Kiran George

Associate Dean
Graduate Programs, Faculty Research and Innovation
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EDUCATION

Ph.D. **Electrical Engineering, Wright State University, Dayton, Ohio, 2007**

M.S. **Electrical Engineering, Wright State University, Dayton, Ohio, 2002**

B.S. **Electrical Engineering, Bharathiar University, India, 1999**

EXPERIENCE

Associate Dean, Graduate Programs, Faculty Research and Innovation
College of Engineering and Computer Science, California State University, Fullerton
January 2024 – present.

- Collaborate with the Dean to develop a strategic vision for all graduate programs, lead outreach and recruitment efforts, and assess existing programs for future growth, providing recommendations for resource allocation.

- Develop and oversee programs that promote faculty research and scholarship, coordinating with the Office of Research and Sponsored Projects to facilitate access to resources, funding, and training, and advancing faculty research as a high-impact practice to support student success.

- Lead the College's engagement in developing the ECS Innovation Hub and community partnerships by collaborating on staffing and funding models, building industry relationships, advising on space design, and promoting cross-college initiatives that enhance student innovation, workforce readiness, and curriculum development.

Dean's Innovation Fellow, College of Engineering and Computer Science
California State University, Fullerton, July 2023 – December 2023.

- Conduct in-depth research on best practices in engineering and computer science within innovation ecosystems, with a specific focus on CSU institutions and student-centric initiatives, while also exploring staffing, funding, and legal frameworks for implementing innovative practices within ECS.
- Assume a leadership role in space planning and design for the new *ECS Innovation Hub*, aligning it with the goals of fostering innovation and collaboration, and provide recommendations for collaborative enhancements both within ECS and with other colleges.
- Collaborate with the Dean and Chairs to share best practices and suggestions and representing the College in matters related to the *ECS Innovation Hub* and community partnerships, bringing exposure, resources, and value to the institution.

Program Coordinator*, Computer Engineering Program, College of Engineering and Computer Science, California State University, Fullerton, January 2015 – August 2022.

(*Equivalent to a Department Chair position with separate budget, faculty lines and staff*)

- Implemented a range of program and curricular improvements that have positively influenced student learning, enhanced retention rates, and reduced time-to-degree; B.S. Degree in Computer Engineering still maintains its standing since 2020 as the #7 ranked program nationwide among non-Ph.D. granting institutions according to *US News and World report.*

- Increased the extramural grant submissions, fostered department-level fundraising initiatives to bolster faculty research and student experiences, and provided mentorship for junior faculty in the grant submission process; Computer Engineering faculty collectively brought in $6M+ as PI/Co-PI (highest in ECS).

- Served as the Accreditation Board for Engineering and Technology (ABET) Coordinator for Computer Engineering during the 2014 and 2020 review cycles. Wrote the ABET Self-Study Report, orchestrated all elements essential for the evaluation and assessment of the Program Educational Objectives (PEOs) and the Student Outcomes (SOs), and compiled pertinent documents in preparation for the ABET accreditation visit in 2014 and 2020; program garnered NGR (Next General Review) accreditation status, the highest level of accreditation attainable, in both 2014 and 2020.

- Proposed and implemented two degree programs, *4-year Integrated BS/MS program* and *Masters in Science*, with 10 new courses in Computer Engineering. The *4-year Integrated BS/MS degree* program in Computer Engineering is a distinct initiative that significantly enhances CSUF's capacity to attract high-achieving students who might not have otherwise considered CSUF. In a dual role as the program advisor, took the lead in spearheading marketing efforts during the program's launch. The inaugural cohort of 8 students graduated in 2018.

- Maintained an environment conducive to faculty satisfaction and fostering student success; effectively oversaw the program's daily operations; planned and managed all budgetary matters, software and hardware needs of the program; successfully recruited and hired five tenure-track faculty members for the program; supervised and coordinated course offerings and faculty teaching assignments; managed curriculum development, revisions, and improvements effectively; conducted staff performance reviews; evaluated tenure-track and part-time faculty; coordinated activities for various department committees, including Continuous Improvement, Curriculum, and Graduate Committee; reconciled P-Card expenditure and approved Instructional student (ISA) and Research Assistant (RA) hours; conducted New Student Orientation (NSO), Transfer Student Orientation (TSO), and Graduate NSO, and coordinated outreach activities including *Welcome to CSUF day*, Experience CSUF day, and lab tours.

Professor, Electrical and Computer Engineering, College of Engineering and Computer Science, California State University, Fullerton, August 2022 – Present.

Professor, Computer Engineering Program, College of Engineering and Computer Science, California State University, Fullerton, August 2016 – August 2022.

Associate Professor, Computer Engineering Program, College of Engineering and Computer Science, California State University, Fullerton, August 2013 – August 2016.

Assistant Professor, Computer Engineering Program, College of Engineering and Computer Science, California State University, Fullerton, August 2007 – August 2013.

Key Achievements as a Faculty

- Recipient of the National Science Foundation (NSF)'s most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research, the prestigious *NSF Faculty Early Career Development (CAREER)* award, only the second recipient of the award at CSUF.

- As a teacher-scholar, primary focus was on actively involving students in real-world research to address engineering challenges, with a particular emphasis on assistive technology, neuroadaptive systems, and cyber-physical systems.

- Served as the investigator and managed more than 15 extramural grants and industry sponsored projects, totaling over $4 million from NSF, US Veterans Affairs, US Army Research Labs, SoCal Gas Company, Keck Foundation, Disability Communication Fund, CISCO and Mercury Systems.

- Produced a prestigious body of scholarly work, comprising over 160 peer-reviewed technical articles and reports, with 86% of them published in the *Institute of Electrical and Electronics Engineers* (IEEE), the world's largest technical professional organization committed to advancing technology; Co-authored over 130 research papers with students which allowed them to present their work at prestigious IEEE conferences and symposiums.

