Journal, 2015.
- Tozal, M.E., Reviewer, Elsevier Computer Networks Journal, 2015.

- **Tozal, M.E.**, Reviewed: February 2014, Path-Quality Monitoring in the Presence of Adversaries: The Secure Sketch Protocols, IEEE/ACM Transactions on Networking, March 2014.
- **Tozal, M.E.**, Reviewer: Robust Estimation of Mean Failure Probability in Access Networks, Elsevier Computer Networks, April 2014.
- **Tozal, M.E.**, Reviewer: Models, Algorithms and Solution Methods for Centralized Control Planes to Optimize Control Traffic Overhead, Elsevier Computer Networks, June 2014.
- **Tozal, M.E.**, Reviewer: On Enhancing the Stability of Tree-based Overlay Multicast Using Cloud VMs, IEEE Transactions on Parallel and Distributed Systems, June 2014.
- **Tozal, M.E.**, reviewed: December 2013, Asymmetric Social Proximity Based Private Matching Protocols for Online Social Networks, IEEE Transactions on Parallel and Distributed Systems.
- **Tozal, M.E.**, Reviewed: August 2013, Bandwidth-Guaranteed Multicast by Multiple Trees and Network Coding in Lossy MANETs, Elsevier Ad Hoc Networks Journal.
- **Tozal, M.E.**, Reviewed: June 2013, Impacts of User-selfishness on Cooperative Content Caching in Social Wireless Networks, Elsevier Ad Hoc Networks Journal.
- **Tozal, M.E.**, reviewed: May 2013, Scouting Internet Paths with ICMP Parameter Problem-based active probing, Elsevier Computer Networks Journal.
- Tzeng, N.F., IEEE Transactions on Computers.
- Tzeng, N.F., IEEE Transactions on Parallel and Distributed Systems.
- Tzeng, N.F., IEEE/ACM Transactions on Networking.
- Tzeng, N.F., Journal of Information Science and Engineering (JISE, published by Academia Sinica, Taiwan).
- Wu, H., IEEE Journal on Selected Areas in Communications (JSAC).
- Wu, H., IEEE Transactions on Communications.
- Wu, H., IEEE Transactions on Wireless Communications.
- Wu, H., IEEE Transaction on Mobile Computing.
- Wu, H., IEEE Transactions on Vehicular Technology.
- Wu, H., IEEE Transaction on Parallel and Distributed Systems.
- Wu, H., IEEE Transactions on Computers, IEEE Computer Networks.
- Wu, H., IEEE Communication Magazine.
- Wu, H., IEEE Communications Letters.
- Wu, H., ACM Wireless Networks (WINET).
- Wu, H., ACM Mobile Networks & Applications Journal (MONET).
- Wu, H., Eselvier Ad Hoc Networks.
- Zhao, D., IEEE Transactions on Parallel and Distributed Systems.
- Zhao, D., IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems.
- Zhao, D., IEEE Transactions on Computers.
- Zhao, D., IEEE Transactions on VLSI Systems.
- Zhao, D., IEEE Transactions on Circuits and Systems, I and II.
- Zhao, D., IEEE Transactions on Instrumentation and Measurement.
- Zhao, D., ACM Transactions on Embedded Computing Systems.

- Zhao, D., ACM Transactions on Design Automation of Electronic Systems.
- Zhao, D., ACM Journal of Emerging Technologies in Computing.
- Zhao, D., IEEE Journal of Solid-State Circuits.
- **Zhao, D.**, IEEE Computer.
- Zhao, D., IEEE Design & Test of Computers.
- Zhao, D., IEEE Journal on Emerging and Selected Topics in Circuits and Systems.
- Zhao, D., IET Journal on Computers & Digital Technique
- Zhao, D., Integration the VLSI Journal
- Zhao, D., Journal of Electronic Testing: Theory and Applications.
- Zhao, D., Journal of Circuits, Systems, and Computers.

# **Funding**

#### **External Funding**

- Amini, M. S., (Investigator) Research credit for the proposal on Interactive Cloud-based Video Streaming, Amazon.com (Amazon Web Services), \$4,500, May 2019 Sep. 2020
- R. Gottumukkala, **Borst, C. W., Raghavan, V,** Year 9 Project: Privacy-aware stress & activity prediction using multi-modal sensing: Application to smart hospitals, \$50,000, August 2020–July 2021. CVDI Industrial Advisory Board.
- R. Gottumukkala, **Borst, C. W.,** Year 8 Project: Visual Analytics of Online Streams at the Edge: Application to Hospital Emergency Department Operations, \$100,000, August 2019–July 2020. CVDI Industrial Advisory Board.
- **Raghavan, V. V.,** DeCuir, Dr., Louis Stokes, Louisiana Alliance for Minority Participation- Senior Alliance (SA), National Science NSF and the State of Louisiana Board of Regents (BoR), LAMP-SA 08, \$125,000, 9/01/15 8/31/20.
- Amini Salehi, M. (PI), Jamshidi, P., CNS: Small: SmartSight: an AI-Based Computing Platform to Assist Blind and Visually Impaired People, National Science Foundation (NSF), \$499,650, 2020—2023.
- Lakhotia, A. (PI), Chen, S., ACADIANA: Annotating Code for Assured Data Intent to Avoid Novel Attacks, DARPA/STTR, \$96,907, 10/01/2020 04/31/2021.
- Khonsari, M. (PI), Guo, S. (co-PI), Li, G. (co-PI), Jin, M. (co-PI), Moore, A. (co-PI), Chu, H., Hei, X. RII Track-1: Louisiana Materials Design Alliance (LAMDA), \$20,000,000, UL Subcontract \$2,690,986, US National Science Foundation EPSCoR, 07/01/2020-06/30/2025
- Tzeng, N. (Lead PI & Project Director), Kimball, S., Foster, S. Yuan, X., Day, R., Najafi., M. H., et al, Precise Regional Forecasting via Intelligent and Rapid Harnessing of National Scale Hydrometeorological Big Data, Agency: National Science Foundation (NSF), Program: EPSCoR Research Infrastructure, \$5,000,000, 2020-2024
- Raghavan, V. V., (CO-PI), Gottumukkala, R. et al., National Science Foundation (NSF), \$187,477, 06/20 05/21.
- Raghavan, V. V., (Co-PI) Broussard, Dr., National Science Foundation (NSF) and the State of Louisiana Board of Regents (BoR), Louis Stokes- Louisiana Alliance Participation Program, NSF SUBR, \$25,000, 09/20 8/21.

