TEMPESTT JA'NICE NEAL

Assistant Professor
Director, Cyber Identity and Behavior Research Lab
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Lab: https://tempestt-neal.github.io/ciber/
GitHub: https://github.com/CIBeResearchLab

BIOGRAPHY

Dr. Tempestt Neal is an Assistant Professor in the Computer Science and Engineering department at the University of South Florida and the founder/director of the Cyber Identity and Behavior Research (CIBeR) Lab. Dr. Neal's research focuses on biometrics and smart sensing for person identification and multidisciplinary applications of human behavior analysis. She also conducts research leading to increased cybersecurity awareness among populations historically excluded in science and engineering. She earned a Ph.D. in Computer Engineering from the University of Florida in 2018, a M.S. in Computer Science from Clemson University in 2014, and a B.S. in Computer Science from South Carolina State University in 2012. Dr. Neal is active in the Biometrics, Identity Science, and Artificial Intelligence communities, serving as the 2019/2020 IEEE Women in Engineering Society Liaison for the IEEE Biometrics Council, Associate Editor for the IEEE Biometrics Council Newsletter, and Guest Editor for the MDPI Electronics Special Issue on Recent Advances in Biometric Security in IoT Based on Machine Learning, among others. She was a 2021-2022 recipient of the Florida Education Fund Junior Faculty Fellowship Award, University of Florida Delores Auzenne Dissertation Award, and National Science Foundation (NSF) CyberCorps Scholarship for Service Fellowship. Her research has been funded by multiple agencies, including an NSF CAREER award that supports the development of inclusive and accessible cybersecurity systems.

EDUCATION

Ph.D., 2018	Computer Engineering Advisor: Dr. Damon Woodard	University of Florida, Gainesville, FL, USA
M.S., 2014	Computer Science	Clemson University, Clemson, SC, USA
B.S., 2012	Computer Science, Mathematics Minor	South Carolina State University, Orangeburg, SC, USA

APPOINTMENTS

Assistant Professor	Aug. 2018 – Present, University of South Florida, Tampa, FL USA
Graduate Research Assistant	Jan. 2015 – Aug. 2018, University of Florida, Gainesville, FL USA
Graduate Research Assistant	Jan. 2013 – Dec. 2014, Clemson University, Clemson, SC USA
Mobile Application Developer	May 2013 – Dec 2013, Clemson University, Clemson, SC USA
Graduate Teaching Assistant	August 2012 – December 2012, Clemson University, Clemson, SC USA
Software Engineer Intern	Summer 2011, Savannah River Remediation, LLC, Aiken, SC USA
Website and Marketing Intern	Summer 2010, The Nature Conservancy, Columbia, SC USA
NSF HBCU-UP Intern	Summer 2009, South Carolina State University, Orangeburg, SC USA

RESEARCH PUBLICATIONS

REFEREED BOOK CHAPTERS

[1] Tempestt Neal and Damon Woodard. Presentation attacks in mobile and continuous behavioral biometric systems. In Securing Social Identity in Mobile Platforms, pages 21–40. Springer, 2020.

[2] Tempestt Neal, Damon L Woodard, and Aaron D Striegel. Mobile device usage data as behavioral biometrics. Mobile Biometrics, volume 3, page 177. IET, 2017.

REFEREED JOURNAL ARTICLES

[1] Kristin A. Kosyluk, Jennifer T. Tran, Sayde King, Katie Torres & Tempestt Neal (2023) Preliminary effectiveness study of the Cope Notes digital mental Health program, Journal of Mental Health, DOI: 10.1080/09638237.2023.2182424 (3.681 (2021) Impact Factor; SJR: 603/2489 (Q1) Medicine (miscellaneous))

[2] 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.

[3] 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.

[4] 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.

[5] Tempestt Neal and Damon L Woodard. Surveying biometric authentication for mobile device security. Journal of Pattern Recognition Research, volume 1, page 4, 2016.

REFEREED CONFERENCE ARTICLES

[1] Nele Loecher, Sayde King, Joseph Cabo, Tempestt Neal, and Kristin Kosyluk. Assessing the efficacy of a self-stigma reduction mental health program with mobile biometrics: Work-in-progress. In 17th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2023), 2023.

[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.

[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] Sk R. Jannat, D. Fabiano, S. Canavan, and Tempestt Neal. Subject identification across large expression variations using 3d facial landmarks, 2020. arXiv:2005.08339.