- Operates the *Bio-electric Signal based Systems* lab with its primary focus on design and development of affordable, and user-friendly assistive technology (AT) devices that require minimal training to operate; collaborated with several support organizations and institutions, including ALS Association and Casa Colina Hospital; completed several bio-medical research projects, many of which involved prototype testing with individuals with disabilities and free device give outs.

- As an extension of various sponsored projects, supervised and guided over 250 undergraduates and graduates in Computer Engineering, and has in addition hosted over 100 local junior college and high school students, and international students from Brazil through various partnerships including *Student International Research Institute* (SIRI).

- Served as a faculty advisor to over 450 students on their capstone senior design projects (470 and 471 - Multidisciplinary Projects in Computer Engineering I & II).

- Prepared accreditation notebooks for EGCP 180, 280, 281, 381, 441, 450, 470 and 471 for the Computer Engineering ABET accreditation visit in Fall 2008.

- Proposed and developed 10 new courses (EGCP 446, 447, 456, 541, 542, 543, 556, 560, 565 & 570) and revised existing courses.

- Conducted numerous outreach and collaborative activities at local high schools and community colleges to promote the BS degree program in Computer Engineering; actively

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engaged with external partners and stakeholders, including local industry, with the goal of enhancing the visibility and impact of the Computer Engineering program, ultimately contributing to the program's growth and success.
- Proposed and setup Very-large-scale integration (VLSI) lab (2009)
- Proposed and setup High-Performance Computing (HPC) lab (2011)

RESEARCH INTERESTS

- **Brain-Computer Interface (BCI) Technology:**

  Research on BCI based cognitive system architecture:
  § Sensing and Decoding of Visual Stimuli using Commercial Brain Computer Interface Technology with a Cognitive Level Function.
  § Automated Sensing, Interpretation and Conversion of Facial and Mental Expressions into Text Acronyms using Brain-Computer Interface Technology.

- **Biomedical Research:**
  § Design, Implementation and Evaluation of a Brain-Computer Interface Controlled Mechanical Arm for Rehabilitation.
  § Low-cost Assistive technology devices.

- **Wideband Digital Receivers**:
  § High-resolution spectral measurement for digital wideband receivers through amplitude comparison and empirical frequency estimation.
  § Modular test RF instrumentation and measurement for a hybrid computing digital wideband receiver.
  § Design and implementation of intelligent pulsed radar receiver.
  (collaborative project with Mercury Systems)

HONORS AND AWARDS

2021   University Faculty Marshal for Commencement

2020   *Outstanding Professor* award

2019   College of Engineering and Computer Science Distinguished Faculty Marshal

2017   Recipient of *L. Donald Shields Excellence in Scholarship and Creativity* Award

2012   Recipient of *NSF Faculty Early Career Development (CAREER)* award

2012   Recognized for Service
         (Faculty Recognition: Scholarly & Creative Activity event, April 2012)

2011   Recognized for Sponsoring Student Research and Creative Activities
         (Faculty Recognition: Scholarly & Creative Activity event, April 2011)

2010   Recognized for Outstanding Record in Scholarly & Creative Activity
        (Faculty Recognition: Scholarly & Creative Activity event, April 2010)

2006   Recipient of the Dean's Award for Outstanding Graduate Student
        (Ph. D. Engineering Program)

2003   Recipient of Competitive Dayton Area Graduate Studies Institute (DAGSI)
        Scholarship, Home Institution - Wright State

GRANTS AWARDED

<u>Current Grants</u>

- **NSF IIS-Expand AI grant**
  [Co-PI; project duration: 2 years; $400,00]

  The INSPIRE project advances knowledge by integrating culturally responsive AI teaching modules, creating an inclusive AI career pathway, promoting interdisciplinary collaboration, and establishing a campus-wide hub to foster innovation, inclusivity, and sustainable knowledge-sharing in AI education and research.

- **DoD MRI grant**
  [Co-PI; project duration: 1 year; $353,506]

  This DoD MRI proposal requests funding to acquire advanced instrumentation, including a materials printer, atomic force microscope, sputter coater, and microwave synthesizer, to enhance interdisciplinary biomedical engineering research and education hubs at CSUF, supporting rapid prototyping, precise material characterization, and advanced sensor studies.

- **CA Learning Lab grant**
  [Co-PI; project duration: 1.5 years; $150,000

  The *Titan Research Immersion Program* provides underrepresented freshman and sophomore students with an 8-week immersion in generative AI for chip design, followed by a year-long research program and the development of AI-driven open educational resources to prepare them for careers in the semiconductor industry.

- **VentureWell Program grant**
  [PI; project duration: 3 years; $30,000

  The *ECS Innovation Launchpad*, in partnership with the Center for Entrepreneurship, supports underrepresented engineering and computer science students by providing resources, stipends, and hands-on experience to transform their ideas into startups, including MVP development through the ECS Innovation Idea Prototyping Hub.

- **NSF SCC-IRG grant**
  [Co-PI; project duration: 3 years; $1,215,370]

  The project investigates the social and technical challenges of adopting sensor-based technologies, such as tele-mental health services. The project will explore the issues using

a combination of surveys and an innovative "lean design" approach. Lean design refers to developing a solution in an iterative way with rapid development of prototypes that can be quickly evaluated and the lessons learned applied to the next iteration. This approach includes the community partners in the design and evaluation of technology prototypes.

Past Grants

- **Mercury Defense Systems** research grant
  [Sole Investigator; project duration: 3 years; $300,000]

  The project involves developing a hardware-software solution that would survey the radio frequencies (RF) in an environment and classify it based on predetermined need and prior knowledge. This system, that learns with experience, will be part of airborne radar systems.

- **SoCal Gas Grant**
  [PI; project duration: 1 year; $15,000]

  The objective of the project is to develop a self-sustaining carbon capturing system developed to absorb and store carbon dioxide from indoor/outdoor atmospheres leaving the air fresher. This system, in the form of an artificial tree, monitors CO_2 levels continuously and absorbs excess CO_2 above an acceptable level.