- Yuan, X. (PI). CRII: SaTC: Empowering Elastic-honeypot as Real-time Malicious Content Sniffers for Social Networks, National Science Foundation, \$175,000, 03/01/2020–06/30/2022.
- Amini Salehi, M. (PI), IRES: PILOT: Location-Independent Multi-Source Video Streaming, National Science Foundation (NSF), \$74997, 2019–2020.
- **Borst, C. W. & Kulshreshth, A.,** REU Supplement to: Enhancing Educational Virtual Reality with Headset-based Eye Tracking, National Science Foundation, \$16,000, 2019.
- **Borst, C. W**. & Kulshreshth, A., Equipment for Virtual Reality Research, Education, and Outreach, Louisiana BoRSF Departmental Enhancement program: Targeted Enhancement category, \$111,495, June 2019 June 2021 (LEQSF-ENH-DE-22).
- Chen, L. (PI), Smart Optimization Framework to Accelerate Distributed Deep Learning, Louisiana Board of Regents Support Fund R&D Program, Research Competitiveness Subprogram, \$157,105, 2019-2022.
- Borst, C. (PI), and Kulshreshth, A., Equipment for Virtual Reality Research, Education, and Outreach, Louisiana Board of Regents Enhancement Grant, \$111,495, 2019-2021
- Najafi, M. H. (PI), Deterministic Bit-Stream Processing for Energy-Efficient Machine Learning Systems, Agency: Louisiana Board of Regents Program: Research Competitiveness Subprogram (RCS), Ranked #1 out of 169 submitted proposals, \$140,767, 2020-2023
- **Raghavan, V.V., (PI),** Gottumukkala, R., **Borst, C. (CO-PI),** Center for Visual and Decision Informatics (NSF/CVDI), enter for Visual and Decision Informatics (NSF/CVDI), Visual Analytics of Online Streams at the Edge: Application to Hospital Emergency Department Operations, \$100,000, 2019 20.
- Tzeng N. -F. (PI), funded by National Science Foundation, Division of Computer and Network Systems, "CSR: Small: Collaborative Research: Comprehensive Algorithmic Resilience (CAR) for Big Data Analytics," \$265,999, September 2015 through August 2019.
- **Borst C.**, Cross-community deployment and evaluation of Kvasir-VR, Mozilla, \$25,000, March 2018.
- Borst, C. (PI), Kulshreshth, A. (Co-PI), "CHS: SMALL: Enhancing Educational Virtual Reality with HMD-based Eye Tracking", \$499,814, August 2018 to July 2021.
- **Borst, C.** (PI), "Kvasir-VR Teacher-guided Shared Virtual Worlds", Mozilla Gigabit Community Fund, \$25,000, March-July 2018.
- **Borst, C.** (PI), "Kvasir-VR Teacher-guided Shared Virtual Worlds", Mozilla Gigabit Community Fund, \$10,000, October 2017-February 2018.
- Chen, S., (PI) CAREER: Making Type Error Debugging Work. NSF Computing and Communication Foundations, \$506,060, February 2018-January 2023.
- Chu, C.H., PI, A strategic innovations partnership for efficient, innovative and consolidated information technology operations, Louisiana Department of Health, November 2018-October 2021, \$10,888,027.
- Chu, C.H., Principal Investigator, Detecting and identifying wildlife animals from images using deep learning, co-P.I. K. Xu, USGS Wetland and Aquatic Research Center, July 2017-June 2018, \$90,000.

- Yuan, X., PI, "Building a Distributed Key-Value Store with Secure Data Operations." Board of Regents–Research Competitiveness Subprogram (RCS). June 1, 2018-June 30, 2021, \$128,861.
- Hei, X., CRII: Cyber-Physical System Security in Implantable Insulin Injection System. NSF CRII, \$143,043.00, 2017-2019, PI/PD.
- **Raghavan, V.V.**, Center for Visual and Decision Informatics (NSF/ CVDI), An Ontology-based Fast Semantic Indexing for Structured and Unstructured Data in Health Care," 2018-2019, \$40,000, (with Satya Katragadda)
- Amini Salehi, M. (PI), Gottumukalla, R. (Co-PI), Secure Information Sharing for Proactive Detection of Criminal Activities, BORSF ITRS, \$322,023, 2017-2020
- Amini Salehi, M., Research funding (credit), Cloud-based Video Streaming Service, Amazon Web Services (AWS), \$4,500, 2016-2017.
- Amini Salehi, M., Constructing Community Clouds for Disaster Management in Smart Cities, BORSF RCS, \$110,755, 2016-2019.
- **Borst, C. W.**, Networked Collaborative Exploration of Earth Sciences Datasets, US Ignite Application Development Award, \$10,000, November 1, 2018–June 30, 2019.
- **Borst, C. W.** and Hamilton School District, Kvasir-VR Teacher-guided Shared Virtual Worlds, Mozilla Gigabit Community Fund, \$25,000, March 26, 2018–July 25, 2018.
- **Borst, C.**, (Lead PI) Year 5 Project: Interactive Visual Exploration of Large Graphs with Enhanced Sampling and Summarization, \$53,778, 1 year (August 2016-July 2017), CVDI Industrial Advisory Board.
- **Borst, C.W.**, (Lead PI) CVDI Industrial Advisory Board Year 4 Project: Graph Sampling, Summarization, and Touch-based Visual Analytics for Large Complex Systems, 1 year, August 2015-July 2016, **\$68,768.**
- **Borst, C.W.**, (Lead PI) NSF REU Supplement added to EAGER: US IGNITE : Collaborative Exploration in Networked VR Environments and Application to Remotely-Guided Classroom, \$15,996 for 2016.
- **Chu, C.H.,** Mentor, HydroViz: Web-based modules for hydrology and water resources, P.I. E. Habib, National Science Foundation, Innovation Corps for Learning, \$50,000, July-Dec. 2016.
- Amini Salehi, M. (PI) NVidia Corp.: Hardware Grant to build a heterogeneous private Cloud at University of Louisiana at Lafayette, December 2015.
- Amini Salehi, M. (PI) NSF Early-Career Investigators Workshop on Cyber Physical Systems and Smart City, Community Clouds for Disaster Management in Smart Cities, October 2015.
- Amini Salehi, M. (PI), RCS Board of Regents Support Fund (BoRSF), Constructing Community Clouds for Disaster Management in Smart Cities, October 2015-October 2018.
- **Borst, C.W.**, (Lead PI) CVDI Industrial Advisory Board Year 4 Project: Graph Sampling, Summarization, and Touch-based Visual Analytics for Large Complex Systems, 1 year, August 2015-July 2016, **\$68,768.**
- **Borst, C.W.**, (Lead PI) BoRSF ENH: Equipment for Virtual and Augmented Reality Research for Education and Training Systems, Louisiana BoRSF, Special Multidisciplinary program, July 2015-June 2016, \$88,188.

