Tempestt Ja'Nice Neal

Contact Information

Address:	4202 East Fowler Avenue, Tampa, FL, 33534 USA
E-mail:	tjneal@usf.edu
Phone:	(813) 396-9353
Website:	https://cse.usf.edu/~tjneal/

Education

Ph.D. in Computer Engineering, University of Florida, USA, 2018
Dissertation Title: *A Feasibility Study of Mobile Device Usage Data for Identification and Soft Biometric Classification*

M.Sc. in Computer Science, Clemson University, USA, 2014

B.Sc. in Computer Science, South Carolina State University, USA, 2012

Academic Positions

Assistant Professor, Department of Computer Science and Engineering, University of South Florida, USA, August 2018 - Present

Graduate Research Assistant, Department of Electrical and Computer Engineering, University of Florida, USA, Jan. 2015 – Aug. 2018

Graduate Research Assistant, School of Computing, Clemson University, USA, Jan. 2013 – Dec. 2014

Mobile Application Developer, Creative Inquiry Program, Clemson University, USA, May 2013 – Dec. 2013

Graduate Teaching Assistant, School of Computing, Clemson University, USA, Aug. 2012 – Dec. 2012

Software Engineer Intern, Savannah River Remediation, LLC, Aiken, SC USA, Summer 2011

Website and Marketing Intern, The Nature Conservancy, Columbia, SC USA, Summer 2010

NSF HBCU-UP Intern, Department of Computer Science and Mathematics, South Carolina State University, Orangeburg, SC USA, Summer 2009

Research Interests

Biometrics, Applied Smart Sensing, Applied Artificial Intelligence, Inclusivity in Cybersecurity

Authorship Attribution, Stylometry

Publications

Refereed Book Chapters

[1] **Neal, T.**, Woodard, D. (2020). "Presentation Attacks in Mobile and Continuous Behavioral Biometric Systems." In: Bourlai, T., Karampelas, P., Patel, V.M. (eds) *Securing Social Identity in Mobile Platforms.* Advanced Sciences and Technologies for Security Applications. Springer, Cham. https://doi.org/10.1007/978-3-030-39489-9_2.

[2] **Neal, Tempestt J.**; Woodard, Damon L.; Striegel, Aaron D.: "Mobile device usage data as behavioral biometrics" (Security, 2017), *Mobile Biometrics*, Chap. 7, pp. 177-207, DOI: 10.1049/PBSE003E_ch7 IET Digital Library, https://digital-library.theiet.org/content/books/10.1049/pbse003e_ch7.

Refereed Journal Articles

[1] Negro A, Montagna F, Teng MN, **Neal T**, Thomas S and King S (2023) "Analysis of the evolution of COVID-19 disease understanding through temporal knowledge graphs." *Front. Res. Metr. Anal.* 8:1204801. doi: 10.3389/frma.2023.1204801

[2] Chaudhary, M., Kosyluk, K., Thomas, S., and **Neal, T**. "On the use of aspect-based sentiment analysis of Twitter data to explore the experiences of African Americans during COVID-19." *Sci Rep* 13, 10694 (2023). https://doi.org/10.1038/s41598-023-37592-1.

[3] Kristin A. Kosyluk, Jennifer T. Tran, Sayde King, Katie Torres and **Tempestt Neal** (2023) "Preliminary effectiveness study of the Cope Notes digital mental Health program", *Journal of Mental Health*, DOI: 10.1080/09638237.2023.2182424.

[4] Sayde Leya King, Jana Lebert, Lacey Anne Karpisek, Amelia Phillips, **Tempestt Neal**, and Kristin Kosyluk. "Characterizing user experiences with an sms text messaging–based mhealth intervention: Mixed methods study." *JMIR Form Res*, volume 6, page e35699, May 2022. https://doi.org/10.2196/35699.

[5] **Tempestt Neal** and Damon L. Woodard. "You are not acting like yourself: A study on soft biometric classification, person identification, and mobile device use." *IEEE Transactions on Biometrics, Behavior, and Identity Science*, volume 1, pages 109–122, 2019.

[6] **Tempestt Neal**, Kalaivani Sundararajan, Aneez Fatima, Yiming Yan, Yingfei Xiang, and Damon Woodard. "Surveying stylometry techniques and applications." *ACM Comput. Surv.*, volume 50. Association for Computing Machinery, nov 2017. https://doi.org/10.1145/3132039.

