
FACULTY RESEARCH PROFILES

2020-2021

**DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING
AT
UNIVERSITY OF CENTRAL FLORIDA**



FACULTY RESEARCH PROFILES ELECTRICAL & COMPUTER ENGINEERING

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INTRODUCTIONS TO ECE RESEARCH

Welcome to Electrical and Computer Engineering (ECE) at the University of Central Florida. We have talented students, dedicated faculty, state-of-the-art facilities, and quality educational programs. Through delivering research-based education to our students and facilitating technology transfers, ECE faculty continue their research endeavors that generate new knowledge and support technology advances as well as economic growth.

ECE research is categorized into the following four focus groups, each of which consists of several areas:

- Computer Systems and VLSI
 - Data-intensive High Performance Computing, Massive Storage and File System, I/O Architecture Computer Architecture and Evolvable Hardware
 - Secure, Trusted, and Reliable Processor and ASIC Design; Cyber Security and Cryptography
- Cyber-Physical Systems (Communication, Controls, Signal Processing, and Energy Systems)
 - Networked Systems, Cooperative Control, Optimization and Dynamic Games Autonomous Robotic Vehicles, Medical and Assistive Robotics
 - Smart Grids and Energy Systems, Distributed Generation and Optimization, Protection and Control
 - Biomedical Devices and Control
 - Digital Signal Processing, Detection and Estimation
 - Communication Theory, Cognitive Radios and Networks, Wireless Communication and Sensor Networks Machine Learning, Artificial Neural Networks, Distributed Decision
- Micro- and Nano-Systems
 - Microwave Sensors, Antennas, Phased Arrays and Integrated RF
 - Micro- and Nano- Electronics, MEMS devices, Device Modeling, Acoustic Wave Devices Power electronics, Power Semiconductor devices and ICs
 - Optoelectronic Materials, Thin Films Micromachining
- Electromagnetics
 - Microwave Sensors, Antennas, Phased Arrays and Integrated RF Remote Sensing, Satellite Communications

In this booklet, research profiles of individual ECE faculty are included. Separately, annual reports detailing research accomplishments are available upon request.

Thank you for your interests in and support of ECE students, faculty and their research. You are cordially invited to visit us at your convenience. For more information, please visit our web site at www.ece.ucf.edu or contact the ECE office at (407) 823-5942.

Zhihua Qu
Chair, Department of ECE

CONTACT INFORMATION

DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING

Zhihua Qu, Professor & Chair of ECE, 407-823-5976, qu@ucf.edu

Parveen Wahid, Professor, Associate Chair & Undergraduate Coordinator of ECE,
407-823-2610, Parveen.Wahid@ucf.edu

Kalpathy Sundaram, Professor & Graduate Coordinator of ECE, 407-823-5326, sundaram@ucf.edu