- **Borst, C.W.**, (Lead PI) BoRSF ENH: Visual Analytics Lab: Interactive Visualization and Analysis of Big Data for Research and Education, Louisiana BoRSF ENH program, July 2015-June 2016, \$80,679.
- **Borst, C.**, Cross-community deployment and evaluation of Kvasir-VR, Mozilla, \$25,000, March 2018.
- Borst, C., Kvasir-VR Teacher-guided Shared Virtual Worlds, Mozilla, \$10,000, October 2017.
- **Borst, C.**, Extensions to Kvasir-VR: VR Field Trips with Networked Teacher, U.S. Ignite, \$10,000, October 2017.
- **Borst, C.**, REU supplement for: EAGER: US IGNITE: Collaborative Exploration in Networked VR Environments and Application to Remotely-Guided Classroom, NSF, \$16,000 for 2017.
- Raghavan, V., Borst, C. W., Jin, M., Gottumukkala, R., & Tozal, M., I/UCRC Phase II Renewal: Center for Visual and Decision Informatics (CVDI), National Science Foundation, \$556,995 (includes supplements), March 2017–February 2022.
- Borst, C., (Co-PI): I/UCRC Phase II Renewal: Center for Visual and Decision Informatics (CVDI), NSF, \$499,998, March 1, 2017-February 28, 2022
- **Borst C.W.**, (Lead PI) NSF proposal: EAGER: US IGNITE: Collaborative Exploration in Networked VR Environments and Application to Remotely-Guided Classroom, \$297,767. October 1, 2014-September 30, 2016.
- **Borst C.W.**, CVDI Year 3 Project: Visual Analytic Methods for Dynamic Graphs, \$80,293. 1 year, August 2014-July 2015, CVDI Industrial Advisory Board.
- Borst C.W., (Co-PI) NSF REU supplement to the CVDI project, \$13,200. For 2015.
- **Borst C.W.**, (Co-PI) NSF proposal: MRI: Development: A Distributed Visual Analytics Sandbox for High Volume Data Streams, \$499,998. August 1, 2014-July 31, 2018.
- **Borst C.W.**, (Co-PI) NSF I/UCRC Center for Visual and Decision Informatics (CVDI), \$400,000 for 5 years, April 2012-2017.
- Chu, C.H., PI, A strategic innovations partnership for efficient, innovative and consolidated information technology operations, Louisiana Department of Health, November 2015-October 2018, \$10,974,959.
- Chu, C.H., PI, Efficient, innovative and consolidated information technology operations, Louisiana Department of Health and Hospitals, contract, \$3,534,742. July 2014-June 2015.
- Chu, C.H., Co-Principal Investigator, (P.I.: Raghavan, V.), Web 3.0 and beyond: Enhancement of the Laboratory for Internet Computing for the future web generations, Louisiana Board of Regents Enhancement Grant, 2009-2010, \$77,000.
- Hsu, S.H-Y. Academic Liaison, STARS Computing Corps, National Science Foundation Program, 2013-2015.
- Jin, M. NeTS: Small: Distributed In-network Data Storage and Retrieval in 3D Wireless Sensor Networks, PI -, Co-Investigators: **Wu**, **H**., Funding agency: US National Science Foundation (CNS-1320931). Amount of grant: \$372,513, Time period: October 1, 2013-September 30, 2016.
- Jin, M. CAREER: Theorem, Algorithm, and Applications of Computational Quasiconformal Geometry, PI, Funding Agency: US National Science Foundation (CCF-1054996). Amount of Grant: \$419,779. Time Period: August 1, 2011-July 31, 2016.

- Jin, M. NeTS: Small: Scalable Routing in 3D Wireless Sensor Networks. PI-Wu, H., Co-investigator: Jin, M., Funding Agency: US National Science Foundation (CNS-1018306), Amount of Grant: \$425,000. Time Period: August 01, 2010-July 31, 2015.
- Kumar, A., PI, Louisiana Board of Regents, RCS Award. Design and development of coordination and control mechanisms for sensor-enabled software systems, (PI), funded 2009-2014, \$113,424.
- Lakhotia, A., (PI), Idaho National Lab. End-to-End Dynamic Program Analysis for Industrial Control Systems with Concolic Execution, \$174,000. November 2014-September 2017.
- Lakhotia, A., (PI), McAfee Associates. Machine Learning for Based APT Analytics, \$52,900. October 2014-October 2015.
- Pfeffer, A. and Lakhotia, A., Supervised Algorithms against Malware Evolution Phase II (SESAME). Funded by AFOSR, STTR 2011 program. Subcontract through Charles River Analytics, (Total UL: \$300,000 UL Indirect Cost: \$169,000; Total Project: \$750,000), March 2013-April 2015.
- Loganantharaj, R., (PI), Azure Microsoft Machine Learning Research Award. Annotating Uncharacterized Genes Using Phylogenetic Profiles, \$20,000 Direct Cost, February 2015-February 2016.
- Raghavan, V.V., National Science Foundation (NSF), *Supporting US-Based Students to Attend the 2017 IEEE International Conference on Data Mining (ICDM 2017)*, November 15, 2017 October 31, 202018, \$24,000, (with Dr. Gottumukkala).
- **Raghavan, V.V.**, Center for Visual and Decision Informatics (NSF/ CVDI), An Ontology-based Architecture for Providing Insights, 2017-2018, \$38,000, (with Raju Gottumukkala),
- **Raghavan, V.V.**, NSF- Industrial Innovation Division, PI, I/UCRC Phase II: Center for the Visual and Decision Informatics (CVDI), (Coordinating Institution: UL Lafayette), 60 months, \$499,995, March 2017-February 2022 (with Raju Gottumukkala, Xindong Wu, Jian Chen, and Christoph Borst). The total funding, including industry members' funding, is over \$1.5M over 5 years.
- **Raghavan, V.V.**, Center for Visual and Decision Informatics (NSF/ CVDI), Comparative Knowledge Discovery: Analyzing, Understanding and Visualizing Rankings, 2016-2017, \$64,788, (with Raju Gottumukkala).
- **Raghavan, V.V.**, Gottumukkala, R., Benton, R, **Perkins, D.**, **Borst, C.**, NSF Computer Networks and Systems, Co-PI, MRI: Development: A Distributed Visual Analytics Sandbox for High Volume Data Streams, 48 months, \$499,998. August 2014-July 2018.
- **Raghavan, V.V.** NSF- Industrial Innovation Division, PI, I/UCRC FRP: Collaborative Research: Fundamental Research in Visualization-based Gap Analysis and Link Prediction, 24 months, \$100K, August 2013-July 2015 (with Ryan Benton).
- **Raghavan, V.V.** NSF- Industrial Innovation Division, PI, I/UCRC Phase I: Center for the Visual and Decision Informatics (CVDI), (Lead Institution: UL Lafayette), 60 months, \$400K, February 2012-January 2017 (with Ryan Benton, Carolina Cruz-Neira, Raju Gottumukkala and Ramesh Kolluru). The total funding, including members' funding, is over 1.72 M over 5 years.
- Raghavan, V.V. NSF and the State of Louisiana Board of Regents (BoR), Louis Stokes -Louisiana Alliance for Minority Participation - Senior Alliance (SA) (Year 1), NSF (2015-20)-LAMP-SA-08, \$125,000 (w/ Dr. DeCuir), 09-01-15-August 31, 2020.

- **Raghavan, V.V.** LA BoR Support Fund (ITRS), Development of an Algorithm and a Tool for Accurate Comparison of Protein and Chemical 3-D Structure, LEQSF (2015-18)/RD-B-06, **\$182,679** (with Xu, W.), July 01, 2015-June 30, 2018.
- **Raghavan, V.V.** Center for Visual Decision Informatics (NSF/CVDI), Predicting Future Relations: Incremental and Robust Link Prediction, \$72,535 (with Raju Gottumukkala and Ryan Benton), 2015-2016
- **Raghavan, V.V.** National Science Foundation (NSF) and the State of Louisiana Board of Regents (BoR), Louis Stokes- Louisiana Alliance for Minority Participation- Phase IV (Years 1-5), November 1, 2011-October 31, 2016, \$250,000, (with Dr. DeCuir).
- Tzeng, N.-F. National Science Foundation (NSF), Division of Computer and Network Systems. CSR: Small: Collaborative Research: Comprehensive Algorithmic Resilience (CAR) for Big Data Analytics, \$249,999, September 2015 through August 2018.
- Tzeng, N.-F. National Science Foundation, Division of Computing and Communication Foundations. SHF: Small: Cooperative Memory Expansion (COMEX) for Networked Computing Systems via Remote Direct Memory Access, \$460,000, July 2014-June 2017.
- Wu, H. Project: NeTS: Small: Large-Scale Opportunistic Data Crowdsourcing and Dissemination in Device-to-Device (D2D) Networks. National Science Foundation (NSF), CNS-1528004, \$385,024, 2015-2018, PI.
- Wu, H. Project: NeTS: Small: Distributed In-network Data Storage and Retrieval in 3D Wireless Sensor Networks, National Science Foundation (NSF), CNS-1320931, \$372,513 (my share is about \$186,256), 2013-2016, Co-PI (with PI Jin, M.).
- Zhao, D. Wireless Network-on-Chip: A New Communication Paradigm for Heterogeneous Gigascale MPSoCs. NSF Career, \$621,230, 2009-2015, PI/PD.