[7] **Tempestt Neal** and Damon L Woodard. "Surveying biometric authentication for mobile device security." *Journal of Pattern Recognition Research*, volume 1, page 4, 2016. https://doi.org/10.13176/11.764.

Refereed Conference and Workshop Articles

[1] N. Loecher, S. King, J. Cabo, **T. Neal** and K. Kosyluk, "Assessing the Efficacy of a Self-Stigma Reduction Mental Health Program with Mobile Biometrics: Work-in-Progress," *2023 IEEE 17th International Conference on Automatic Face and Gesture Recognition (FG)*, Waikoloa Beach, HI, USA, 2023, pp. 1-6, doi: 10.1109/FG57933.2023.10042655.

[2] **Tempestt Neal**, Lisa Anthony, Shaun Canavan, Jaime Ruiz, Saandeep Aathreya, Meghna Chaudhary, Yu-Peng Chen, Heting Wang, Rodrigo Calvo, Liza Jivnani, and Nicolas Ng Wai. Toward understanding children's use and understanding of user authentication systems: Work-in-progress. In *USENIX Symposium on Usable Privacy and Security (SOUPS)*, Boston, MA, USA, August 2022.

[3] Parush Gera and **Tempestt Neal**. A comparative analysis of stance detection approaches and datasets. In *Proceedings of the 3rd Workshop on Evaluation and Comparison of NLP Systems*, pages 58–69, Online, November 2022. Association for Computational Linguistics. https://aclanthology.org/2022.eval4nlp-1.7.pdf.

[4] Mohamed Ebraheem, Sayde King, and **Tempestt Neal**. Lip movement as a wifi-enabled behavioral biometric: A pilot study. In Constantine Stephanidis, Margherita Antona, and Stavroula Ntoa, editors, *HCI International 2022 Posters*, pages 473–480, Cham, 2022. Springer International Publishing.

[5] Khadija Zanna, **Tempestt Neal**, and Shaun Canavan. Clustering of physiological signals by emotional state, race, and sex. In Companion Publication of the *2021 International Conference on Multimodal Interaction, ICMI '21 Companion*, page 312–316, New York, NY, USA, 2021. Association for Computing Machinery.

[6] Matthew Sumpter and **Tempestt Neal**. User perceptions of article credibility warnings: Towards understanding the influence of journalists and ai agents. In *MEDIATE 2021* in conjunction with the *15th International AAAI Conference on Web and Social Media (ICWSM)*, 2021.

[7] SK Rahatul Jannat, Diego Fabiano, Shaun Canavan, and **Tempestt Neal**. Subject identification across large expression variations using 3d facial landmarks. In Alberto Del Bimbo, Rita Cucchiara, Stan Sclaroff, Giovanni Maria Farinella, Tao Mei, Marco Bertini, Hugo Jair Escalante, and Roberto Vezzani, editors, Pattern Recognition. *ICPR International Workshops and Challenges*, pages 5–13, Cham, 2021. Springer International Publishing.

[8] **Tempestt Neal** and Ashokkumar Patel. A brief literature review and survey of adult perceptions on biometric recognition for infants and toddlers. In *2020 IEEE International Joint Conference on Biometrics (IJCB)*, pages 1–10, 2020.

[9] **Tempestt Neal** and Shaun Canavan. Mood versus identity: Studying the influence of affective states on mobile biometrics. In 2020 15th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2020), pages 562–566, 2020.

[10] Sayde King, Mohamed Ebraheem, Khadija Zanna, and **Tempestt Neal**. Learning a privacy-preserving global feature set for mood classification using smartphone activity and sensor data. In *2020 15th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2020)*, pages 582–586, 2020.

[11] Parush Gera, Nadia Thomas, and **Tempestt Neal**. Hesitation while posting: A cross-sectional survey of sensitive topics and opinion sharing on social media. In *International Conference on Social Media and Society (SMSociety'20)*, page 134–140, New York, NY, USA, 2020. Association for Computing Machinery.

[12] B. M. S. Bahar Talukder, Vineetha Menon, Biswajit Ray, **Tempestt Neal**, and Md Tauhidur Rahman. Towards the avoidance of counterfeit memory: Identifying the dram origin. In 2020 IEEE International Symposium on Hardware Oriented Security and Trust (HOST), pages 111–121, 2020.