- **U.S. Department of Veterans Affairs** research grant
  [PI; project duration: 2 years; $200,000]

  The overarching goal of this effort is to develop a low-cost robotic aid system that can be rapidly trained to semi autonomously perform visuospatial tasks utilized in typical activities of daily living (ADLs), and which can be easily used by visually impaired persons.

- **CISCO Digital Economy Initiative** grant
  [Co-PI; project duration: 3 years; $296,253]

  The objective of the project is to develop an industry-focused IoT curriculum that will enable students graduating from this program to be competitive when applying for jobs in the local IoT industry and be productive as soon as they begin their career.

- **Keck Foundation:** BS in Engineering with Biomedical Device Engineering Option
  [Co-PI, $300,000, 36 months]

  The objective of the project is to develop BS in Engineering degree program with Biomedical Device Engineering option; the program is an interdisciplinary engineering program integrating medical device, assistive and rehabilitative technology research and project activity by undergraduate students, faculty mentors, and industry partners.

- **Mercury Defense Systems** Research Grant
  [Sole Investigator; project duration: 2 years; $100,000]

  The objective of this effort is to design and implement a signal classification algorithm capable of cognitive learning for wideband non-coherent digital receivers. The receiver is able to classify multiple simultaneous radar signals with low false alarm rate based on the signal environment, attributes and cues, while simultaneously enhancing its knowledge base through cognitive learning.

- **NSF CAREER grant** [project duration: 5 years; $400,000]

  The objective of this effort is to design and implement an intelligent wideband digital receiver capable of achieving a "near-zero" false alarm rate and a high instantaneous dynamic range by ascertaining the legitimacy of signals while categorizing and tracking incoming signals based on the signal environment, attributes, and simultaneously enhancing its knowledge base.

- **NSF S-STEM grant:** [PI; project duration: 5 years; $598,000]

  This project establishes the ECS Academic Catalyst for Excellence (ACE) Scholarship Program, a comprehensive educational support system designed to ensure student success. The scholarship will serve as a catalyst that will allow students to focus diligently on their academics. The program awarded scholarships to 62 students in ECS over a period of 12 semesters, and leveraged the well-established network of ECS and University student services to support cohorts of ACE scholars majoring in ECS disciplines.

- **Disability Communication Funds** [Sole Investigator; project duration: 1 year; $100,000]

  The overarching goal of this project is to design and pilot test a low-cost Electrooculography (EOG) based electronic communication system (estimated cost to be under $100). This system will enable ALS patients to effortlessly access the internet and communicate via e-mail, text, chat, Skype, using only eye movements, blinks and eye brow raises.

- **NSF I-Corps grant** [PI; project duration: 6 months; $50,000]

  The proposed work involves developing an innovative human-technology interface (HTI) system, which allows users to operate and interact with electronic devices solely with expressions and thoughts. The proposed HTI system, with a mobile app as the user interface, will utilize self-learning algorithms along with low-cost commercially-off-the-shelf (COTS) brain-computer interface (BCI) technology.

- **Disability Communication Funds** [Sole Investigator; project duration: 1 year; $100,000]

  The overarching goal of this project is to design and pilot test a low-cost brain-computer interface (BCI) based electronic communication system (estimated cost to be under $150). This system will enable ALS patients to effortlessly access the internet and communicate via e-mail, text, chat, Skype, using mental thoughts, facial expressions and head movements, with minimal training.

- **NSF BRIGE grant** [Sole investigator; project duration: 3 years; $174,795]

The project aims to advance the digital receiver technology using a hybrid high performance computing platform. The main effort of this work will center on intelligently partitioning the signal processing tasks of the receiver to optimally utilize the best features of COTS hardware accelerators. The proposed receiver design capable of high-resolution spectrum estimation will provide remarkable improvement in performance over its predecessor.

- **US Army Research Lab grant** [Sole investigator; project duration: 1 year; $122,243]

The technical objective of this effort is to establish an innovative research that will design and implement a digital radar receiver system comprising of multiple wideband receivers to achieve an ultrawide instantaneous bandwidth (IBW) along with a high instantaneous dynamic range (IDR) and frequency resolution (FR). The proposed system, implemented on a hybrid accelerator cluster comprising of both off-the-shelf graphics processing units (GPUs) and field-programmable gate arrays (FPGAs), acquires signal data at an aggregate rate of 6GB/sec and is capable of real-time simultaneous multiple signal detection. Using several advanced DSP techniques, the proposed receiver system drastically improves its performance over its predecessor designs

- **NSF REU grant** [supplementary grant as part of NSF BRIGE grant; $6000]

- **Engaging Students in Engineering Minigrant** [Stevens Institute subaward to CSUF; Everyday Examples in Engineering Co-Lead; project duration: 1 year; $10,000]

EQUIPMENT DONATION

2012   **Emulex Corporation** (Costa Mesa, CA) **Donation** (equipment cost: $850,000)

2011   **Xilinx University Program Donation** (Purchase Order # 5310-XUP-1-1U9KYM; equipment cost: $4,243)

INDUSTRY FUNDED PROJECTS

2016 - Present   "Pulsed Radar Receiver Implementation on Hardware Accelerator Platforms" funded by **Mercury Defense Systems**, Cypress, CA ($400,000 total)

2013   "Brain-Computer Interface Controlled Robotic Arm" funded by **Western Digital**, Irvine, CA ($7500)

PATENTS

- Provisional Patent Filed: "*Facial Expression and Head Movement Based Electronic Communication Device*," Sole Inventor; Year filed: 2015

- Provisional Patent Filed: "*Medical Alert and Communication Device*"; Sole inventor; Year filed: 2015

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 UEMCO*N.

[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. Codding, 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. Codding, 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] 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*.

[51] H. Lin, C. M. Martinez, K. Lee, I. Izabal, T. Groom, A. Codding, 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*.

[52] 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*.

[53] A. Govalkar and **K. George**, "Siamese Network Based Pulse and Signal Attribute Identification," *2021 IEEE Annual Information Technology, Electronics and Mobile Communication Conference*.

