

## RESEARCH PUBLICATIONS, CONFERENCE PROCEEDINGS, EXHIBITS, AND INVITED PRESENTATIONS

- [1] G. Ruiz, S. C Kilambi, P. Soni, **K. George**, and A. Panangadan, "Visual and Thermal imaging camera-based system for a Smart Cooking Assistant," *2024 IEEE ECBIOS*.
- [2] P. Suseela, J. A. John, P. K. Kandregula; R. Murrieta, **K. George**, and A. Panangadan, "Integration of multiple sensor-based wellness systems for supportive housing using Bluetooth Low Energy," *2024 IEEE ECBIOS*.
- [3] A. Luu, B. Rivera, K. Luong, A. Angulo, **K. George**, and A. Panangadan, "Design and Implementation of Smart Medical Alert Device," *2024 IEEE ECBIOS*.
- [4] N. Kanapuram, S. Addagatla, M. A. Khalil, and **K. George**, "Road-Based Wireless Charging: Pioneering Self-Sustaining Electric Vehicle Technology," *2024 IEEE ECBIOS*.
- [5] M. Babinec, V. Shikarpur; M. A. Khalil, and **K. George**, "An fNIRS and EEG Based-Deep Learning Model for Consumer Taste Classification Using BCI and Neuromarketing for Health Promotion," *2024 IEEE ECBIOS*.
- [6] A. Jarrar, R. Murrietta, and **K. George**, "Integrating IoT in Wireless EV Charging Roads," *2024 IEEE ECBIOS*.
- [7] L. Kumar, M. A. Khalil, M. Babinec, and **K. George**, "EEG-Based Home Automation with SVM," *2024 IEEE ECBIOS*.
- [8] S. Minera and **K. George**, "Voice Controlled Robotic Arm with Object Detection as a Feedback System for Visually Impaired Individuals," *2024 IEEE ECBIOS*.
- [9] K. Vergara, M. A. Khalil, and **K. George**, "Understanding Stress in the Aging Community with Technology," *2024 IEEE ECBIOS*.
- [10] M. A. Khalil, M. Babinec, and **K. George**, "LSTM Model for Brain Control Interface Based-Lie Detection," *2024 IEEE AIMHC*.
- [11] V. Peddisetti, P. K. Kandregula, J. A. John, S. Poomdla, **K. George**, and A. Panangadan, and **K. George**, "Smart Medication Management: Enhancing Medication Adherence with Automatic Pill Dispensing into a Smart Cup," *2024 IEEE AIMHC*.
- [12] G. Ruiz, S. C. Kilambi, P. Soni, **K. George**, and A. Panangadan, and **K. George**, "Design of a Multisensor System for a Smart Cooking Assistant," *2024 IEEE AIMHC*.
- [13] J. Gambhir, M. A. Khalil, and **K. George**, "Brain-Computer Interface for Color Perception in Gaming using AI and ML Techniques," *2024 IEEE AIMHC*.
- [14] V. More and **K. George**, "Incorporating Motor Imagery-Controlled Gaming into Paralysis Rehabilitation," *2024 IEEE AIMHC*.
- [15] M. Maram, M. A. Khalil, and **K. George**, "Analysis of Consumer Coffee Brand Preferences Using Brain-Computer Interface and Deep Learning," *2023 IEEE ICITISEE*.

- [16] A. Desoto, J. Dodd, M. Babinec, and **K. George**, "Utilization of EEG and fNIRS to Determine Neural Alignment in Educational Applications," *2023 IEEE World AI IoT Congress*.
- [17] S. R. Minera, A. Nuerbiya, A. Espinoza, **K. George**, and A. Panangadan, "Smart Pill Dispenser with Smart Cup," *2023 IEEE World AI IoT Congress*.
- [18] V. More, M. A. Khalil, and **K. George**, "Using Motor Imagery and Deep Learning for Brain-Computer Interface in Video Games," *2023 IEEE World AI IoT Congress*.
- [19] C. M. Melgoza, J. Miho and **K. George**, "Sensor Tracking System Using Radar and Object Detection," *2023 IEEE CCWC*.
- [20] C. M. Melgoza, J. Miho and **K. George**, "Image Segmentation and Anomaly Detection Using Doppler Data From Coffee-Can Radar," *2023 IEEE CCWC*.
- [21] J. D. L Cruz, J. Law, N.-K. Oteng-Quarshie and **K. George**, "EEG and fNIRS Analysis to Determine Acute Stress Resulting from Reaction Time Tests," *2023 IEEE CCWC*.
- [22] M. A. Khalil, J. Can and **K. George**, "Deep Learning Applications in BCI Based Lie Detection," *2023 IEEE CCWC*.
- [23] B. M. Rivera, K. Luong, A. Liu and **K. George**, "Design and Implementation Improvements for RFID Based Tactile Communication Devices," *2023 IEEE CCWC*.
- [24] S. R. Minera, A. Nuerbiya, A. Espinoza, A. Panangadan and **K. George**, "Smart Cup for a Smart Pill Dispenser for Verification of Pill Consumption," *2023 IEEE CCWC*.
- [25] J. D. L Cruz and **K. George**, "Acute Stress Analysis Resulting from Word Construction Using EEG and fNIRS," *2022 IEEE UEMCON*.
- [26] S.R. Minera, A.Nuerbiya, A. Espinoza, and **K. George**, "Safety and Feedback for a Robotic Arm for Visually Impaired People" *2022 IEEE IEMCON*.
- [27] M. A. Khalil and **K. George**, "Using Neural Network Models for BCI Based Lie Detection," *2022 IEEE UEMCON*.
- [28] A. Desoto and **K. George**, "Using EEG and fNIRS to Determine Neural Alignment Through Storytelling" *2022 IEEE UEMCON*.
- [29] C. M. Melgoza, J. Miho, and **K. George**, "Comparison of CW Radar Systems for Radar Applications Using Object Detection and Real-Time Tracking," *2022 IEEE UEMCON*.
- [30] J. D. L Cruz, D. Shimizu and **K. George**, "EEG and fNIRS Analysis Using Machine Learning to Determine Stress Levels," *2022 IEEE World AI IoT Congress*.
- [31] H. Lin and **K. George**, "Stack Type Detection Using Few-Shot Learning," *2022 IEEE World Conference on Applied Intelligence and Computing*.
- [32] F. X. Liri, A. Luu, A. Angulo, J. Dittloff and **K. George**, "Real-Time Dynamic Object Grasping With a Robotic Arm: A Design for Visually Impaired Persons," *2022 IEEE World AI IoT Congress*.
- [33] T. Groom and **K. George**, "Real Time FPGA-Based CNN Training and Recognition of Signals," *2022 IEEE World AI IoT Congress*.