[13] **Tempestt Neal** and Damon Woodard. Mobile biometrics, replay attacks, and behavior profiling: An empirical analysis of impostor detection. In 2019 International Conference on Biometrics (ICB), pages 1–8, 2019.

[14] **Tempestt Neal**, Md Asaduzzaman Noor, Parush Gera, Khadija Zanna, and Gurpreet Kaptan. Authenticating phone users using a gait-based histogram approach on mobile app sessions. In 2019 International Conference on Biometrics (ICB), pages 1–7, 2019.

[15] **Tempestt Neal** and Damon L. Woodard. On the use of mobile calling patterns for soft biometric classification. In 2018 IEEE 9th International Conference on Biometrics Theory, Applications and Systems (BTAS), pages 1–6, 2018.

[16] **Tempestt Neal** and Damon L. Woodard. A gender-specific behavioral analysis of mobile device usage data. In 2018 IEEE 4th International Conference on Identity, Security, and Behavior Analysis (ISBA), pages 1–8, 2018.

[17] **Tempestt Neal**, Kalaivani Sundararajan, and Damon Woodard. Exploiting linguistic style as a cognitive biometric for continuous verification. In 2018 International Conference on Biometrics (ICB), pages 270–276, 2018.

[18] Kalaivani Sundararajan, **Tempestt Neal**, and Damon Woodard. Style signatures to combat biometric menagerie in stylometry. In 2018 International Conference on Biometrics (ICB), pages 263–269, 2018.

[19] **Tempestt Neal** and Damon L. Woodard. Using associative classification to authenticate mobile device users. In 2017 IEEE International Joint Conference on Biometrics (IJCB), pages 71–79, 2017.

[20] **Tempestt Neal** and Damon L. Woodard. Spoofing analysis of mobile device data as behavioral biometric modalities. In 2017 IEEE International Joint Conference on Biometrics (IJCB), pages 62–70, 2017.

[21] **Tempestt Neal**, Damon L. Woodard, and Aaron D. Striegel. Mobile device application, bluetooth, and wi-fi usage data as behavioral biometric traits. In 2015 IEEE 7th International Conference on Biometrics Theory, Applications and Systems (BTAS), pages 1–6, 2015.

Non-refereed Articles

[1] Tempestt Neal. User perceptions of mobile-based biometrics for enhancing mobile health interventions. https://www.ieee-biometrics.org/images/pdf/Vol42-Newsletter.pdf, 2022. IEEE Biometrics Council Newsletter Vol 42.

[2] Tempestt Neal. The emergence of "everyday use" biometrics. https://www.ieee-biometrics.org/images/pdf/Vol43-Newsletter.pdf, 2022. IEEE Biometrics Council Newsletter Vol 43.

[3] Tempestt Neal. Biometrics in 2021: A review of most cited research articles and related applications. http://www.ieee-biometrics.org/images/pdf/Vol41-Newsletter.pdf, 2022. IEEE Biometrics Council Newsletter Vol 41.

[4] Tempestt Neal. Continuous authentication with plurilock's defend persisted. http://www.ieee-biometrics.org/images/pdf/Vol40-Newsletter.pdf, 2021. IEEE Biometrics Council Newsletter Vol 40.

[5] Tempestt Neal. Biometrics in Commercial VR. http://www.ieee-biometrics.org/images/pdf/Vol39-Newsletter.pdf, 2021. IEEE Biometrics Council Newsletter Vol 39.

[6] Tempestt Neal. Bias in Commercial Biometric Applications. http://www.ieee-biometrics.org/images/pdf/Vol38-Newsletter.pdf, 2021. IEEE Biometrics Council Newsletter Vol 38.

[7] Tempestt Neal. Integrated Biometrics? Watson Mini Fingerprint Recognition Scanner to be Used for Identifying Victims of Natural Disasters. http://www.ieee-biometrics.org/images/pdf/Vol37-Newsletter.pdf, 2021. IEEE Biometrics Council Newsletter Vol 37.

[8] Tempestt Neal. The role of biometrics amid global epidemics. https://ieee-biometrics.org/images/pdf/Vol33-Newsletter.pdf, 2020. IEEE Biometrics Council Newsletter Vol 33.