# **Internal Funding**

- Kulshreshth, A., Utilizing Eye-tracking data for enhancing educational virtual reality applications, \$2000, Undergraduate Research Mini Grant, 2020-2021
- Chaudhry, B., Teaching Tablet Technology to Dementia Patients, \$2,000, Jan 2019 Dec 2019.
- Islam, A. (PI), Detecting Truthfulness in Online Social Networks, \$2000, 2019-2019.
- Kulshreshth, A., Utilizing Eye-tracking data for enhancing educational virtual reality applications, \$2000, Undergraduate Research Mini Grant, 2019-2019
- Borst, C. (PI), and Kulshreshth, A., Equipment for the CACS Virtual Reality (VR) Lab, STEP Grant, \$21,150, 2019-2020
- Amini Salehi, M. (PI), STEP: Completing Equipment for High Performance and Cloud Computing (HPCC) Laboratory, \$26,000, 2018
- Amini Salehi, M. (PI), Undergraduate Research Mini-Grant on Cloud-based Interactive Video Streaming Engine, \$2000, 2018
- Islam, A. (PI), Comparison of Word Embedding Model Performance using Distributed Computing, \$2000, 2018-2018
- Kulshreshth, A., Utilizing Virtual Reality for Improving Physics Education, \$2000, Undergraduate Research Mini Grant, 2018-2018
- Kulshreshth, A., and Kumar, A., Equipment for the Video Game Design and Development (VGDD) Lab, STEP Grant, \$9500, 2018-2019

- Islam, A., Undergraduate Research Mini-Grant Program: \$2000, University of Louisiana at Lafayette, 2018.
- Tozal, M.E., UL Lafayette Travel Grant: \$700, IEEE systems Conference 2017, Canada
- Amini Salehi, M., Travel Grant: \$700 to attend 6th International Conference on Big Data and Cloud Computing (BDCloud '16), Atlanta, GA, October 2016.
- Etheredge, J. and Ducrest, F., UL Student Technology Enhancement Program (STEP) Grant G299E8. Purchase of hardware and software for the Computer Science Department's laboratory / classroom for Video Game Design and Development. \$20,000, Fall 2014.
- Jin, M., Jack and Gladys Theall/Board of Regents Endowed Professorship, College of Science, University of Louisiana at Lafayette, \$10,000. 2013-2016.
- Amini Salehi, M. (PI), Kumar, A., STEP: Equipment for High Performance and Cloud Computing (HPCC) Laboratory, \$27100, 2016.
- •

# <u>Other</u>

# Awards/Honors

- Amini Salehi, M., Certificate of Achievement in Innovation Award, UL Lafayette, Jan. 2020
- Amini Salehi, M., Innovation Award, UL Lafayette, Nov. 2017
- Amini Salehi, M., Certificate of Achievement in Sponsored Research, UL Lafayette, Nov. 2017
- Amini Salehi, M., Certificate of Achievement in Innovation, UL Lafayette, Nov. 2016
- Amini Salehi, M., selected to present proposal on Community Clouds for disaster management at NSF Workshop along with ICCPS Conference, April 2015.
- Amini Salehi, M., awarded Early-Career Investigator Funding from NSF Workshop on Cyber Physical Systems and Smart Cities, March 2015.
- Amini Salehi, M., awarded Recognized Reviewer status from Elsevier, February 2015.
- Amini Salehi, M., Nomination for Best Paper Award in 33rd International Parallel and Distributed Processing Symposium (IPDPS '19), Rio de Janeiro, Brazil, May 2019
- Woodworth, J. W., Ekong, S., & **Borst, C. W.**, Best Research Demo Award, 2017 IEEE Virtual Reality Conference.
- Borst, C., Region 4 Post-Secondary Educator of the Year, 2016, LACUE.
- Borst, C., State winner, Post-Secondary Educator of the Year, 2016, LACUE.
- Borst, C., U.S. Ignite demo award, 2016 Smart Cities Innovation Summit.
- Borst, C. W., Ekong, S., Ritter, K. A., & Chambers, T. L., US Ignite award for creative use of gigabit networks, US Ignite Summit, Austin, June 2016.
- **Borst, C. W.**, 2016 State Winner, Post-Secondary Educator of the Year, Louisiana Association of Computer-Using Educators (LACUE)
- **Borst, C. W.**, 2016 Region 4 Post-Secondary Educator of the Year, Louisiana Association of Computer-Using Educators (LACUE)
- Chen, L., Travel Grant (NSF), the 2018 USENIX istre (USENIX ATC), Boston, Massachusetts, JULY 11–13, 2018.

- Chen, L., Best-in-Session Presentation Award, IEEE INFOCOM 2016, for presenting the paper titled Optimizing Coflow Completion Times with Utility Max-Min Fairness, San Francisco, California, April 10-15, 2016.
- Chen, L., Li, B., & Li, B. Best Paper Candidate, IEEE IC2E 2016, for the paper titled "Barrier-Aware Max-Min Fair Bandwidth Sharing and Path Selection in Datacenter Networks", Berlin, Germany, April 4-8, 2016.
- Chen, S., NSF Career Award, NSF, Feb. 2018.
- Hsu, S., Fulbright Scholar Romania, 2020.
- Hsu, S., National Science Foundation Panelist, 2019.
- Hsu, S., Women in Cybersecurity annual conference faculty scholarship recipient, 2019.
- Hsu, S., Fulbright Scholar Romania, 2019.
- Hsu, S., Fulbright Specialist to Malaysia, 2019.
- Hsu, S., Women in Cybersecurity annual conference faculty scholarship recipient, 2018.
- Hsu, S., Grace Hopper Celebration faculty scholarship recipient, 2018.
- Hsu, S., Women in Cybersecurity annual conference faculty scholarship recipient, 2017.
- Hsu, S., Women in Cybersecurity annual conference faculty scholarship recipient, 2016.
- Istre, W. L., Outstanding Advisor, UL Lafayette (University-wide)
- Istre, W. L., Outstanding Advisor, UL Lafayette, College of Sciences
- Istre, W. L., Outstanding Teacher, UL Lafayette, College of Sciences.
- Istre, W. L., Outstanding Advisor, UL Lafayette, College of Sciences.
- Istre, W. L., Outstanding Advisor, UL Lafayette, College of Sciences
- Istre, W. L., Outstanding Advisor, UL Lafayette, College of Sciences
- Jin, M., Lockheed Martin Corporation/BoRSF Professorship College of Science, University of Louisiana at Lafayette
- Jin, M., Outstanding Researcher Award College of Science, University of Louisiana at Lafayette
- Konecni, S., CompTIA Security+ Certification, CompTIA, August 5, 2020
- Konecni, S., ULearn Certified Online Teacher, UL Lafayette, August 26, 2019
- Konecni, S., AWS Certified Solutions Architect Associate, Amazon, July 19, 2019
- Maida, A., Alfred and Helen M. Lamson Endowed Professor in Computer Science, The University of Louisiana at Lafayette, July 2019.
- Najafi, M. H., Ferdowsi, F., UL Lafayette 2020-21 Educational Grant Award, Aug 2020.
- Najafi, M. H., NSF Travel Grant for Emerging Faculty (TGEF), NSF, March 2020.
- Najafi, M. H., Best Poster Award in Design Automation Conference (DAC) PhD Forum, June 2019.
- Najafi, M. H., EDAA Outstanding Dissertation Award in the area of "New Directions in Logic, Physical Design and CAD for Analog/Mixed-signal, Nano-Scale and Emerging Technologies", European Design and Automation Association (EDAA), March 2019.
- Raghavan, V. V., IEEE Life Senior Member, 2017. Raghavan, V.V., C.G. Khatri Memorial Lecturer. 2015 Rao Prize Conference, Penn State University, 2015.
- **Raghavan, V.V.**, Outstanding Achievement in Research and Sponsored Activities, Office of Research and Sponsored Programs, UL Lafayette, 2016-2017
- **Raghavan, V.V.**, Innovator Award, Office of Research and Sponsored Programs, UL Lafayette, 2016-2017.