TENURE/TENURE-TRACK FACULTY AND RESEARCH FACULTY

Name	Location	Phone	E-Mail
Abdolvand, Reza	HEC 417	(407) 823-1760	Reza.Abdolvand@ucf.edu
Assefzadeh, Mahdi	HEC 312	(407) 823-5957	Mahdi.Assefzadeh@ucf.edu
Atia, George	HEC 429	(407) 823-3467	George.atia@ucf.edu
Batarseh, Issa	HEC 204	(407) 823-0185	Issa.Batarseh@ucf.edu
Behal, Aman	RP 406	(407) 882-2820	Aman.Behal@ucf.edu
Braiman, Yehuda	Creol A240	(407) 823-0742	Yehuda.braiman@ucf.edu
Chen, Kenle	HEC 353	(407) 823-0063	Kenle.Chen@ucf.edu
DeMara, Ronald F.	HEC 310	(407) 823-5916	Ronald.Demara@ucf.edu
Dimitrovski, Aleksandar	RB1-150D	(407) 823-4183	ADimitrovski@ucf.edu
Enyioha, Chinwendu	HEC 416	(407) 823-0122	cenyioha@ucf.edu
Ewetz, Rickard	HEC 235	(407) 823-4766	Rickard.Ewetz@ucf.edu
Fallah, Yaser P.	HEC 355	(407) 823-4182	Yaser.Fallah@ucf.edu
Georgiopoulos, Michael	HEC 114	(407) 823-5338	michaelg@ucf.edu
Gong, Xun	HEC 426	(407) 823-5762	Xun.Gong@ucf.edu
Guo, Zhishan	HEC 443	(407) 823-0124	Zhishan.Guo@ucf.edu
Jones, W. Linwood	HEC 352	(407) 823-6603	ljones@ucf.edu
Kim, Brian	HEC 339	(407) 823-1034	Brian.Kim@ucf.edu
Li, Qifeng	HEC 443	(407) 823-0159	Qifeng.Li@ucf.edu
Lin, Mingjie	HEC 237	(407) 882-2298	Mingjie.Lin@ucf.edu
Mikhael, Wasfy B.	HEC 344	(407) 823-3210	Wasfy.Mikhael@ucf.edu
Qu, Zhihua	HEC 439C	(407) 823-5976	qu@ucf.edu
Rahnavard, Nazanin	HEC 335	(407) 823-1762	Nazanin.Rahnavard@ucf.edu
Simaan, Marwan	HEC 247D	(407) 882-2220	simaan@ucf.edu
Sun, Wei	HEC 306	(407) 823-2344	sun@ucf.edu
Sundaram, Kalpathy	HEC 419	(407) 823-5326	Kalpathy.Sundaram@ucf.edu
Vosoughi, Azadeh	HEC 432	(407) 882-0137	azadeh@ucf.edu
Wahid, Parveen F.	HEC 345E	(407) 823-2610	Parveen.Wahid@ucf.edu
Wang, Jun	HEC 320	(407) 823-0449	Jun.Wang@ucf.edu
Weeks, Arthur	HEC 205	(407) 823-0767	Arthur.Weeks@ucf.edu
Wei, Lei	HEC 418	(407) 823-5098	Lei.Wei@ucf.edu
Yang, Yuxiao	RB1-378	(407)823-0167	Yuxiao.yang@ucf.edu
Yao, Fan	HEC 359	(407) 823-0147	Fan.Yao@ucf.edu
Yuan, Jiann S.	HEC 423	(407) 823-5719	Jiann-Shiun.Yuan@ucf.edu
Yuksel, Murat	HEC 317A	(407) 823-4181	Murat.Yuksel@ucf.edu
Zhou, Qun	HEC 358	(407) 823-3284	Qun.Zhou@ucf.edu

ELECTRICAL & COMPUTER

ENGINEERING FACULTY

RESEARCH PROFILES



Reza Abdolvand
Associate Professor
Ph.D., Electrical Engineering
Georgia Institute of Technology, 2008



Contact:
Reza.Abdolvand@ucf.edu
407-823-1760

Research: <http://www.eecs.ucf.edu/~reza/>

- *Micro- and Nano-Electromechanical Systems (MEMS/NEMS)*
- *Micro-resonators for timing and data processing*
- *Resonant Sensors*
- *Ultrasonic Techniques for Bio-fluid Analysis at Small Scale*
- *Infrared Sensing and Projection*
- *Micro-fabrication*

Ongoing Research Projects

- Passive Wireless Resonant Sensors (NSF)
- Acousto-Electric Amplification in Composite Piezoelectric-Silicon resonant Cavities (NSF)
- Ultra-stable MEMS Oscillators (Intel)
- Piezoelectrically-Actuated Micro-Mirrors (Truventic/Airforce)
- Wireless and Battery-Less Vibration Sensors (Lorand Technologies/NSF/NASA)

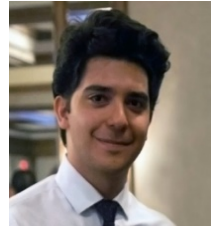
Professional Activities

- Lead faculty at the UCF central cleanroom operation
- Member of the departmental graduate program committee
- Frequent NSF panel reviewer
- Technical Program Committee member in IEEE UFFC
- Technical reviewer for several journals including IEEE Transaction on Ultrasonics, Ferroelectrics, and Frequency Control, IEEE Journal of Micro-Electro-Mechanical (JMEMS), IEEE Transaction on Electron Devices, Journal of Sensors and Actuators

Honors & Awards

- UCF Teaching Incentive Program Award (2019)
- Excellence in Undergraduate Teaching Award (2018)
- Granted 12 US patents

Mahdi Assefzadeh
Assistant Professor
Ph.D., Electrical and Computer Engineering
Rice University, 2018