[54] 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*.

[55] 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*.

[56] 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*.

[57] H. Lin, C. M. Martinez, K. Lee, I. Izabal, T. Groom, A. Codding, 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*.

[58]   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*.

[59]   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*.

[60]   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*.

[61]   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*.

[62]   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*.

[63]   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*.

[64]   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*.

[65]   J. Kachhia and **K. George**, "EEG-Based Image Classification Using Machine Learning Algorithms," *2021 IEEE Computing and Communication Workshop and Conference*.

[66]   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*.

[67]   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*.

[68]   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*.

[69]   R. Bagwe and **K. George**, "Cortically-Coupled Generative Adversarial Network for Target Image Retrieval in Rapid Image Search," *2020 IEEE International Conference on Cognitive Machine Intelligence*.

[70]   D. Parikh and **K. George**, "Conceptual Neuroadaptive Brain Computer Interface for Autonomous Control of Automobile Brakes," *2020 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[71]   J. Kachhia, R. Natharani and **K. George**, "Deep Learning Enhanced BCI Technology for 3D Printing," *2020 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[72]   J. Juliano, J. Lin, A. Erdogan and **K. George**, "Radar Pulse on Pulse Identification Parallel FFT and Power Envelope Algorithm," *2020 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[73]   J. Lin, J. Juliano, A. Erdogan, and **K. George**, "Pulse Separation Using Independent Component Analysis," *2020 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[74]   R. Bagwe and **K. George**, "Automatic Numerical Question Answering on Table Using BERT-GNN," *2020 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[75]   J. H. Samawi, A. Govalkar, T. Tothong and **K. George**, "Morphing Quadcopters," *2020 IEEE Information Technology, Electronics and Mobile Communication Conference*.

[76]   B. Hoang, U. Shah, R. Villanueva and **K. George**, "Study of EEG Signals for Focus Detection for Cocktail Party Phenomenon Using Multiple Sources of Sound," *2020 IEEE Information Technology, Electronics and Mobile Communication Conference*.

[77]   C. M. Melgoza, H. Lin, I. Izabal, A. Govalkar, K. Lee and **K. George**, "Comparing Radar Receiver Pulse Deinterleaving Performance of Differing Window Functions for Bandpass FIR Filter Design," *2020 IEEE Information Technology, Electronics and Mobile Communication Conference*.

[78]   D. Parikh and **K. George**, "Quadcopter Control in Three-Dimensional Space Using SSVEP and Motor Imagery-Based Brain-Computer Interface," *2020 IEEE Information Technology, Electronics and Mobile Communication Conference*.

[79]   R. Bagwe, J. Kachhia, A. Erdogan and **K. George**, "Automated Radar Signal Analysis Based on Deep Learning," *2020 IEEE Computing and Communication Workshop and Conference*.

[80]   J. Lin, J. Juliano, A. Erdogan and **K. George**, "Pulse on Pulse Deinterleaving Radar Algorithm," *2020 IEEE Computing and Communication Workshop and Conference*.

[81]   M. Sreekanta, A. Sarode and **K. George**, "Error Detection Using Augmented Reality in the Subtractive Manufacturing Process," *2020 IEEE Computing and Communication Workshop and Conference*.

[82]   B. Shirke, J. Wong, J. Libut, **K. George** and S. Oh, "Brain-IoT Based Emotion Recognition System," *2020 IEEE Computing and Communication Workshop and Conference*.

[83]   U. Shah, R. Villanueva, B. Hoang, and **K. George,** "Focus Detection Using Spatial Release from Masking," *2020 IEEE Computing and Communication Workshop and Conference.*

[84]   R. Villanueva, B. Hoang, U. Shah, Y. Martinez and **K. George**, "Sensory Audio Focusing Detection Using Brain Computer Interface Archetype," *2019 IEEE International Conference on Cognitive Machine Intelligence.*

[85]   R. Parekh and **K. George**, "Fractal Base Antennas Effects on Wi-Fi Harvesting Technologies," *2019 IEEE International Conference on Cognitive Machine Intelligence.*

[86]   B. Shirke, J. Wong and **K. George**, "Acute Mental Stress Measurement using Brain-IoT System," *2019 IEEE International Conference on Cognitive Machine Intelligence.*

[87]   R. Parekh, D. Luu, K. Jain and **K. George**, "Scavenging Residual Energy from Wi-Fi Sources Using a Rectenna Circuit," *2019 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference.*

[88]   M. Regueiro, B. Shirke, M. Chiu, N. and **K. George**, "Electroencephalographic (EEG) Analysis of Individuals Experiencing Acute Mental Stress," *2019 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference.*

[89]   B. Luu, B. Hansberger, T. Tothong and **K. George**, "Conceptual Neuroadaptive Brain-Computer Interface Utilizing Event-related Desynchronization," *2019 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference.*

[90]   B. Shirke and **K. George**, "EEG-Based Biometrics Utilizing Image Recognition for Patient Identification," *2019 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference.*

[91]   D. Sundaram, A. Sarode and **K. George**, "Vision-Based Trainable Robotic Arm for Individuals with Motor Disability," *2019 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference.*

[92]   A. Erdogan and K. George, "Deinterleaving Radar Pulse Train Using Neural Networks," *2019 IEEE International Conference on Computational Science and Engineering*, 1-3 Aug. 2019, New York, USA.