- Raghavan. V. V., Research Excellence Award, R.P. Authement College of Sciences, UL Lafayette, 2016
- Raghavan, V.V., 2009-Present IEEE Senior Member.
- Totaro, M. UL Lafayette Award for Excellence in Academic Advising, 2018 Academic Year.
- Totaro, M. UL Lafayette Foundation Eminent Faculty Award: 2017 Dr. Ray P. Authement Excellence in Teaching Award.
- Totaro, M. UL Lafayette 2017 Ray P. Authement College of Sciences Outstanding Teacher Award.
- Totaro, M. UL Lafayette Award for Excellence in Academic Advising, 2017 Academic Year.
- **Tozal, M.,** Certificate of Outstanding Contribution in Reviewing, Journal of Information Security and Applications, July 2018
- West, B., Reserve Component National Security Course Participant, National Defense University April 2019
- West, B., Reserve Component National Security Course Seminar Leader, National Defense University July 2020
- West, B., Leadership Lafayette Participant, Leadership Institute of Acadiana, 2016
- Wu, X., Alfred and Helen M. Lamson Endowed Professorship in Computer Science, 2016-Present.
- Wu, H. Alfred and Helen M. Lamson Endowed Professorship in Computer Science, 2008-2016.

## **Conference Chairs and Other Organization Roles**

- 1. Amini Salehi, M., Publicity Chair
  - Heterogeneity in Computing Workshop (HCW) collocated with 32nd and 34th International Parallel and Distributed Processing Symposium, Vancouver, Canada; Rio de Janeiro, Brazil; and New Orleans, USA, 2018—2020
  - 20th EEE/ACM International Symposium in Cluster, Cloud, and Grid Computing (CCGrid '20), Melbourne, Australia, 2020
  - 9th International Green and Sustainable Computing Conference (IGCC '18), Pittsburgh, PA, USA, 2018
- 2. Amini Salehi, M., Panel organizer
  - 10th International Green and Sustainable Computing Conference (IGSC '19), Alexandria, VA, USA, 2019
- 3. Borst, C. W., General Chair
  - ACM Symposium on Spatial User Interaction (SUI), New Orleans, LA, USA, 2019.
- 4. Borst, C. W., Demonstrations Chair
  - o ISMAR 2020, Recife/Porto de Galinhas, Brazil, 2020.
- 5. Borst, C. W., Co-chair
  - IEEE Workshop on Everyday Virtual Reality, IEEE VR 2020, Atlanta, GA, USA, 2020.

- IEEE Workshop on Everyday Virtual Reality, IEEE VR 2019, Osaka, Japan, 2019.
- 6. Borst, C. W., Research Demonstrations Chair
  - IEEE VR 2020, Atlanta, GA, USA, 2020.
  - IEEE VR 2019, Osaka, Japan, 2019.
  - IEEE VR 2018 Reutlingen, Germany, 2018.
  - IEEE VR 2017, Los Angeles, CA, 2017.
- 7. Borst, C. W., Posters Chair
  - IEEE 3DUI 2017, Los Angeles, CA, 2017.
  - IEEE 3DUI 2016, Greenville, SC, 2016.
- 8. Hei, X., Session Chair
  - USENIX Security Symp., Boston, MA, USA, 2020.
- 9. Kulshreshth, A., General Chair
  - ACM Symposium on Spatial User Interaction (SUI), 2019, New Orleans, LA, USA, 2019.
- 10. Lakhotia, A. Steering Committee
  - Software Attack and Defense (SAD) Workshop, 2019 till date.
  - Software Security, Protection, and Reverse Engineering Workshop (SSPREW), 2016-17
  - Dagstuhl Seminar #17281, "Malware Analysis: From Large-Scale Data Triage to Targeted Attack Recognition", Schloss Dagstuhl, Germany, July 2017.
  - IEEE International Conference on Malicious and Unwanted Software (MALCON), 2012-2019
  - International Summer School on Information Security and Protection (ISSISP), 2016 till date
- 11. Lipari, N., Web Chair
  - o ACM Spatial User Interaction 2019, New Orleans, LA, USA, 2019
- 12. Raghavan, V. V., Panel Moderator
  - IEEE Big Data Conference, Panel on Addressing Big Data Heterogeneity: Recent Advances and Challenges, Los Angeles, CA, Dec. 2019.
  - 2017 IEEE Big Data Conference, Panel on Big Data Software and Analytic Methods- What is Next?, Boston, MA, Dec. 2017
- 13. Raghavan, V.V., Area Chair
  - Technical Program Committee, 2018 International Conference on Data Mining, (ICDM 2018), Singapore, Nov. 2018.
- 14. Raghavan, V.V., Co-Chair
  - Technical Program Committee, 2017 International Conference on Data Mining (ICDM 2017), New Orleans, LA, Nov. 2017.
- 15. Raghavan, V.V., Session Chair
  - 2016 IEEE / ACM WI-BIH Conference, Omaha, NE, Oct. 2016.
- 16. Raghavan, V.V., Member
  - Panel Session on Connecting Network and Brain with Big Data, 2016 IEEE / ACM WI-BIH Conference, Omaha, NE, Oct. 2016
- 17. Yuan, X., Web Chair:
  - IEEE International Conference on Computer Communications (IEEE INFOCOM), 2020

- Publication Chair:
  - 14th International Conference on Mobile Ad-hoc and Sensor Networks (MSN), December 6-8, 2018
- Publicity Chair:
  - 12th EAI International Conference on Mobile Multimedia Communications, 2019
- Session Chair:
  - 2017 IEEE Conference on Communications and Network Security (CNS)
  - 2018 IEEE International Conference on Computer and Communications (INFOCOM)