[9] Tempestt Neal. Remote education and biometrics: How online learning tools are using biometrics to enhance classroom instruction and an opportunity for improvement. https://ieee-biometrics.org/images/pdf/Vol34-Newsletter1.pdf, 2020. IEEE Biometrics Council Newsletter Vol 34.

[10] Tempestt Neal. Industry responses to face masks: Periocular recognition. https://ieee-biometrics.org/images/pdf/Vol36-Newsletter.pdf, 2020. IEEE Biometrics Council Newsletter Vol 36.

[11] Tempestt Neal. Face recognition beyond face masks. https://ieee-biometrics.org/images/pdf/Vol35-Newsletter.pdf, 2020. IEEE Biometrics Council Newsletter Vol 35.

[12] K. Zanna, S. King, Tempestt Neal, and S. Canavan. Studying the impact of mood on identifying smartphone users. https://arxiv.org/abs/1906.11960, 2019. arXiv:1906.11960.

[13] Tempestt Neal. Irisguard provides essential aid to refugees using non-invasive iris recognition. http://ieee-biometrics.org/images/pdf/Vol31-Newsletter.pdf, 2019. IEEE Biometrics Council Newsletter Vol 31.

[14] Tempestt Neal. The canadian down syndrome society partners with google to improve voice recognition. http://ieee-biometrics.org/images/pdf/Vol32-Newsletter.pdf, 2019. IEEE Biometrics Council Newsletter Vol 32.

[15] M. A. Noor, G. Kaptan, V. Cherukupally, P. Gera, and Tempestt Neal. A closer look at mobile app usage as a persistent biometric: A small case study. https://arxiv.org/pdf/1912.11721.pdf, 2019. arXiv preprint arXiv:1912.11721.

Presentations and Invited Talks

[1] Panelist, “Black Faculty Panel”, National Society of Black Engineers, University of South Florida, 2023

[2] Panelist at “Is CSE for Me?”, University of South Florida, 2021, 2022

[3] Invited Talk titled “Towards Generalizable User Authentication Systems on Personal Devices” at the Pacific Northwest National Laboratory (PNNL) Mathematics for Artificial Reasoning in Science Seminar, 2021

[4] Invited Talk titled “Understanding Human Behavior with Personal Computing Devices – Mobile Mental Health Interventions: User Perceptions and Preliminary Results” at Duke University, 2021

[5] Panelist for the FSU SSS-STEM Luncheon at University of South Florida, 2019

[6] Invited Talk titled “Smartphones + X: Applications of Mobile Sensing” at Berea College, 2019

[7] Invited Talk titled “Mobile Biometrics: A Continuous Look at Identity” at the J.P. Morgan Chase TechFest, Tampa, FL, 2019

[8] Poster titled "Using Gait Recognition Techniques on Mobile App Sessions to Continuously Recognize Smartphone Users" at the Cyber Florida Research Symposium, Tampa, FL, 2019

[9] Poster titled "Mobile Biometrics, Replay Attacks, and Behavior Profiling: An Empirical Analysis of Impostor Detection" at the 12th IAPR International Conference on Biometrics, Crete, Greece, 2019

[10] Poster titled "Authenticating Phone Users Using a Gait-Based Histogram Approach on Mobile App Sessions" at the 12th IAPR International Conference on Biometrics, Crete, Greece, 2019

[11] Panelist at "CodeBreakHERS: Women in Cybersecurity" at the University of South Florida, 2019

[12] Panelist at "Exploring Identities in Engineering" at the University of South Florida, 2019

[13] Panelist at "Black Computer Scientist: Past, Present and You" at the University of South Florida, 2019

[14] Invited Course Lecture titled "An Overview of Mobile Biometrics" at the University of South Florida, 2019

[15] Panelist at "Life of a Research Professor" at the IEEE-HKN Student Leadership Conference, University of Florida, 2018

[16] Poster titled "On the Use of Mobile Calling Patterns for Soft Biometric Classification" at the IEEE International Conference on Biometrics: Theory, Applications, and Systems, Los Angeles, CA, 2018

[17] Poster titled "Mobile Biometrics: Using Association Analysis for Mining Smartphone Usage Data" at the Florida Institute for Cybersecurity Research Conference, Gainesville, FL. Best Poster Award, 2017