[93]   B. Luu, B. Hansberger, M. Chiu, V. K. K. Shivappa and **K. George**, "Scalable Smart Home Interface using Occipitalis sEMG Detection and Classification," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference.*

[94]   A. Zaheer, D. Sundaram and **K. George**, "Trainable Robotic Arm for Disability Assistance," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference.*

[95]   V. A. Contractor, A. P. Matthews, H. S. Grewal, R. Tea and **K. George**, "Sip-and-Puff Autonomous Wheelchair for Individuals with Severe Disabilities," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference.*

[96]   V. A. Contractor, H. S. Grewal, N. Jayaprakash, A. P. Matthews and **K. George**, "PCL-Based Autonomous Wheelchair Navigating in an Unmapped Indoor Environments," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[97]   M. Chiu, H. Murthy and **K. George**, "Mobile Switch Control Using Auditory and Haptic Steady State Response in Ear-EEG," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[98]   M. Regueiro, R. Raveendra and **K. George**, "Acute Stress Detection and Analysis Using Resonant Field Imaging (RFI) Technique," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[99]   S. Sisson and **K. George**, "Programmable Errorless Face-Name Association Device with Real-Time Processing," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[100] A. Zaheer and **K. George**, "*Automated Dye-Sensitized Solar Cell Manufacturing System with IoT Monitoring*," *2018 IEEE Ubiquitous Computing, Electronics & Mobile Communication Conference*.

[101] P. Pelayo, H. Murthy and **K. George**, "Brain-Computer Interface Controlled Robotic Arm to Improve Quality of Life," *2018 IEEE International Conference on Healthcare Informatics*.

[102] S. Vu, S. Dee, J. Gotuzzo and **K. George**, "Electromyography based Orthotic Arm and Finger Rehabilitation System," *2018 IEEE International Conference on Healthcare Informatics*.

[103] S. Nonavinakere, E. Cruz, J. Aldana and **K. George**, "Memory Aid Device to Improve Face-Name Memory in Individuals with Alzheimer's Disease," *2018 IEEE International Conference on Healthcare Informatics*.

[104] P. Karuppiah, H. Metalia and **K. George**, "Automation of a Wheelchair Mounted Robotic Arm using Computer Vision Interface," *2018 IEEE International Instrumentation and Measurement Technology Conference*.

[105] K. S. Mistry, D. G. Anil, P. Pelayo, and **K. George**, "An SSVEP Based Brain Computer Interface System to Control Electric Wheelchairs," *2018 IEEE International Instrumentation and Measurement Technology Conference*.

[106] D. G. Anil, K. S. Mistry, P. Pelayo, and **K. George**, "A Tactile P300 Based Brain Computer Interface System for Communication in iOS Devices," *2018 IEEE International Instrumentation and Measurement Technology Conference*.

[107] B. O'Bard and **K. George**, "Classification of Eye Gestures Using Machine Learning for use in Embedded Switch Controller," *2018 IEEE International Instrumentation and Measurement Technology Conference*.

[108] H. Grewal, Aaron Matthews, N. Jayaprakash, C. Shrivastav, and **K. George**, "Autonomous Wheelchair Navigation in Unmapped Indoor Environments," *2018 IEEE International Instrumentation and Measurement Technology Conference*.

[109] V. K. K. Shivappa, M. Solis, B. Luu, and **K. George**, "Home Automation System using Brain Computer Interface Paradigm based on Auditory Selection Attention," *2018 IEEE International Instrumentation and Measurement Technology Conference.*

[110] S. Preetham, F. T. George, and **K. George**, "'Real-Time Deep Learning based System to Detect Suspicious Non-Verbal Gestures," *2018 IEEE International Instrumentation and Measurement Technology Conference.*

[111] S. Preetham, F. T. George, and **K. George**, "Deep Learning Based Recognition of Meltdown in Autistic Children," *CSUPERB: 2018 CSU Biotechnology Symposium.*

[112] H. Grewal, Aaron Matthews, R. Tea and **K. George**, "Autonomous Wheelchair with a Sip-and-Puff Controlled User-Interface for Amyotrophic Lateral Sclerosis Patients," *CSUPERB: 2018 CSU Biotechnology Symposium.*

[113] K. S. Mistry, D. G. Anil, P. Pelayo, and **K. George**, "A Vibrotactile Approach Based on P300 for Brain Computer Interface Paradigm Benchmarked Against Auditory Steady State Response," *CSUPERB: 2018 CSU Biotechnology Symposium.*

[114] V. Palande, A. Zaheer and **K. George**, "Fully Automated Hydroponic System for Indoor Plant Growth," *2017 IEEE International Conference on Identification, Information & Knowledge in the Internet of Things*, October 2017, Shandong, China.

[115] K. S. Mistry, D. G. Anil, V. Palande, and **K. George**, "A Novel Steady-State Visually Evoked Potential (SSVEP) based Brain Computer Interface Paradigm for Disabled Individuals," *IEEE International Conference on Healthcare Informatics*, August 2017, Park City, UT, USA.

[116] S. Preetham, F. T. George, and **K. George**, "Deep Learning Based Recognition of Meltdowns in Autistic Kid," *IEEE International Conference on Healthcare Informatics*, August 2017, Park City, UT, USA.

[117] B. O'Bard, A. Larson, J. Herrera, D. Nega, , and **K. George**, "Electrooculography Based iOS Controller for Individuals with Quadriplegia or Neurodegenerative Disease," *IEEE International Conference on Healthcare Informatics*, August 2017, Park City, UT, USA.

[118] Y. Mangukiya and **K. George**, "Electromyography (EMG) sensor controlled Assistive Orthotic Robotic Arm for Forearm Movement," *2017 IEEE Sensors Applications Symposium*, Glassboro, New Jersey.

[119] J. Herrera, A. Larson and **K. George**, "Electrooculography based Electronic Communication Device for Individuals with ALS," *2017 IEEE Sensors Applications Symposium*, Glassboro, New Jersey.

[120] H. Grewal, Aaron Matthews, R. Tea and **K. George**, "LIDAR-Based Autonomous Wheelchair," *2017 IEEE Sensors Applications Symposium*, Glassboro, New Jersey.

[121] B. Purohit and **K. George**, "Tongue Driven Wireless Electronic Communication Device," *2017 IEEE Sensors Applications Symposium*, Glassboro, New Jersey.

[122] Y. Mangukiya and **K. George**, "Electromyography(EMG) signals controlled Assistive Orthotic Robotic Arm for Forearm Movement," *CSUPERB: 2017 CSU Biotechnology Symposium,* January 2017.