#### **Conference Program Committee Members and/or Reviewer**

- 1. Amini Salehi, M., Technical Program Committee:
  - 21st IEEE/ACM international Symposium on Cluster, Cloud and Internet Computing (CCGrid '21), Melbourne, Australia, 2021.
  - Australasian Computer Science Week (ACSW '21), online due to COVID-19, 2021.
  - 14th International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM '20), Nice, France, 2020
  - International Symposium on Cloud Computing and Services for High Performance Computing Systems (InterCloud-HPC 2020) as part of the 18<sup>th</sup> International Conference on High Performance Computing & Simulation (HPCS '20), Online, 2020
  - IEEE International Conference on Smart Data Services (SMDS '20), Beijing, China, 2020
  - 8th IEEE International Conference on Cloud Computing in Emerging Markets (CCEM '19), Bengaluru, India, 2019
  - International Conference on Internet of Things Research and Practice (iCIOTRP '19), Sydney, Australia, 2019
  - o IEEE International Congress on BigData, San Francisco, CA, USA, 2018
  - 27<sup>th</sup> International Conference on Computer Communications and Networks (ICCCN '18), Hangzhou, China, 2018
  - 2<sup>nd</sup> IEEE International Conference on Fog and Edge Computing (ICFEC '18), Washington DC, USA, 2018
  - 3<sup>rd</sup> IEEE International Conference on Cloud Computing and Big Data Analysis (ICCCBDA '18), Chengdu, China, 2018
  - 9<sup>th</sup> International Conference on Cloud Computing, GRIDs, and Virtualization (Cloud Computing '18), Barcelona, Spain, 2018
  - Japan-Africa Conference on Electronics, Communications, and Computers (JAC-ECC '17), Alexandria, Egypt, 2016—2017
  - 19<sup>th</sup> IEEE International Conference on High Performance Computing and Communications (HPCC '17), Bangkok, Thailand, 2017
  - 2<sup>nd</sup> International conference on Intelligent Information Technologies (ICIIT '17), Chennai, India, 2017

- 2<sup>nd</sup> IEEE International Conference on Cloud Computing and Big Data Analysis (ICCCBDA '17), Chengdu, China, 2017
- 6<sup>th</sup> International Congress on Technology, Communication and Knowledge (ICTCK '16), Mashhad, Iran, 2016
- 25<sup>th</sup> International Conference on Computer Communication and Networks (ICCCN '16), Waikoloa, Hawaii, USA, 2016
- 2. Borst, C. W., Program Committee
  - IEEE Virtual Reality 2018 (conference papers track). Reutlingen, Germany, 2018.
- 3. Borst, C. W., International Program Committee
  - o ICAT-EGVE, Limassol, Cyprus, 2018.
  - o ICAT-EGVE, Adelaide, Australia, 2017.
- 4. Borst, C. W., Reviewer
  - EEE VR Journal Papers track: 2021 (reviewed in 2020)
  - NordiCHI 2020
  - Frontiers in ICT, Virtual Environments section, 2018
  - IEEE VR Journal Papers track: 2018
  - Elsevier's Entertainment Computing, 2018
  - Elsevier's Computers & Education Journal, 2018
  - IEEE Transactions on Haptics, 2018
  - Elsevier's Computers & Graphics, 2018
  - ACM CHI: Conference on Human Factors in Computing Systems, 2017.
  - ACM SIGGRAPH technical papers, 2017
  - ACM Symposium on User Interface Technology and Software (UIST), 2017
  - o IEEE Computer Graphics and Applications, 2017
  - o ACM Symposium on Spatial User Interaction (SUI), 2016
  - IEEE Transactions on Haptics, 2016
  - Elsevier's Computers & Graphics, 2016
  - Computer Animation and Virtual Worlds journal, 2016
  - EuroHaptics, 2016
- 5. Campora, J., Reviewer, Journal of Functional Programming, 2020.
- 6. Chaudhry, B., Associate Chair on Late Breaking Work:
  - International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI), 2020.
  - The ACM Conference on Human Factors in Computing Systems (CHI), 2020.
- 7. Chaudhry, B., Reviewer
  - MobileHCI 2017 to 2020
  - o SIGCHI 2017
  - JMIR 2017, 2018 to 2021
  - AIM 2020
- 8. Chen, L. TPC:
  - IEEE International Conference on Computer Communications (INFOCOM), 2021, 2020, 2016.
  - BRAINS, 2020.
  - AAAI Conference on Artificial Intelligence (AAAI), 2021.
- 9. Chen, L. Reviewer:
  - IEEE Transactions on Networking,

- IEEE Transactions on Mobile Computing,
- IEEE Transactions on Parallel and Distributed Systems,
- IEEE Transactions on Service Computing,
- Multimedia Systems Springer Journals.
- Conferences: NeurIPS, AAAI, ACM Multimedia, IEEE INFOCOM, IEEE IWQoS, ACM MMSys, ACM NOSSDAV, IEEE SECON, IEEE MASS, IEEE GLOBECOM, IEEE ICC, IEEE IC2E, WiOpt.
- 10. Chen, S., PC member
  - o Workshop on Feature-Oriented Software Development, 2017
  - International Conference on Generative Programming: Concepts & Experiences, 2020
  - o ACM SIGPLAN Symposium on Principles of Programming Languages, 2021
- 11. Chen, S., Reviewer
  - ACM SIGPLAN Conference on Programming Language Design and Implementation, 2018
  - o ACM SIGPLAN Symposium on Principles of Programming Languages, 2019
  - ACM SIGPLAN International Conference on Functional Programming, 2019, 2018
- 12. Hei, X., Program Committee
  - USENIX Security Symp., 2019-2021.
  - Automobile Security Workshop, 2019-2021.
- 13. Hsu, S., Program reviewer:
  - Women in Cybersecurity Annual Conference (WiCyS 2019), Pittsburgh, PA, USS, Year 2019.
- 14. Islam, A. Committee Member:
  - International Conference on Intelligent Text Processing and Computational Linguistics (CICLing), 2016-2019
  - The 6th IFIP International Conference on Computational Intelligence and Its Applications (IFIP CIIA), 2018
  - Conference on Empirical Methods in Natural Language Processing (EMNLP), 2018-2020.
  - Conference on Computational Linguistics (COLING), 2020.
  - The Florida Artificial Intelligence Research Society Conference (FLAIRS), 2019-2020.
  - Canadian Conference on Artificial Intelligence (CAI), 2016-2020.
  - 31st International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA-AIE), 2018
  - o International Symposium on Language & Knowledge Engineering, 2018-2019
  - o Canadian AI Graduate Student Symposium (CAIGSS), 2017
- 15. Islam, A. Reviewer:
  - Annual Meeting of the Association for Computational Linguistics (ACL), 2019-2020.
  - AAAI Conference on Artificial Intelligence, 2020
  - Hawaii International Conference on System Sciences (HICSS), 2019.
- 16. Jin, M., TPC Member:
  - INNOV since 2013