Contact:
Mahdi.Assefzadeh@ucf.edu
407-823-5957

Research: <http://www.ece.ucf.edu/assefzadehlab>

- Millimeter-wave/THz integrated circuits, on-chip antennas, and quasi-optics
- THz broadband spectroscopy and high-resolution imaging
- Silicon-based ultrabroadband continuous-time analog signal processing
- Hybrid electronic-photonic integrated systems

Ongoing Research Projects:

- Silicon-based 0.05-1.5 THz arbitrary waveform generation and radiation for Tbps wireless links
- Ultrabroadband real-time spectrometers for high-performance THz communications and sensing
- Whispering gallery mode resonators for gas sensing and 3D sub-wavelength imaging
- Near-field sensors and imagers for biomolecular assay
- High-speed high-resolution gesture recognition radars based on real-time standing-wave spectrometry

Professional Activities:

- NSF panel reviewer
- Ad hoc review for NSF SBIR
- Technical Reviewer for several journals and conferences
- including IEEE Transactions on Microwave
- Theory and Techniques (TMTT), IEEE Journal
- of Solid-state Circuits
- (JSSC), IEEE Transactions on Antennas and
- Propagation
- (TAP), IEEE Sensors Journal.

Honors & Awards

- 2017 IEEE MTT-S Graduate Fellowship
- 2016 Best paper award (2nd place) in IEEE Antennas and Propagation International Symposium
- 2014 Best paper award (1st place) in IEEE International Microwave Symposium

George Atia**Associate Professor**

Ph.D., Electrical and Computer Engineering
Boston University, 2009

Contact:

George.Atia@ucf.edu

407-823-3467

Research: <http://www.eecs.ucf.edu/~atia/>

- *Machine learning and statistical signal processing*
- *Verifiable planning in AI*
- *Controlled sensing for inference*
- *Optical and brain signal processing*
- *Security of cyber-physical systems*

Ongoing Research Projects

- Inference-Driven Data Processing and Acquisition: Scalability, Robustness and Control (NSF)
- Development of Diffraction-Free Space-Time Optical Beams (ONR)
- Building Intelligence with Layered Defense using Security-Constrained Optimization and Security Risk Detection (DOE)

Professional Activities

- Senior Member, IEEE
- Program Committee Member, NeurIPS 2020, AISTATS 2021, AAAI 2021, ICLR 2021
- Technical Committee Member, Machine Learning for Signal Processing (MLSP), 2017-Present
- Vice Chair, Machine Learning and Adaptive Signal Processing Track, Asilomar Conference on Signals Systems and Computers, 2018
- NSF Panel Reviewer
- Technical reviewer for IEEE Transactions on Signal Processing, IEEE Transactions on Information Theory, IEEE Signal Processing Magazine, IEEE Signal Processing Letters, IEEE/ACM Transactions on Networking, Algorithmica, Transactions on Network Science and Engineering, Journal of Selected Topics in Signal Processing
- Organizer and Chair of the GlobalSIP Symposium on Controlled Sensing for Inference: Applications, Theory and Algorithms, 2013

**Issa Batarseh****Professor**

Ph.D., Electrical Engineering
University of Illinois at Chicago,
1990

Contact:

Issa.batarseh@ucf.edu

407-823-0185

Research: <http://fpcc.ucf.edu>

- *Power Electronics*
- *Energy Conversion*
- *Grid-tied Inverters*
- *Smart Distributed Solar Energy*
- *Photovoltaics (PV) Systems*

Ongoing Research Projects

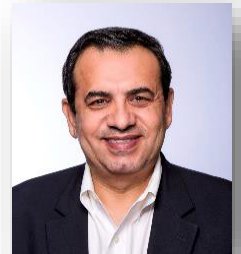
- High-Density Soft-Switching Multi-Port Photovoltaic Power Manager
- Integrated Solar energy with Storage
- Three-port Flying Capacitor Inverter

Professional Activities

- Director of the Florida Power Electronics Center
- NASA Technical Board Member
- Served as panelist, and reviewer for NSF, DoE, NASA and several IEEE Transaction and other international journals
- Served as General Chair for IEEE-PESC'07 and SOUTHEASTCON'98 conferences
- IEEE Orlando Section Chair
- Technical program committee chair of IEEE APEC, PESC, IECON, IAS and ISCAS
- Registered Professional Engineer, Florida

Honors & Awards

- SoTL Award, 2020.
- IEEE PELS David Middlebrook Achievement Award, 2019
- *Florida Inventors Hall of Fame, Inductee, 2017*
- National Academy of Inventors (NAI) Fellow, 2016
- Research Incentive Award, 2011, 2015
- *FES Outstanding Technical Achievement Award, 2017 AAAS Fellow, 2009*
- IEEE Fellow, 2005
- IEEE Power Electronics Society, *IEEE Transactions on Power Electronics* Prize Paper Award
- Davis Productivity Award, Florida.