[123]   H. Grewal, A. Matthews, R. Tea and **K. George**, "Autonomous Wheelchair Navigation System for Individuals with Severe Disabilities," *CSUPERB: 2017 CSU Biotechnology Symposium,* January 2017.

[124]   J. Herrera, A. Larson and **K. George**, "EOG Eye Tracker for Computer Control," *CSUPERB: 2017 CSU Biotechnology Symposium,* January 2017.

[125]   N. Shinde and **K. George**, "Brain-Controlled Driving Aid for Electric Wheelchairs," *2016 IEEE International Conference on Wearable and Implantable Body Sensor Networks,* June 2016.

[126]   Castillo, G. Cortez, D. Diaz, R. Espiritu, K. Ilisastigui, B. Obard, and **K. George**, "Hands Free Mouse," *2016 IEEE International Conference on Wearable and Implantable Body Sensor Networks,* June 2016.

[127]   P. Rathod and **K. George**, "Bio-Signal based Emotion Detection Device," Accepted – *2016 IEEE International Conference on Wearable and Implantable Body Sensor Networks,* June 2016.

[128]   J. Speer and **K. George**, "FFT Based Algorithm to Demodulate of High Frequency Chirp Signals," *Proceedings of 2016 IEEE Aerospace Conference,* March 2016.

[129]   D. Mutz and **K. George**, "Costas Loop and FFT Based BPSK Demodulation for Pulsed Radar Receivers," *Proceedings of 2016 IEEE Aerospace Conference,* March 2016.

[130]   C. Maclean, N. Shinde and **K. George**, "Thought and Facial Expression based Driving Aid for Electric Wheelchairs," *CSUPERB: 2016 CSU Biotechnology Symposium,* January 2016.

[131]   K. Tran, A, Castillo and **K. George**, "Sip-Puff based Assistive Technology Device," *CSUPERB: 2016 CSU Biotechnology Symposium,* January 2016.

[132]   F. Heng, P. Rathod, and **K. George**, "Bio-Signal Based Emotion Detection Device," *CSUPERB: 2016 CSU Biotechnology Symposium,* January 2016.

[133]   **K. George** and C.-I. H. Chen, "Performance Measurement of a High-Performance Computing System Utilized for Electronic Medical Record Management," *International Journal of Advancements in Computing Technology*, vol 7, No. 1, January 2015.

[134]   Invited Panelist; "How Research and Methodologies in Systems, Human-Machine Systems, and Cybernetics can be applied to BMI Systems," *2014 IEEE International Conference on Systems, Human-Machines Systems, and Cybernetics*, October 2014.

[135]   Invited Panelist; "What Have We Learned, Where Do We Go From Here," *2014 IEEE International Conference on Systems, Human-Machines Systems, and Cybernetics*, October 2014.

[136]   **K. George**, A. Iniguez, Y. Cheng, G. Quental, and J. Gutierrez, "Low-Cost BCI Assisted System to Improve Quality of Life for ALS Patients," BCI Exhibit - *2014 IEEE International Conference on Systems, Human-Machines Systems, and Cybernetics*, October 2014.

[137] **K. George**, A. Iniguez, and H. Donze, "Sensing and Decoding of Visual Stimuli using Commercial Brain Computer Interface Technology with a Cognitive Level Function," *Proceedings of the 2014 IEEE International Instrumentation and Measurement Technology Conference proceedings,* May 2014.

[138] **K. George**, A. Iniguez, and H. Donze, "Automated Sensing, Interpretation and Conversion of Facial and Mental Expressions into Text Acronyms using Brain-Computer Interface Technology," *Proceedings of the 2014 IEEE International Instrumentation and Measurement Technology Conference proceedings,* May 2014.

[139] **K. George**, A. Iniguez, and H. Donze, "Design, Implementation and Evaluation of a Brain-Computer Interface Controlled Mechanical Arm for Rehabilitation," *Proceedings of the 2014 IEEE International Instrumentation and Measurement Technology Conference proceedings,* May 2014.

[140] **K. George** and C.-I. H. Chen, "Modular Test RF Instrumentation and Measurement for a Hybrid Computing Digital Wideband Receiver," *Proceedings of the 2014 IEEE International Instrumentation and Measurement Technology Conference proceedings,* May 2014.

[141] **K. George**, K. and C.-I. H. Chen, "Multiple Signal Detection Digital Wideband Receiver Utilizing Hardware Accelerators*," IEEE Transactions on Aerospace and Electronic Systems*, vol.49, no.2, 706-712, April 2013.

[142] **K. George**, "Evaluating the Impact of ECS Academic Catalyst for Excellence (ACE) Scholarship Program," *Proceedings of the 2013 ASEE-PSW conference,* April 2013.

[143] **K. George**, "CoursePedia for Engineering Courses," *Proceedings of the 2013 ASEE-PSW conference,* April 2013.

[144] **K. George** and C.-I. H. Chen, "Measurement setup and performance analysis of digital receiver system with multiple signal detection and expandable bandwidth capabilities on a multiprocessor hardware platform," *Int. J. Engg. Sc. & Mgmt.*, vol.3, no.1, 46-54, June 2013.

[145] **K. George** and V. Venugopal, "Design and performance measurement of a high-performance computing cluster," *Proceedings of the 2012 IEEE International Instrumentation and Measurement Technology Conference*, pp. 2531 - 2536, May 2012.

[146] **K. George** and C.-I. H. Chen, "Automated mixed-signal SoC BIST synthesis utilizing hardware accelerators*," Proceedings of the 2012 IEEE International Instrumentation and Measurement Technology Conference*, pp. 1184 - 1189, May 2012.

[147] **K. George**, "Integration of Low-cost Classroom Technologies into Engineering Classrooms," *Proceedings of the 2012 ASEE-PSW conference,* February 2012.

[148] **K. George**, "A STEM Scholarship Program Model to Reverse High Student Attrition," *Proceedings of the 2012 ASEE-PSW conference,* February 2012.