[13] 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.

[14] 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.

[15] 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.

[16] 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.

TALKS AND PRESENTATIONS

[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

GRANTS

EXTERNAL FUNDING (MY PORTION: $1,100,438; TOTAL: $1,990,164)

CAREER: Inclusive Cybersecurity Through the Lens of Accessible Identity and Access Management (I-CLAIM)

Role: PI, National Science Foundation, $607,272, 07/2023 – 06/2028

This project informs the design and implementation of authentication systems that contribute to inclusive and accessible cybersecurity solutions, transforms state-of-the-art authentication systems by exposing when and how they isolate certain groups and identifying biases in knowledge and biometric-based authentication systems, contributes a novel, diverse dataset for cybersecurity research, and informs future directions for inclusive identity and access management.

McKnight Fellowship (Junior Faculty Fellowship)

Role: PI, Florida Education Fund, Inc., $15K, 03/2022 –04/2023

The FEF's Junior Faculty Fellowship Program promotes excellence in teaching and research by underrepresented minorities and women.

Up To Me: Erasing the Stigma of Mental Illness on College Campuses

Role: Co-I, National Institute on Disability, Independent Living, and Rehabilitation Research, $136,763 (Total: $600K), 09/2021 – 08/2024. Team: Dr. Kristin Kosyluk (PI), University of South Florida; Dr. Mark Salzer, Temple University; Dr. Patrick Corrigan, Illinois Institute of Technology

The Up to Me program aims to improve community living and participation of individuals with psychiatric disabilities. These outcomes are substantiated through passive sensing technologies to monitor human behavior.

Speedlane: Social Media Micromoments (Bulls Engineering Success Training Program Faculty Advisor)

Role: PI, Fanatics Apparel, LLC, $25K, 08/2021 – 05/2023. Team: Dr. Ken Christensen, University of South Florida

The Bulls Engineering Success Training (BEST) program provides selected undergraduate students in the College of Engineering an interdisciplinary industry-based capstone design experience. This program supported five USF CSE undergraduate students on the development of Speedlane, a natural language processing platform which leverages social media content for informed decision making.

Collaborative Research: SaTC: CORE: Medium: Toward Age-Aware Continuous Authentication on Personal Computing Devices

Role: PI, $287,406 (Total: $542,892), 04/2021 – 03/2024, Team: Dr. Shaun Canavan, University of South Florida; Dr. Lisa Anthony, University of Florida; Dr. Jaime Ruiz, University of Florida

This project advances understanding of how individuals of different age groups use and perceive existing authentication methods, especially concerning users' mental models and acceptance of continuous authentication.

RAPID: Early Detection of Disease Outbreaks using Self-Organizing Patterns — COVID-19
Role: Co-PI, National Science Foundation, $28,997 (Total: $200K), 05/2020 – 11/2022, Team: Dr. Sylvia Thomas (PI), University of South Florida; Dr. Alessandro Negro, GraphAware
This project develops a predictive modeling tool to visually represent the spread of COVID-19 or other potential pandemics utilizing artificial intelligence techniques to support data gathering, analysis and representation of the outcomes.

INTERNAL FUNDING / COMPUTING CREDITS (TOTAL: $175,000)

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

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

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

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

TEACHING

S23	COP 4530 Data Structures
F22	CAP 4103/6101 Mobile Biometrics
F21	CAP 4103/6101 Mobile Biometrics
S21	COP 3331 Object Oriented Software Design
F20	CAP 4103/6101 Mobile Biometrics
S20	COP 3331 Object Oriented Software Design
F19	CIS 4930/6930 Biometric Authentication on Mobile Devices
S19	COP 3331 Object Oriented Software Design
F18	CIS 4930/6930 Biometric Authentication on Mobile Devices
F18	CIS 6930 Seminar in Artificial Intelligence

ADVISING

MAJOR ADVISOR

[1] Parush Gera: (Ph.D., In progress), Cross-Target and Cross-Dataset Stance Detection
[2] Sayde King: (Ph.D. Candidate, Expected 2024), Multimodal Deception Detection in Mental Health Applications
[3] Mohamed Ebraheem: (Ph.D., In progress), IoT-Based Biometrics
[4] Meghna Chaudhary: (Ph.D., In progress), Implicit Aspect Extraction
[5] Wilson Lozano: (Ph.D., In progress), A.I. for Monitoring Symptoms of Dementia
[6] 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"
[7] Khadija Zanna: (M.S., Spring 2020), "Toward Culturally Relevant Emotion Detection Using Physiological Features"