[18] Poster titled "Mobile Biometrics: Using Association Analysis for Mining Smartphone Usage Data" at the Women in Hardware and Systems Security Workshop at the IEEE International Symposium on Hardware Oriented Security and Trust, McLean, VA, 2017

[19] Poster titled "Spoofing Analysis of Mobile Device Data as Behavioral Biometric Modalities" at the IEEE/IAPR International Joint Conference on Biometrics, Denver, CO, 2017

[20] Poster titled "Using Associative Classification to Authenticate Mobile Device Users" at the IEEE/IAPR International Joint Conference on Biometrics, Denver, CO, 2017

[21] Poster titled "Mobile device application, Bluetooth, and Wi-Fi usage data as behavioral biometric traits" at the IEEE 7th International Conference on Biometrics: Theory, Applications and Systems, Arlington, VA, 2015

Funding

External Funding (My Portion: $1,110,438; Total: $2,000,164)

[1] 08/2023-07/2024 - *Travel: NSF Student Travel Grant for 2023 IEEE International Joint Conference on Biometrics (IJCB 2023)* **Role: PI**, National Science Foundation, $10,000

[2] 07/2023-06/2028 - *CAREER: Inclusive Cybersecurity Through the Lens of Accessible Identity and Access Management (I-CLAIM)* **Role: PI**, National Science Foundation, $607,272

[3] 03/2022-04/2023 - *McKnight Fellowship (Junior Faculty Fellowship)* **Role: PI**, Florida Education Fund, Inc., $15,000

[4] 09/2021-08/2024 - *Up To Me: Erasing the Stigma of Mental Illness on College Campuses* **Role: Co-I**, National Institute on Disability, Independent Living, and Rehabilitation Research, Team: Dr. Kristin Kosyluk (PI), University of South Florida; Dr. Mark Salzer, Temple University; Dr. Patrick Corrigan, Illinois Institute of Technology, $136,763 (Total: $600,000)

[5] 08/2021–05/2023 - *Speedlane: Social Media Micromoments (Bulls Engineering Success Training Program Faculty Advisor)*, **Role: PI**, Fanatics Apparel, LLC, Team: Dr. Ken Christensen, University of South Florida, $25,000

[6] 04/2021–03/2024 - *Collaborative Research: SaTC: CORE: Medium: Toward Age-Aware Continuous Authentication on Personal Computing Devices*, **Role: PI**, Team: Dr. Shaun Canavan, University of South Florida; Dr. Lisa Anthony, University of Florida; Dr. Jaime Ruiz, University of Florida, $261,966 (Total: $517,452)

2023-2024 Research Experience for Teachers Supplement, $9,600

2021-2022 Research Experience for Undergraduates Supplement, $15,840

[7] 05/2020–11/2022 - *RAPID: Early Detection of Disease Outbreaks using Self-Organizing Patterns — COVID-19*, **Role: Co-PI**, National Science Foundation, Team: Dr. Sylvia Thomas (PI), University of South Florida; Dr. Alessandro Negro, GraphAware, $28,997 (Total: $200,000)

Internal Funding / Computing Credits (Total: $372,842)

[1] 07/2023–07/2024 - *Empowering AI+X Research: Upgrading the GAIVI (GPU-based AI Video Intelligence) Cluster for Enhanced Interdisciplinary Exploration* **Role: PI**, USF RSCH Strategic Investment Pool, $197,842

[2] 06/2020–05/2022 - *Social Media Trend Analysis to Explore Racial Disparities in the Treatment, Perceptions, and Tracking of COVID-19* **Role: PI**, Microsoft AI for Health, $30,000 Microsoft Azure Computing Credits

[3] 06/2020 – 05/2021 - *Exploring Racial Disparities in the Treatment, Perceptions, and Tracking of COVID-19 through Automated Stigma Detection and Sentiment Analysis of Social Media Data* **Role: PI**, USF COVID Rapid Response Program, $25,000

[4] 04/2022–06/2023 - *Transforming Multimodal Travel Behavior Data from an Open-Source Platform to Support Traffic Congestion Reduction Strategies* **Role: Co-PI**, National Institute for Congestion Research, $90,000

[5] 09/2020–09/2021 - *Game On: Grooming Black Youth for Leadership Excellence Using Video Gaming* **Role: Co-PI**, USF Understanding and Addressing Blackness and Anti-Black Racism in Local, National, and International Communities Research Program, $30,000