[149] **K. George** and C.-I. H. Chen, "Biologically-Inspired Signal Processor with High Instantaneous Dynamic Range and Frequency Resolution," *International Journal on Smart Sensing and Intelligent Systems*, vol. 4, no. 4, 547 – 567, Dec 2011.

[150]   **K. George** and C.-I. H. Chen, "A Hybrid Computing Platform Digital Wideband Receiver Design and Performance Measurement," *IEEE Transactions on Instrumentation and measurement*, no. 99, pp. 1-3, June 2011.

[151]   **K. George**, Engineering innovation project presented at *2011 National Academy of Engineering's Frontiers of Engineering Education Symposium* for early career faculty members who are developing and implementing innovative educational approaches in engineering disciplines (one among 65 attendees chosen from across the country).

[152]   **K. George**, "Cost-Effective Integration of Tablet Technology into Engineering Courses," *Proceedings of the 2011 ASEE-PSW conference*, April 2011.

[153]   **K. George** and C.-I. H. Chen, "Design and Performance Evaluation of a Digital Wideband Receiver on a Hybrid Computing Platform," *Proceedings of the 2011 IEEE International Instrumentation and Measurement Tech. Conf.*, pp. 1-5, May 2011.

[154]   **K. George** and C.-I. H. Chen, "Logic Built-In Self-Test for Core-Based Designs on System-on-a-Chip," *IEEE Trans. Instrumentation and Measurement*, vol. 58, no.5, pp. 1495 – 1504, May 2009.

[155]   **K. George**, C.-I. H. Chen, and J. B. Y. Tsui "Extension of Two Signal Dynamic Range of Wideband Digital Receivers using Kaiser Window and Compensation Method," *IEEE Trans. Microwave Theory and Techniques*, vol. 55, no. 4, pp. 788– 794, April, 2007.

[156]   **K. George** and C.-I. H. Chen, "Logic Built-In Self-Test for Core-Based Designs on System-on-a-Chip," *Proceedings of the 2008 IEEE International Instrumentation and Measurement Technology Conf.*, pp. 1503-1508, May 2008.

[157]   **K. George** and C.-I. H. Chen, "Multiple Signal Detection and Measurement Using a Configurable Wideband Digital Receiver," *Proceedings of the 2007 IEEE International Instrumentation and Measurement Technology Conf.*, May 2007.

[158]   **K. George** and C.-I. H. Chen, "Configurable and Expandable FFT Processor for Wideband Communications," *Proceedings of the 2007 IEEE International Instrumentation and Measurement Technology Conf.*, Warsaw, Poland, May, 2007.

[159]   **K. George**, C.-I. H. Chen, and J. B. Y. Tsui "Extension of Two Signal Spur Free Dynamic Range of Wideband Digital Receivers using Kaiser Window and Compensation Method," *Proceedings of the 2006 IEEE MTT International Microwave Symposium*, pp. 1955-1958, June 2006.

[160]   C.-I. H. Chen, **K. George**, W. McCormick, J. B. Y. Tsui, S. L. Hary, and K. M. Graves, "Design and performance evaluation of a 2.5-GSPS Digital Receiver," *IEEE Trans. Instrumentation and Measurement*, vol. 54, no. 4, pp. 1089-1099, June 2005.

[161]   C.-I. H. Chen and **K. George**, "Configurable two-dimensional Linear Feedback Shifter Registers for parallel and serial Built-In Self-Test," *IEEE Trans. Instrumentation and Measurement*, vol. 53, no. 4, pp. 1005-1014, August 2004.

[162]   C.-I. H. Chen and **K. George**, "2.5 GSPS/1 GHz Wide Band Digital Receiver," *Proceedings of the 2003 IEEE Industrial Electronics*, vol. 2, pp. 1888-1893, Nov. 2003.

[163]   C.-I. H. Chen, **K. George**, and J. B. Y. Tsui, "Design and measurement of 2.5 GSPS Digital Receiver," *Proceedings of the 2003 IEEE Instrumentation and Measurement technology Conf.*, vol. 1, pp. 258-263, May. 2003.

[164]   C.-I. H. Chen and **K. George**, "Configurable two-dimensional Linear Feedback Shift Registers for Built-In Self-Test," *Proceedings of the 2003 IEEE Instrumentation and Measurement technology Conf.*, vol. 2, pp. 1431-1436, May. 2003.

[165]   C.-I. H. Chen and **K. George**, "Configurable two-dimensional Linear Feedback Shift Registers for random patterns logic BIST," *Proceedings of the 2003 IEEE Int. Symp. Circuits and Systems*, vol. 5, pp. 25-28, May. 2003.

[166]   C.-I. H. Chen and **K. George**, "Automated synthesis of Configurable two-dimensional Linear Feedback Shifter Registers for random/embedded test patterns," *Proceedings of the 2003 IEEE Int. Symp. Quality Electronic Design*, vol. 5, pp. 24-26, March. 2003.

INTRAMURAL GRANTS/AWARDS

Funding Source	Funding Year	Proposal Title	Funding Amount
Instructionally Related Activities (IRA)	2016 - 2023	Multidisciplinary Senior Design Projects in Computer Engineering	$66,000
Research, Scholarship and Creative Activity	2019	Study on Mixed Reality-based Visualization and Interaction Tool Integration of remote mental health services in permanent supportive housing	$15,000 $15,000
FDC (FEID Grant)	2016	Integrating Augmented Reality into Engineering Courses	3 WTU release time
HPRI Mini Grant	2014	Low-Cost BCI based Robotic System to Improve Quality of Life for ALS Patients	3 WTU release time
Instructionally Related Activities (IRA)	2015	Multidisciplinary Senior Design Projects in Computer Engineering	$7,500
OGC Junior Faculty Award	2014	Intelligent Indoor Air Quality and Ventilation System	$5,000 + 3 WTU release time
Instructionally Related Activities (IRA)	2014	Multidisciplinary Senior Design Projects in Computer Engineering	$7,700
FDC (FEID Grant)	2014	Lab to Market – entrepreneurship in engineering	3 WTU release time
Instructionally Related Activities (IRA)	2013	Multidisciplinary Senior Design Projects in Computer Engineering	$7,400
FDC (FEID Grant)	2013	Integrating Service-Learning into Capstone Design Project Course in Computer Engineering	3 WTU release time
CICE Mini grant	2013	Add Service-Learning to a Course	$1000
OGC Junior Faculty Award	2012	Neural Signal Based Assistive Technology for Spinal Cord Injury (SPI) Patients	$5,000 + 3 WTU release time
Instructionally Related Activities (IRA)	2012	Multidisciplinary Senior Design Projects in Computer Engineering	$7,300
OGC Incentive Grant	2011	Design and Implementation of an Evolving Intelligent Telemedicine Clinical Decision Support System	$10,000