OTHER LAB AFFILIATES

[1] Kevin Antony, NSF REU, 2022

[2] Orestes Bringas, Undergraduate Research Volunteer, 2022
[3] Nicolas Ng Wai, Undergraduate Research Volunteer, 2020-2022
[4] Frances Castro, Undergraduate Research Volunteer, 2021
[5] Sue Dang, Undergraduate Research Volunteer, 2021
[6] Dong Jun Kim, Undergraduate Research Volunteer, 2021
[7] Ajay Chekuri, MS Research Volunteer, 2020
[8] Lakshmi Angara, Undergraduate Research Volunteer, 2019-2020
[9] Nadia Thomas, Undergraduate Research Volunteer, 2019-2020
[10] Matthew Sumpter, USF CSE REU, 2018
[11] Valesia Davis, USF CSE REU, 2019
[12] Gurpreet Kaptan, MS Research Volunteer, 2018-2019
[13] Vineeth Cherukupally, MS Research Volunteer, 2018-2019

SUPERVISORY COMMITTEE MEMBER

[1] Shen Lu: (Ph.D., 2023), Committee Chair: Dr. Les Piegl, GPU Accelerated Community Detection on Social Stream
[2] Jennifer Adorno: (Ph.D., In progress), Committee Chairs: Dr. Miguel Labrador and Dr. Sean Barbeau, Fostering Research and Innovation in Public Transportation: A Data Driven Approach
[3] Sk Rahatul Jannat: (Ph.D., In progress), Committee Chair: Dr. Shaun Canavan, Impact of Age on Expression Recognition
[4] Laura Owczarek: (Ph.D., In progress), Committee Chair: Dr. Amber Dumford, URM Women Faculty Hiring in Engineering
[5] Md Adnan Zaman: (Ph.D., 2022), Committee Chair: Dr. Robert Karam, Edge-AI ASICs
[6] Antonio Laverghetta: (M.S., 2021), Committee Chair: Dr. John Licato, Exploring the Use of Neural Transformers for Psycholinguistics
[7] Iyonna Tynes: (M.S., 2021), Committee Chair: Dr. Shaun Canavan, Pain Recognition Performance on a Single Board Computer
[8] Tyree Lewis: (M.S., 2021), Committee Chair: Dr. Marvin Andujar, Adaptive Mobile EEG Noise Cancellation Using 2D Convolutional Autoencoders for BCI Authentication
[9] Curtis Davis: (M.S., 2021), Committee Chair: Dr. Paul Rosen, Using High Order Spanning Trees to Improve Dimensionality Reduction while Preserving Structure
[10] Bharti Goel: (Ph.D., 2020), Committee Chair: Dr. Sriram Chellappan, Algorithms to Profile Driver Behavior from Zero-Permission Embedded Sensors
[11] Diego Fabiano: (M.S., 2019), Committee Chair: Dr. Shaun Canavan, Multimodal Emotion Recognition using 3D Facial Landmarks, Action Units, and Physiological Data
[12] Neilesh Sambhu: (M.S., 2019), Committee Chair: Dr. Shaun Canavan, Detecting Digitally Forged Faces in Online Videos

SERVICE

[1] 2023 – Current, Committee Member, International Association for Pattern Recognition (IAPR) Equality, Diversity, and Inclusion Committee
[2] 2023, Doctoral Consortium Chair at the IEEE/IAPR International Joint Conference on Biometrics
[3] 2023, Organizer of the First Workshop on Interdisciplinary Applications of Biometrics and Identity Science (InterID 2023) at the IEEE International Conference on Automatic Face and Gesture Recognition
[4] 2023, Program Committee Member for the IEEE Symposium on Security and Privacy
[5] 2022 – Current, Committee Member, University of South Florida Computer Science and Engineering Dept. Faculty Search Committee
[6] 2022, 2021, 2019, Invited Guest Speaker at the CodeBreakHERS High School Girls Camp
[7] 2022, Program Committee Member at the MEDIATE 2022 Workshop at the International AAAI Conference on Web and Social Media
[8] 2022, Program Committee Member at the ACM International Conference on Multimodal Interaction
[9] 2022, Associate Editor of Track 4, Biometrics and Human-Computer Interaction at the IEEE/IAPR International Conference on Pattern Recognition
[10] 2020 – 2022, Co-Organizer of the Workshop on Applied Multimodal Affect Recognition at the 2020 IEEE International Conference on Automatic Face and Gesture Recognition, 2021 International Conference on Affective Computing and Intelligent Interaction, and 2022 IEEE/IAPR International Conference on Pattern Recognition