Advising

Student Advisees

Parush Gera, Ph.D. Student, Expected May 2025, Topic: *Cross-Target and Cross-Dataset Stance Detection*

Sayde King, Ph.D. Candidate, Expected December 2024, *Multimodal Deception Detection in Mental Health Applications*

Mohamed Ebraheem, Ph.D., Student Expected May 2025, *IoT-Based Biometrics*

Meghna Chaudhary, Ph.D. Student, Expected May 2025, *Implicit Aspect Extraction*

Wilson Lozano, Ph.D. Student, Expected December 2025, *A.I. for Monitoring Symptoms of Dementia*

Steven Diaz, Ph.D., Spring 2022, *On the Reliability of Wearable Sensors for Assessing Movement Disorder-Related Gait Quality and Imbalance: A Case Study of Multiple Sclerosis.* https://www.proquest.com/docview/2656795825?pq-origsite=gscholar&fromopenview=true.

Khadija Zanna, M.S., Spring 2020, *Toward Culturally Relevant Emotion Detection Using Physiological Features.* https://www.proquest.com/docview/2395337040?pq-origsite=gscholar&fromopenview=true.

Other Lab Affiliates

Janelle Yearwood, NSF Research Experience for Teachers, 2023

Erika Samuel, NSF Research Experience for Undergraduates, 2023

Kevin Antony, NSF Research Experience for Undergraduates, 2022

Orestes Bringas, Undergraduate Research Volunteer, 2022

Nicolas Ng Wai, Undergraduate Research Volunteer, 2020-2022

Frances Castro, Undergraduate Research Volunteer, 2021

Sue Dang, Undergraduate Research Volunteer, 2021

Dong Jun Kim, Undergraduate Research Volunteer, 2021

Ajay Chekuri, M.S. Research Volunteer, 2020

Lakshmi Angara, Undergraduate Research Volunteer, 2019-2020

Nadia Thomas, Undergraduate Research Volunteer, 2019-2020

Matthew Sumpter, USF CSE Research Experience for Undergraduates, 2018

Valesia Davis, USF CSE Research Experience for Undergraduates, 2019

Gurpreet Kaptan, M.S. Research Volunteer, 2018-2019

Vineeth Cherukupally, M.S. Research Volunteer, 2018-2019

Supervisory Committees

[1] Deep Learning and Adversarial Examples
Laureano Griffin (M.S., in progress), Committee Chair: Hao Zheng

[2] Inflicting Denial-of-Service via Serverless Functions in the Cloud
JunJie Xiong (Ph.D., in progress), Committee Chair: Yao Liu

[3] Fostering Research and Innovation in Public Transportation: A Data Driven Approach
Jennifer Adorno (Ph.D., in progress), Committee Chairs: Dr. Miguel Labrador and Dr. Sean Barbeau

[4] URM Women Faculty Hiring in Engineering
Laura Owczarek (Ph.D., in progress), Committee Chair: Dr. Amber Dumford

[5] GPU Accelerated Community Detection on Social Stream
Shen Lu (Ph.D., 2023), Committee Chair: Dr. Les Piegl

[6] Multimodal Assessment of Human Behavior with Applications in Analysis of Autism Spectrum Disorder
Sk Rahatul Jannat (Ph.D., 2023), Committee Chair: Dr. Shaun Canavan

[7] Edge-AI ASICs
Md Adnan Zaman (Ph.D., 2022), Committee Chair: Dr. Robert Karam

[8] Exploring the Use of Neural Transformers for Psycholinguistics
Antonio Laverghetta (M.S., 2021), Committee Chair: Dr. John Licato. https://www.proquest.com/docview/2516821564?pq-origsite=gscholar&fromopenview=true

[9] Pain Recognition Performance on a Single Board Computer
Iyonna Tynes (M.S., 2021), Committee Chair: Dr. Shaun Canavan. https://www.proquest.com/docview/2529201730?pq-origsite=gscholar&fromopenview=true.

[10] Adaptive Mobile EEG Noise Cancellation Using 2D Convolutional Autoencoders for BCI Authentication
Tyree Lewis (M.S., 2021), Committee Chair: Dr. Marvin Andujar. https://www.proquest.com/docview/2566086400?pq-origsite=gscholar&fromopenview=true.