FDC (FEID Grant)	2011	Design and Implementation of low-cost SmartBoards for engineering classrooms	$55 + 3 WTU release time
FDC Faculty-Student Research Grant (Fall)	2011	Microchip Implementation of Brain-Computer Interface (BCI) for Biomedical Applications	$1000
Instructionally Related Activities (IRA)	2011	Multidisciplinary Senior Design Projects in Computer Engineering	$6,700
OGC Incentive Grant	2010	Titan Supercomputing Centre	$10,000
FDC Faculty-Student Research Grant (Spring)	2010	Design and Implementation of a Cost-Effective Solar-Powered Fully Automated Algae Fuel Production System	$1000
FDC Faculty-Student Research Grant (Fall)	2010	Fully Automated Solar-Powered Water Purification System - A Sustainable Water Solution	$995
Instructionally Related Activities (IRA)	2010	Multidisciplinary Senior Design Projects in Computer Engineering	$5,505
FDC (FEID Grant)	2010	Cost-Effective Integration of Single-Tablet Model into Computer Engineering Courses	$423 + 3 WTU release time
ECS Dean's Office	2010	Cost-Effective Integration of Single-Tablet Model into Computer Engineering Courses	$7,000
Accessible Technology Initiative (ATI)	2010	Adaptation of EGCP 450 Class to Meet ATI Mandates	$1,250
ECS Dean's Office	2010	Development of High Performance Computing Lab	$63,540
OGC (Mini-Grant)	2010	Fully Automated Solar-Powered Biodiesel Processor	$3,000
CSUF Incentive Program award	2009	ECS ACE Scholarship program	$2,000
FDC (Faculty-Student Research Grant)	2009	Fully Automated Solar-Powered Biodiesel Processor	$830
FDC (Untenured Faculty Development Intramural Grant)	2009	Development of Undergraduate Course in Logic Design for Nano ICs	$1000 + 3 WTU release time
OGC (General Faculty Award)	2009	Microchip Implementation Of High Frequency Ultrasound Transducer Array With Applications In Medicine	$3,000
Vice President for Academic Affairs Stipend)	2008	High Precision DSP Algorithm Development to Extend Digital Receiver Performance	$6,500

DEPARTMENT RELATED SERVICE AND ACTIVITIES

- Vice Chair, Electrical and Computer Engineering Department (08/2022 – present)
- ABET Coordinator for Computer Engineering (2014 and 2020 Review Cycle)
- Serving as capstone senior design project advisor (2008 to present)
- Served as undergraduate advisor in Computer Engineering program (CpE) (2009 – 2017)
- Serving as *4 year Integrated BS/MS Degree* program advisor (2014 to present)
- Serving as NSO, TSO, Grad NSO advisor
- Faculty Advisor, IEEE Computer Society Student Chapter (2012 - 2013)
- Member, CpE Faculty Search Committee (2009, 2011, 2012, 2013 & 2015)
- Member, CpE Continuous Improvement Committee (2010 – present)
- Member, CpE Scholarship Committee (2007 & 2010)
- Member, CpE Planning Committee (2012 & 2013)
- CpE DPC Chair (2014-15)

SERVICE TO THE COLLEGE OF ECS

- Faculty Marshall – ECS Commencement (2008 - present)
- Participation in *Welcome to CSUF Day* Event (2008 - present)
- Host Professor, *Professor for a Day* Event (2008 - present)
- ECS Space Committee Member (2016)
- ECS Open House, (2008 - present)
- Member, ECS Curriculum Committee (2008 & 2009)
- Member, ECS Scholarship Committee (2009)

UNIVERSITY SERVICE

- UPD Chief's Advisory Board (2024)
- Taskforce Member, Innovation and Makerspaces Hub in library (2023)
- Member - Sponsored Programs Post Award Work Group (2023)
- Faculty Research Policy Committee (2016 - 2022)
- Member - ECS Dean Search Committee (2018)
- Academic master Plan, Member (2015 - 16)
- Steering Committee Member, Strategic Planning (co-chair: Goal 4)
- Taskforce Member, Strategic Plan Goal 1 – Assessment)
- Taskforce Member (Strategic Plan Goal 2 – High Impact Practices)
- Member, Assessment and Educational Effectiveness Committee (2013 & 2014)
- OGC Asst. Director Search Committee (2012 & 2013)
- Member, Internships and Service-Learning Committee Meeting (2013, 2014 & 2015)

- Member, 50th Anniversary Research Celebration Planning Committee (2007)
- Member, OGC Advisory Committee (2010 – 2012)
- FDC Board – ECS representative (2011)

PROFESSIONAL SERVICES/ACTIVITIES

- **Member** of IEEE, ASEE, International Microwave & Instrumentation and Measurement society

- **Reviewer** NSF, FDC (CSUF), IEEE International Symposium on Circuits and Systems, IEEE International Conference on Electronics, Circuits and Systems, IEEE Transactions on Computers, IEEE Transactions on Signal Processing, IEEE Transactions on Instrumentation and Measurement, and IEEE Transactions on Circuits and Systems (I) & (II)