- [34] B. Fonseca, S. R. Minera, T. Kheang, **K. George**, and A. Panangadan, "Voice Controlled Robotic Arm Helper for Visually Impaired People," *2022 IEEE World Conference on Applied Intelligence and Computing*.
- [35] M. Ramirez, M. A. Khalil, J. Can and **K. George**, "Classification of "Like" and "Dislike" Decisions From EEG and fNIRS Signals Using a LSTM Based Deep Learning Network," *2022 IEEE World AI IoT Congress*.
- [36] N. D. Ruppert and **K. George**, "Robotic Arm with Obstacle Detection Designed for Assistive Applications," *2022 IEEE World Conference on Applied Intelligence and Computing*.
- [37] A. Desoto, F. X. Liri, **K. George**, D. Julia, J. Faller, J. Dodd, E. Santos, and D. Heng, "Predicting Audio Training Learning Outcomes Using EEG Data and KNN Modeling," *2022 IEEE World AI IoT Congress*.
- [38] M. A. Khalil, M. Ramirez, J. Can and **K. George**, "Implementation of Machine Learning in BCI Based Lie Detection," *2022 IEEE World AI IoT Congress*.
- [39] K. J. Lee and **K. George**, "Pulse and Signal Data Classification Using Conventional and Few-Shot Machine Learning," *2022 IEEE World AI IoT Congress*.
- [40] C. M. Melgoza, K. J. Lee, H. Lin, T. Groom, A. Coddington, and **K. George**, "Comparing Pretrained Image-Net CNN With a Siamese Architecture for Few-Shot Learning Applications in Radar Systems," *2022 IEEE World AI IoT Congress*.
- [41] M. A. Khalil, M. Ramirez, and **K. George**, "Using EEG and fNIRS Signals as Polygraph," *2022 IEEE Annual Computing and Communication Workshop and Conference*.
- [42] F. X. Liri, A. Desoto, W. Catalan, J. Faller, J. Drouin, and **K. George**, "Monitoring Audio Training Learning Outcomes With EEG Data," *2022 IEEE Annual Computing and Communication Workshop and Conference*.
- [43] M. Ramirez, S. Kaheh, M. A. Khalil, and **K. George**, "Application of Convolutional Neural Network for Classification of Consumer Preference From Hybrid EEG and FNIRS Signals," *2022 IEEE Annual Computing and Communication Workshop and Conference*.
- [44] F. X. Liri, A. Desoto, W. Catalan, and **K. George**, "An EEG-Based Custom Training Software Solution for Monitoring Audio Training Learning Outcomes," *2021 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.
- [45] M. Ramirez, S. Kaheh, and **K. George**, "Neuromarketing Study Using Machine Learning for Predicting Purchase Decision," *2021 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.
- [46] F. X. Liri, H. Lin, K. J. Lee, B. Fonseca, N. Ruppert, **K. George** and A. Panangadan, "Real-Time Dynamic Object Recognition and Grasp Detection for Robotic Arm Using Streaming Video: A Design for Visually Impaired Persons," *2021 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