- SENSORCOMM since 2013
- o Geometric Modeling and Processing (GMP) 2014, 2015, 2016, 2017
- ALGOSENSORS 2014, 2015, 2016
- 17. Jin. M., Reviewer
  - Proposal review: US National Science Foundation, Georgian National Science Foundation
  - o Book proposal reviewer: Bentham Science Publishers
  - IEEE/ACM Transactions on Networking (TON)
  - IEEE Transactions on Wireless Communications (TWC)
  - IEEE Transaction on Parallel and Distributed Systems (TPDS)
  - IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON)
  - ACM Solid and Physical Modeling (SPM)
  - Geometric Modeling and Processing (GMP)
  - Computer Aided Design (CAD)
  - Computer-Aided Geometric Design (CAGD)
  - EEE Transaction of Visualization and Computer Graphics (TVCG)
  - Pacific Graphics (PG), IEEE International Conference on Computer Vision (ICCV)
  - o IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)
  - IEEE Visualization (Vis), Geomatica Journal
  - EEE Sensors Journal.
- 18. Kulshreshth, A., Reviewer:
  - ACM Conference on Human Factors in Computing (CHI)
  - IEEE Virtual Reality Conference (IEEE VR)
  - ACM Symposium on Spatial User Interaction (SUI)
  - ACM Conference on Intelligent User Interfaces (IUI)
  - ACM Symposium on Computer-Human Interaction in Play (CHI-Play)
  - IEEE Symposium on 3D User Interfaces (3DUI)
  - ACM Symposium on Virtual Reality Software and Technology (VRST)
- 19. Najafi, M. H., Program Committee Member
  - The 38th IEEE International Conference on Computer Design (ICCD'20), Hartford, Connecticut, (Virtual due to COVID) USA, 2020.
- 20. Najafi, M. H., External Review Committee Member
  - International Symposium on Computer Architecture (ISCA'20), Valencia, Spain, (Virtual due to COVID) June 2020
  - The 2020 57th ACM/IEEE Design Automation Conference (DAC'20), San Francisco, CA, (Virtual due to COVID) July 2020
  - The 2019 56th ACM/IEEE Design Automation Conference (DAC'19), Las Vegas, NV, June 2019
- 21. Najafi, M. H., Session Chair
  - The 2020 IEEE International Symposium of Circuits and Systems (ISCAS'20), Valencia, Spain, (Virtual due to COVID) June 2020
  - The 38th IEEE International Conference on Computer Design (ICCD'20), Hartford, Connecticut, (Virtual due to COVID) USA, 2020.
- 22. Raghavan, V. V. Roles:

- Conference, City, State, Country, Year 1 to Year N.
- 23. Tozal, M. E. TPC Member:
  - International Conference on Computer Communication and Networks, Waikoloa, Hawaii, USA, 2016
- 24. Tozal, M. E. Reviewer:
  - o IEEE Sarnoff Symposium, Newark, New Jersey, USA, 2016
- 25. Yuan, X., TPC Member:
  - IEEE INFOCOM 2018
  - ICNC 2018
  - IEEE GreenCom 2018
  - o MSN 2018
  - o MOBIMEDIA 2019
  - INFOCOM 2019, 2020
- 26. Yuan, X., Journal Reviewers:
  - IEEE/ACM Transactions on Networking
  - o IEEE Journal on Selected Areas in Communications
  - IEEE Transactions on Mobile Computing
  - o IEEE Transactions on Wireless Communications
  - o IEEE Transactions on Communications
  - o IEEE Wireless Communications Magazine
  - o IEEE Transactions on Vehicular Technology
  - o IEEE Transactions on Parallel and Distributed Systems
  - IEEE Access
  - IEEE Internet of Things Journal
  - CCF Transactions on Networking
  - Information Science
  - o Journal of Computer Science and Technology

#### **Other Professional Activities**

- 1. Borst, C. W.,
  - NSF proposal review panel, Expeditions in Computing, 2018
  - o NSF proposal reviewer, US Ignite program, 2016
- 2. Chen, S., Session Chair
  - ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications, 2020
  - International Conference on Generative Programming: Concepts & Experiences, 2020
- 3. Chen, S., ACM SIGPLAN Long-term mentor,
  - o ACM SIGPLAN Programming Language Mentoring, 2020-
- 4. Islam, A., Guest editor,
  - Multimedia Tools and Applications, 2020
  - Future Generation Computer Systems, 2019
- 5. Islam, A., Journal reviewer,
  - IEEE Consumer Electronics Magazine, 2018
  - o ACM Transactions on Internet Technology (TOIT), 2018

- o Language Resources and Evaluation, Springer, 2018, 2017, 2016
- Journal of Cloud Computing, 2018
- o Information Processing & Management (IPM) 2019, 2016
- o Computational Intelligence, 2020, 2019
- Expert Systems with Applications, 2019
- Computing Surveys, 2020
- 6. **Islam, A.**, proposal Reviewer, Mitacs (Mathematics of Information Technology and Complex Systems), 2018
- 7. Islam, A., PhD dissertation co-chair of Khalid Alattas, CMIX, ULL, Dec. 2019.
- 8. Islam, A., PhD dissertation committee of,
  - Ege Beyazit, CMIX, ULL, Nov. 30, 2020.
  - Enamul Haque, CMIX, ULL, July 6, 2020.
  - Chase J Gaudet, CMIX, ULL, March 2019.
- 9. Islam, A., Volunteered a STEM camp for school students assisting with the event along with CGI. April 1st, 2017.
- 10. Islam, A., Comprehensive Exam committee member, Knowledge and Data Systems, and Software Engineering, CMIX, ULL, Fall 2018- Fall 2020.
- 11. Jin, M., NSF Panelist, NSF CCF 2012, 2013, 2015
- 12. Jin, M., N2WOMEN Panelist, SECON 2012
- 13. Najafi, M.H., Review Panel, Natural Sciences and Engineering Research Council of Canada (NSERC), 2019.
- 14. Raghavan, V. V.,
  - First IEEE Conference on Cognitive Machine Intelligence (2019 IEEE CogMI).
  - 4<sup>th</sup> Workshop on Real-time & Stream analytics in Big Data & Stream Data Management in conjunction with 2019 IEEE Big Data Conf.
  - The 7<sup>th</sup> Special Session on Parallel and Distributed Data Mining (PDDM'18) in conjunction with HPCS 2018.
  - International Conf. on Machine Learning and Data Science (ICMLDS 2018)
  - 3<sup>rd</sup> Workshop on Real-time & Stream analytics in Big Data & Stream Data Management in conjunction with 2018 IEEE Big Data Conf.
  - First Int'l Workshop on AI Methods in Data Mining Challenges (DMGATE'18) in conjunction with FedCSIS 2018
  - 12<sup>th</sup> International Symposium on Artificial Intelligence and Applications (AAIA 2017)
  - IEEE Conf. on Big Knowledge (ICBK-17)
  - The 37<sup>th</sup> Int'l Conference on Distributed Computing Systems (ICDCS 2017)
  - The 8th Workshop on Web Intelligence & Communities (WI & C 2016) held in conjunction with WWW 2016
  - International Joint Conference on Rough Sets (IJCRS-2016)
  - The 11th International Symposium Advances in Artificial Intelligence and Applications (*AAIA*'16)
  - IEEE/WIC/ACM 2016 Web Intelligence and Brain and Health Informatics Conference (WI-BIH 2016)
- 15. **Tozal, M. E.,** Session Chair, IEEE Systems Conference, System Architecture II, Orlando, FL, USA, 2016
- 16. N. -F. Tzeng.,

- Member, IEEE Fellows Evaluation Committee, IEEE Computer Society, 2016, 2018, 2019, 2020.
- Panelist, for proposal evaluation, NSF Division of Computing and Communication Foundations, 2017.