Aman Behal
Professor

Ph.D., Electrical Engineering Clemson
University, 2001

Contact:

Aman.Behal@ucf.edu
407-882-2820



Research: <http://www.eecs.ucf.edu/~abehal/>

- *Robotics*
- *Wheelchair Mounted Assistive Robotic Arms*
- *Autonomous and Semi-Autonomous Control*
- *Human Robot and Human Computer Interaction*
- *Applications of Computer Vision*
- *Applied Nonlinear Controls*

Ongoing Research Projects

- CHS: Small: Empowerment of Disabled Individuals via an Adaptive Framework for Indirect Human-Robot Interaction (NSF)
- CHS: Medium: Collaborative Research: Social Learning in Mixed Human-Robot Groups for People with Disabilities (NSF)

Professional Activities

- Associate Editor, IEEE Transactions on Control Systems Technology
- Associate Editor, Journal of Aerospace Engineering
- Associate Editor, Conference Editorial Board, IEEE Control Systems Society
- Proposal Reviewer for NSF, NIDILRR, NIH, NASA, NMSS

Honors & Awards

- Full Member – Sigma Xi Scientific Research Honor Society
- Senior Member – IEEE
- Charles N. Millican Faculty Fellow
- UCF Millionaires Club

Yehuda Braiman
Research Professor of
Optics and Photonics and
ECE

Ph.D., Chemical Physics
Tel Aviv University, 1993

Contact:

yehuda.braiman@ucf.edu
407-823-0742



Research: <https://creol.ucf.edu/person/yehuda-braiman/>

- Semiconductor Diode Lasers and Diode Laser Arrays
- Cryogenic (Low Temperature) Memory and Dynamics of Josephson Junction Arrays
- Synchronization and Dynamics of Coupled Nonlinear Systems
- Nonlinear Signal Processing
- Friction and Friction Control at the Atomic Scale

Ongoing Research Projects

- Beam Combining of High-Power, Broad-Area Blue Diode Laser Arrays
- Microscopic Model of a Semiconductor Diode Laser Operating in the Ultrashort Pulse Emission Regime
- Cryogenic Memory Design
- Detection of Weak Signals in Noisy Environment
- Nonlinear Markers Detecting Acoustic Weak Signals Underwater
- Spectrum-Agile Micro Ti-Sapphire (uTS) Laser Based on III-Nitride Photonic Integrated Circuit

Professional Activities

- Member of APS and OSA.
- Referee for APS, OSA, IEEE, and Elsevier Journals.
- APS Outstanding Referee

Honors & Awards

- 1995 Paper was selected for a cover page of Nature.
- 2000 Award for outstanding technical achievement, UT-Battelle, LLC
- 2009 Significant Event Award, UT-Battelle, LLC
- 2013 Significant Event Award, UT-Battelle, LLC
- 2013 R&D 100 Award
- 2016 Paper selected for a Superconductor Science and Technology 2016 Highlight Collection
- 2016 Significant Event Award, UT-Battelle, LLC
- 2019 APS Outstanding Referee Award

Kenle Chen
Assistant Professor
Ph.D., Electrical Engineering
Purdue University, 2013

Contact:
kenle.chen@ucf.edu
407-823-0063



Research:
<https://www.kenlechen-lab.com/>

- *Radio-frequency and millimeter-Wave integrated circuits*
- *Future-generation (5G) wireless communication systems*
- *High-speed, wideband, and high-efficiency radio solutions*
- *Reconfigurable high-frequency circuits*
- *Interdisciplinary applications of radio technology*