[11] Using High Order Spanning Trees to Improve Dimensionality Reduction while Preserving Structure
Curtis Davis (M.S., 2021), Committee Chair: Dr. Paul Rosen. https://www.proquest.com/docview/2605303723?pq-origsite=gscholar&fromopenview=true.

[12] Algorithms to Profile Driver Behavior from Zero-Permission Embedded Sensors
Bharti Goel (Ph.D., 2020), Committee Chair: Dr. Sriram Chellappan. https://www.proquest.com/docview/2399882874?pq-origsite=gscholar&fromopenview=true.

[13] Multimodal Emotion Recognition using 3D Facial Landmarks, Action Units, and Physiological Data
Diego Fabiano (M.S., 2019), Committee Chair: Dr. Shaun Canavan. https://www.proquest.com/docview/2321832551?pq-origsite=gscholar&fromopenview=true.

[14] Detecting Digitally Forged Faces in Online Videos
Neilesh Sambhu (M.S., 2019), Committee Chair: Dr. Shaun Canavan. https://www.proquest.com/docview/2355993328?pq-origsite=gscholar&fromopenview=true.

Teaching Experience

Data Structures, COP4530, University of South Florida, Spring 2023

Mobile Biometrics, CAP4103/CAP6101, University of South Florida, Fall 2022

Mobile Biometrics, CAP4103/CAP6101, University of South Florida, Fall 2021

Object-Oriented Software Design, COP3331, University of South Florida, Spring 2021

Mobile Biometrics, CAP4103/CAP6101, University of South Florida, Fall 2020

Object-Oriented Software Design, COP3331, University of South Florida, Spring 2020

Biometric Authentcation on Mobile Devices, CIS4930/CIS6930, University of South Florida, Fall 2019

Object-Oriented Software Design, COP3331, University of South Florida, Spring 2019

Biometric Authentcation on Mobile Devices, CIS4930/CIS6930, University of South Florida, Fall 2018

Seminar in Artificial Intelligence, CIS6930, University of South Florida, Fall 2018

Service

Professional Service

Professional Committees

[1] International Association for Pattern Recognition (IAPR) Equality, Diversity, and Inclusion Committee, 2023 – Current

[2] ACM's Diversity and Inclusion Committee on Systemic Change, 2020 – 2021

[3] IEEE WIE Society Liaison, IEEE Biometrics Council, 2019 – 2021

Editor

[1] Editorial Board, Scientific Reports, 2023 – Current

[2] Guest Editor, MDPI Electronics Special Issue on Recent Advances in Biometric Security in IoT Based on Machine Learning, 2021 – Current

[3] Associate Editor, IEEE Biometrics Council Newsletter, 2019 – 2023

Conference Committees

[1] Area Chair, 18th IEEE International Conference on Automatic Face and Gesture Recognition, May 27-31, 2024, Istanbul, Turkey

[2] Doctoral Consortium Co-Chair, 7th IEEE/IAPR International Joint Conference on Biometrics, September 25-28, 2023, Ljubljana, Slovenia

[3] Program Committee, 44th IEEE Symposium on Security and Privacy, May 22-25, 2023, San Francisco, CA

[4] Program Committee, 24th ACM International Conference on Multimodal Interaction, November 7-11, 2022, Bengaluru, India

[5] Associate Editor, Biometrics and Human-Computer Interaction (Track 4), at the 26th IEEE/IAPR International Conference on Pattern Recognition, August 21-25, 2022, Montreal, Quebec

[6] Session Chair, Novel, Mobile, and Soft Biometrics, 12th IAPR International Conference on Biometrics, June 4-7, 2019, Crete, Greece

Workshop Committees

[1] Organizer, First Workshop on Interdisciplinary Applications of Biometrics and Identity Science (InterID 2023), 17th IEEE International Conference on Automatic Face and Gesture Recognition, January 5-8, 2023, Waikoloa, Hawaii

[2] Program Committee, MEDIATE 2022 Workshop, 16th International AAAI Conference on Web and Social Media, June 6-9, 2022, Atlanta, GA

[3] Co-Organizer, Workshop on Applied Multimodal Affect Recognition (3 iterations) 26th IEEE/IAPR International Conference on Pattern Recognition, August 21-25, 2022, Montreal, Quebec 9th International Conference on Affective Computing and Intelligent Interaction, Sept. 28 – Oct. 1, 2021, Virtual 15th IEEE International Conference on Automatic Face and Gesture Recognition, November 16-20, 2020, Buenos Aires, Argentina