[11] 2021 — Current, Guest Editor for the MDPI Electronics Special Issue on Recent Advances in Biometric Security in IoT Based on Machine Learning
[12] 2020 — 2021, Committee Member of ACM's Diversity & Inclusion Committee on Systemic Change
[13] 2021 — Current, Committee Member of the University of South Florida's College of Engineering Advisors of Research Management Committee
[14] 2019 — Current, Associate Editor for the IEEE Biometrics Council Newsletter
[15] 2018 — Current, Committee Member, University of South Florida Computer Science and Engineering Dept. Broadening Participating in Computing Committee
[16] 2018 — 2022, Committee Member, University of South Florida Computer Science and Engineering Dept. Graduate Affairs Committee
[17] 2020 — 2021, Co-Organizer of the Annual Nelms Workshop on Women in IoT, Leading Through Change held by the University of Florida Warren B. Nelms Institute for the Connected World
[18] 2021, Technical Program Committee Member for the First International Workshop on Responsible Pattern Recognition and Machine Intelligence at the IEEE/CVF International Conference on Computer Vision
[19] 2020, Organizer for the Special Session on Identity for Social Good at the IEEE/IAPR International Joint Conference on Biometrics
[20] 2019 — 2021, IEEE WIE Society Liaison for the IEEE Biometrics Council
[21] 2019 — 2020, Program Committee Member for The Bright and Dark Sides of Computer Vision, Challenges and Opportunities for Privacy and Security at the IEEE/CVF Conference on Computer Vision and Pattern Recognition
[22] 2020, Program Committee Member for the Workshop on Demographic Variation in the Performance of Biometric Systems
[23] 2019, Session Chair of Novel, Mobile, and Soft Biometrics at the IAPR International Conference on Biometrics
[24] Reviewer:
    a. National Science Foundation (2018 — 2021)
    b. IEEE Transactions on Multi-Scale Computing Systems (2018)
    c. IEEE Transactions on Biometrics, Behavior, and Identity Science (2018 — 2021)
    d. IEEE International Conference on Identity, Security, and Behavior Analysis (2018)
    e. IAPR International Conference on Biometrics (2019)
    f. ACM Computing Surveys (2019)
    g. IEEE International Conference on Biometrics: Theory, Applications, and Systems (2019)
    h. International Conference on Acoustics, Speech, and Signal Processing (2020)
    i. IEEE/IAPR International Joint Conference on Biometrics (2021 — 2022)
    j. ACM Transactions on Privacy and Security (2022)

HONORS AND AWARDS

[1] 2023 NSF CAREER Award
[2] 2021-2022 McKnight Junior Faculty Fellow
[3] 2019 Apple Polishing Award, University of South Florida Ambassadors
[4] 2018 University of Florida Delores Auzenne Dissertation Award
[5] 2017 — 2018 National Science Foundation CyberCorps Scholarship for Service Fellowship
[6] 2012 — 2015 National Science Foundation Scholarship in Science, Technology, Engineering, and Mathematics
[7] 2012 South Carolina State University Computer Science Award
[8] 2008 — 2012 South Carolina State University Presidential Scholar

PROFESSIONAL MEMBERSHIPS

[1] Association for Computing Machinery (ACM) ACM Future of the Academy
[2] Institute of Electrical and Electronic Engineers (IEEE) IEEE Women in Engineering
[3] IEEE Biometrics Council
[4] Upsilon Pi Epsilon Computing and Information Disciplines Kappa Mu Epsilon Mathematics Society

MISCELLANEOUS

[1] Press Coverage: (September 28, 2021). Bary, Emily. MarketWatch. How the quirky ways you type,

swipe and behave can protect you online
[2] 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.
[3] Press Coverage: (May 20, 2020), USF engineers awarded NSF grant to fight COVID-19 using big data. Tampa Bay NewsWire.
[4] Press Coverage: (October 20, 2011), SC State University Senior Exclusive HBCU Recipient of Honor Scholarship, South Carolina State University.