#### Office Held and Professional Memberships

- Amini Salehi, M., Member, Association of Computing Machinery (ACM)
- Chaudhry, B., Communications Committee, Cancer Special Interest Group, Society for Behavioral Medicine, 2020 Present.
- Chaudhry, B., Professional Member,
  - Society for Behavioral Medicine, 2019 Present.
  - American Computing Machinery, 2017 Present.
  - Interaction Design, 2017 Present.
- Chen, L.,
  - Member, ACM
  - Member, IEEE
- Hei, X., Senior member, IEEE
- Hsu, S., Member, ACMW
- Jin, M., N2WOMEN Mentor, since 2012
- Konecni, S.,
  - Member, IEEE
  - Member, IEEE Computer Society
- Kulshreshth, A.,
  - Professional Member, Institute of Electrical and Electronics Engineers (IEEE)
  - Professional Member, Association of Computing Machinery (ACM)
- Lakhotia, A. Senior Member, IEEE.
- Najafi, M.H.,
  - Member since 2015, IEEE
  - Member since 2015, ACM
- Raghavan, V. V.,
  - Alfred and Helen Lamson / BoRSE Endowed Professor in Computer Science
  - o Director, NSF I/UCRC on Visual Decision Informatics
- N. -F. Tzeng
  - Fellow, IEEE (Institute of Electrical and Electronics Engineers), since 2010.
  - Senior Member, ACM (Association for Computing Machinery), since 2020.

#### **University Service**

- Borst, C., Chair, CMIX PR Committee, 2016-2017
- Borst, C., CMIX Faculty Recruiting Committee, 2016-2017
- Borst, C., CMIX Graduate Committee, 2016-2017
- Borst, C., CMIX online master's committee, 2016
- Borst, C., CMIX Executive Committee, Spring 2016

- Borst, C., Referee for CACS Student Poster/Paper Contest, 2015.
- **Borst, C.**, Prominent summer research awards reviewer (grants awards to students), 2015.
- Borst, C., CACS Accreditation Committee, 2015.
- Borst, C., CACS Department Newsletter editing and working with students, 2015.
- Borst, C., CACS Department Web Page created pages for new faculty members, 2015.
- Borst, C., CMPS Department Recruiting/Retention Committee, 2015.
- **Borst, C.**, Regular participation in department comprehensives, seminars, poster contests, etc., 2015.
- Borst, C., Faculty Senate, 2013-2016.
- Chu, C.H., member. University Department Head Task Force, Fall 2015-Present.
- Chu, C.H., member. University Strategic Program Review Committee, Fall 2015-Present.
- Gastineau, M.P., Chaplain (July 2010-Present), Executive Board Member, Louisiana Association of Business Educators (LABE)
- Hsu, S.H-Y., Coordinate Informatics majors' experiential work on class projects (INFX 210, 481, and 490) with local and regional small businesses (2012-2013).
- Istre, W.L., Operations Coordinator for the faculty, 2015.
- Istre, W.L., Advising of 90+ CMPS students, 2015.
- Istre, W.L., Honors Advisor CMPS Honors Students, 2015.
- Istre, W.L., CMPS Summer Orientation/Advisor, 2015.
- Istre, W.L., CMPS Course Coordinator for: CMPS150, 351, & 352, 2015.
- Istre, W.L., CMPS Dept. Representative on Preview Day(s), 2015.
- Istre, W.L., CMPS Semester Class Scheduling, 2015.
- Istre, W.L., Preparation of Degree Plan for All Graduating Seniors, 2015.
- Istre, W.L., Transcript Evaluations for Transfer Students, 2015.
- Istre, W.L., CMPS Dept. Scholarship Coordinator, 2015.
- Istre, W.L., Coordination of Semester Majors Meetings, 2015.
- Istre, W.L., Coordinator of Annual SpringFest Activities, 2015.
- Jin, M., Member, CACS Faculty Search Committee, 2015.
- Jin, M., Member, CMIX Director Search Committee, 2015.
- Jin, M., Chair, CACS Department Grievance Committee, 2015.
- Jin, M., Faculty Coordinator, Algorithm Seminar, 2015.
- Jin, M., Faculty Coordinator, Networking Seminar, 2015.
- Kumar, A., Assessment Officer of CMPS Program.
- **Tozal, M.E.**, member. Academic Affairs and Standards Committee (Sciences College), UL Lafayette, 2015.
- **Tozal, M.E.**, Member of the Informatics Program Curriculum Committee, School of Computing and Informatics, UL Lafayette.
- **Tozal, M.E.**, Member of the Informatics Program Distance Learning Initiative Committee, School of Computing and Informatics, UL Lafayette.
- **Tozal, M.E.**, Chair of the Informatics Program Research Committee, School of Computing and Informatics, UL Lafayette.

- Totaro, M., Chair. Dean's Representative, Science Day/SMART Festival Committee, since January 2015.
- Totaro, M., member. Parking Planning Committee, Spring 2015.
- Totaro, M., Chair. Informatics Technology Advisory Council, Fall 2015-Present.
- Totaro, M., Chair & Member, University General Education Committee, Fall 2013-Present.
- Totaro, M., member. Graduate Faculty, Level 2 (5 year term, Spring 2015-Fall 2019), 2015.
- Totaro, M., Associate Dean, Ray P. Authement College of Sciences, (October 2014-May 2015).
- Totaro, M., Acting Director, School of Computing and Informatics, UL Lafayette, (October 2014-May 2015).
- Totaro, M.W., Co-Chair, Task Force: Study James R. Oliver Hall Space, Member IT Rapid Action Team (General Education Subcommittee, December 2104-April 15 2015.
- Totaro, M.W., Co-Chair, Task Force: Explore issues pertaining to possible Informatics Program and/or School, Member IT Repaid Action Team (Gen. Ed Subcommittee).
- Totaro, M., Distance Learning Leadership Council, Fall 2011-Summer 2015, Ray P. Authement College of Sciences Representative.
- West, B.P., member. The 705 Young Professional.

## **Pedagogical Innovations**

- **Borst, C.**, Developed and tested novel educational VR software, deployed at three regional high schools: DTSMA, Comeaux, and STM.
- **Ducrest, F.**, Development of a series of smart device application development courses, 2010 through 2013.
- **Ducrest, F.**, Developed partnership with Red Stick Robotics, Inc. to offer dual enrollment classes centered on robotics to high school students around the State, currently working with Nona Istre to develop the curriculum for the dual enrollment courses. 2013.
- **Ducrest, F.**, Developed and offered mobile device applications programming courses including Android (2013), iPhone programming (2013).
- **Ducrest, F.**, Developed and offered an advanced course in IT programming using .net/C#/ASP.NET. 2013.
- Etheredge, J. and Ducrest, F., Ongoing maintenance of both hardware and software in the Computer Science program's Video Game Design and Development concentration's game laboratory and motion capture laboratory.
- Hsu, SH.-Y., Develop and incorporate SAP curriculum into the INFX curriculum, 2014.
- Hsu, SH.-Y., Develop the Rubrics of Assessment for INFX 490 & 481, 2014.
- Hsu, SH.-Y., Conduct and supervise AppInventor workshop, Layer of Technology Social Engineering, Python, Computer Security Workshop for high school students, 2014.
- Lakhotia, A., Led effort to develop dual-degree program with Amrita University, India. 2014.

- **Raghavan, V.V.**, presented short course on Visual Analytics of Time-Evolving Largescale Graphs, at the *Big Data Winter School*, Tarragona, Spain, January 2015.
- **Raghavan, V.V.**, actively networking and developing industry contacts for the NSF Industry University Collaborative Research Center (I/UCRC) on the theme of *Visual & Decision Informatics*, 2014.
- Wu, H., Organized a weekly seminar that centers on computer network research. The participants included multiple faculty members and about 20 graduate students. 2014.