[4] Co-Organizer (2 iterations), Annual Nelms Workshop on Women in IoT, Leading Through Change, University of Florida Warren B. Nelms Institute for the Connected World, September 22, 2021, October 12, 2020, Virtual

[5] Technical Program Committee, First International Workshop on Responsible Pattern Recognition and Machine Intelligence, 18th IEEE/CVF International Conference on Computer Vision, October 11-17, 2021, Virtual

[6] Program Committee (2 iterations), The Bright and Dark Sides of Computer Vision, Challenges and Opportunities for Privacy and Security, 33rd/32nd IEEE/CVF Conference on Computer Vision and Pattern Recognition, August 28, 2020, Glasgow, Scotland and June 16, 2019, Long Beach, CA

[7] Program Committee, Workshop on Demographic Variation in the Performance of Biometric Systems, IEEE/CVF Winter Conference on Applications of Computer Vision, March 1, 2020, Snowmass, CO

Reviewer

[1] National Science Foundation (2018 – 2021)

[2] IEEE Transactions on Multi-Scale Computing Systems (2018)

[3] IEEE Transactions on Biometrics, Behavior, and Identity Science (2018 – 2021)

[4] IEEE International Conference on Identity, Security, and Behavior Analysis (2018)

[5] IAPR International Conference on Biometrics (2019)

[6] ACM Computing Surveys (2019)

[7] IEEE International Conference on Biometrics: Theory, Applications, and Systems (2019)

[8] International Conference on Acoustics, Speech, and Signal Processing (2020)

[9] IEEE/IAPR International Joint Conference on Biometrics (2021 – 2022)

[10] ACM Transactions on Privacy and Security (2022)

University Service

[1] University of South Florida Computer Science and Engineering Dept. Faculty Search Committee, 2022 – Current

[2] University of South Florida's College of Engineering Advisors of Research Management Committee, 2021 – Current

[3] University of South Florida Computer Science and Engineering Dept. Broadening Participating in Computing Committee, 2018 – Current

[4] University of South Florida Computer Science and Engineering Dept. Graduate Affairs Committee, 2018 – 2022

Outreach

[1] Guest Speaker, CodeBreakHERS High School Girls Camp, 2022, 2021, 2019

Professional Memberships

Association for Computing Machinery (ACM)

ACM Future of the Academy

Institute of Electrical and Electronic Engineers (IEEE)

IEEE Women in Engineering

Upsilon Pi Epsilon Computing and Information Disciplines

Kappa Mu Epsilon Mathematics Society

Honors and Awards

2023 NSF CAREER Award

2021-2022 McKnight Junior Faculty Fellow

2019 Apple Polishing Award, University of South Florida Ambassadors

2018 University of Florida Delores Auzenne Dissertation Award

2017–2018 National Science Foundation CyberCorps Scholarship for Service Fellowship

2012–2015 National Science Foundation Scholarship in Science, Technology, Engineering, and Mathematics

2012 South Carolina State University Computer Science Award

2008–2012 South Carolina State University Presidential Scholar

Miscellaneous

Press Coverage: (September 28, 2021). Bary, Emily. MarketWatch. *How the quirky ways you type, swipe and behave can protect you online.* Available online: https://www.marketwatch.com/story/the-way-you-type-swipe-and-behave-can-now-protect-you-online-better-than-a-strong-password-11632850939?mod=newsviewer_click.

Interview: Bushra Anjum. 2020. *A conversation with Tempestt Neal: continuous authentication methods for mobile platforms.* Ubiquity 2020, June, Article 1 (June 2020), 5 pages. doi: 10.1145/3404394. Available online: https://doi.org/10.1145/3404394.

Press Coverage: (May 20, 2020), *USF engineers awarded NSF grant to fight COVID-19 using big data.* Tampa Bay NewsWire. Available online: https://www.tampabaynewswire.com/2020/05/20/usf-engineers-awarded-nsf-grant-to-fight-covid-19-using-big-data-8.

Press Coverage: (October 20, 2011), *SC State University Senior Exclusive HBCU Recipient of Honor Scholarship, South Carolina State University.* Available online: http://www.scsu.edu/news_article.aspx?news_id=1293.