- [47] J. D. L. Cruz, D. Shimizu, and **K. George**, "Using EEG and fNIRS Measurements for Analysis on the Effects of Heat Stress on Short-Term Memory Performance," *2021 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.
- [48] C. M. Melgoza, K. J. Lee, H. Lin, T. Groom, A. Coddling, A. Govalkar and **K. George**, "Environment Classification and Deinterleaving Using Siamese Networks and Few-Shot Learning," *2021 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.
- [49] T. Groom, D. Barrios, and **K. George**, "Design and Implementation of an RFID Based Tactile Communication Device," *2021 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.
- [50] D. Heng, E. Santos, T. Kheang, K. Nguyen, H. Duraisamy, S. Raju, and **K. George**, "Internet of Things (IoT) Based Patient Fall Prediction and Monitoring System," *2021 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.
- [51] J. D. L. Cruz, D. Shimizu, and **K. George**, "Using EEG for the Analysis of Heat Stress on Quick Decision-Making," *2021 IEEE Annual Information Technology, Electronics and Mobile Communication Conference*.
- [52] H. Lin, C. M. Martinez, K. Lee, I. Izabal, T. Groom, A. Coddling, A. Govalkar, and **K. George**, "Design and Implementation of a Digital Radar Pulse Receiver on FPGA," *2021 IEEE Annual Information Technology, Electronics and Mobile Communication Conference*.
- [53] S. Kaheh, M. Ramirez, and **K. George**, "Using Concurrent fNIRS and EEG Measurements to Study Consumer's Preference," *2021 IEEE Annual Information Technology, Electronics and Mobile Communication Conference*.
- [54] A. Govalkar and **K. George**, "Siamese Network Based Pulse and Signal Attribute Identification," *2021 IEEE Annual Information Technology, Electronics and Mobile Communication Conference*.
- [55] S. Kaheh, M. Ramirez, and **K. George**, "Study on the Effect of Product Brand and Pricing Using Biosignals," *2021 IEEE XXVIII International Conference on Electronics, Electrical Engineering and Computing*.
- [56] J. D. L. Cruz and **K. George**, "Analysis of Stress from Playing a Firefighter Simulator using EEG Signals," *2021 IEEE XXVIII International Conference on Electronics, Electrical Engineering and Computing*.
- [57] A. Govalkar, J. Samawi, T. Tothong, and **K. George**, "Brain-Computer Interface for Quadcopter Morphology Manipulation," *2021 IEEE International Conference on Electronics, Computing and Communication Technologies*.
- [58] H. Lin, C. M. Martinez, K. Lee, I. Izabal, T. Groom, A. Coddling, A. Govalkar, and **K. George**, "Signal Generation and Continuous Tracking with Signal Attribute Variations using Software Simulation," *2021 IEEE International Conference on Electronics, Computing and Communication Technologies*.

- [59] T. Groom, D. Barrios, and **K. George**, “An In-Depth Analysis of RFID Versus Barcode Scanning for Tactile Learning,” *2021 IEEE International Conference on Electronics, Computing and Communication Technologies*.
- [60] S. Kaheh, M. Ramirez, J. Wong, and **K. George**, “Neuromarketing using EEG Signals and Eye-tracking,” *2021 IEEE International Conference on Electronics, Computing and Communication Technologies*.
- [61] J. Juliano, J. Lin, A. Erdogan, and **K. George**, “MPSoC FPGA-Based Radar Warning Receiver,” *2021 IEEE International Conference on Electronics, Computing and Communication Technologies*.
- [62] R. Natharani, F. Liri, J. Samawi, H. Lin, N. Ruppert, K. Lee, **K. George**, and A. Panangadan, “Voice Controlled Object Grasping Robotic Arm for Visually Impaired Disabled Veterans,” *2021 IEEE International Conference on Electronics, Computing and Communication Technologies*.
- [63] J. Lin, J. Juliano, A. Erdogan, and **K. George**, “Pulse Separation Using Time-Frequency Mask and Machine Learning,” *2021 IEEE Computing and Communication Workshop and Conference*.
- [64] C. M. Melgoza, H. Lin, I. Izabal, A. Govalkar, K. J. Lee, A. Erdogan, and **K. George**, “Wavelet Analysis Using Hilbert Transform and Matching Algorithm for Radar Receiver System,” *2021 IEEE Computing and Communication Workshop and Conference*.
- [65] J. Lin, J. Juliano, A. Erdogan, and **K. George**, “Radar Pulse on Pulse Identification Algorithm Hardware Acceleration Performance Analysis,” *2021 IEEE Computing and Communication Workshop and Conference*.
- [66] J. Kachhia and **K. George**, “EEG-Based Image Classification Using Machine Learning Algorithms,” *2021 IEEE Computing and Communication Workshop and Conference*.
- [67] U. Shah, J. Wang and **K. George**, “Classifying Sound Sources Based on Directions Using Audio Visual Stimulus,” *2021 IEEE Computing and Communication Workshop and Conference*.
- [68] R. Bagwe, R. Natharani, **K. George** and A. Panangadan, “Natural Language Controlled Real-Time Object Recognition Framework for Household Robot,” *2021 IEEE Computing and Communication Workshop and Conference*.
- [69] R. Parekh, U. Shah and **K. George**, “Experimental Study on 3D Fractal Base Antennas Design for Efficient Wi-Fi Energy Harvesting,” *2021 IEEE Computing and Communication Workshop and Conference*.