Ongoing Research Projects

- Linear, efficient, and wideband RF PAs/transmitters for 5G and beyond (NSF ECCS, https://www.nsf.gov/awardsearch/showAward?AWD_ID=1914875&HistoricalAwards=false)
- High-efficiency millimeter-Wave power amplifiers and transmitters (NSF I-UCRC)
- Ultra-wideband and highly efficient power amplifiers (NSF I-UCRC) Mode-reconfigurable RF power amplifiers (internally funded)
- Advanced carrier-aggregation and MIMO radio-frontend architectures (internally funded)

Professional Activities

- Associate Editor: IEEE Transactions on Microwave Theory and Techniques
- Chair: IEEE MTT-S/AP-S Orlando Chapter
- Active Referee: 15 International Journals, e.g., TMTT, MWCL, TCAS-I, TCAS-II, and TBioCAS.
- TPC Member: WAMICON
- TPRC Member: IMS, WAMICON
- Conference Session Chair: IMS, WAMICON

Honors & Awards

- 1st Place Best Paper Award, IEEE International Microwave Symposium (2020)
- 1st Place Winner in IEEE MTT-S Student Design Competition (2018, 2019, as advisor)
- Best Paper Award, IEEE WAMICON (2019, as advisor)
- IEEE MTT-S Doctoral Fellowship (2012)
- IEEE MTT-S Design Competitions Winners (2011, 2012)

Ronald F. DeMara,
Pegasus Professor and
Digital Learning Faculty Fellow
Ph.D., Computer Engineering
University of Southern California, 1992



Contact:
Ronald.Demara@ucf.edu
407-823-5916

Research: <https://cal.ucf.edu/>

- *Computer Systems Design and Architecture*
- *Emerging Computing Devices*
- *Adaptive and Reconfigurable Hardware*

Ongoing Research Projects

- Probabilistic Spin Logic for Low-Energy Boolean and Non- Boolean Computing (NSF, 2017-2021)
- Probabilistic Spin Circuits & Benchmarking (Semiconductor Research Corporation (SRC), 2017-2021)
- Cross-layer Adaptive Rate/Resolution Design for Energy-Aware Acquisition of Spectrally Sparse Signals Leveraging Spin-based Devices (NSF, 2018-2021)
- Building Undergraduate Capacity in STEM at a Hispanic Serving Institution utilizing Culturally-Relevant Instruction with Micro-Credentialing (NSF, 2020-2024)

Professional Activities

- Associate Editor of IEEE Transactions on Emerging Topics in Computing
- IEEE Spectrum Editorial Advisory Board Member
- Recent Keynote Addresses: IEEE IEMtronics 2020, IEEE 24th Reconfigurable Architectures Workshop

Honors and Awards

- Excellence Doctoral Mentoring (University-Level, 2020)
- Pegasus Professor ("University Professor" recognition, 2020 Online Learning Consortium (OLC) Effective Practice Award (2018)
- Marchioli Collective Impact Award (2017)
- Scholarship of Teaching & Learning Award (2017, 2008)
- Teaching Incentive Award (2017, 2006, 2001, 1996)
- Excellence in Undergraduate Teaching (2017)
- Research Incentive Award (2009, 2004)
- Distinguished Research Lecturer, Advisor of Year
- IEEE Outstanding Engineering Educator – Region 3 (2008)

Aleksandar Dimitrovski
Associate Professor Ph.D.,
Power Engineering
 Saints Cyril and Methodius University, 1997



Contact:
ADimitrovski@ucf.edu
 407-823-4183

Research: <http://www.eecs.ucf.edu/dimitrovski>

- *Modeling and Analysis of Uncertain Power System*
- *Magnetic-Electronic Power Controllers*
- *Parallel Simulation of Large Power Systems*
- *Power System Protection*
- *Microgrid Protection and Control*

Ongoing Research Projects

- Magnetic Amplifier for Power Flow Control (US DOE)
- Power System Parallel Dynamic Simulation Framework for Real-Time Wide-Area Protection and Control (US DOE)
- Scalable/Secure Cooperative Algorithms and Framework for Extremely-high Penetration Solar Integration (US DOE)

Professional Activities

- IEEE Senior Member
- Member of CIGRE (International Council on Large Electric Systems)
- Reviewer for IEEE Transactions on: Power Systems, Power Delivery, Smart Grid, Sustainable Energy; IEEE Systems Journal; IEEE Power Engineering Letters; IET: Generation, Transmission, Distribution; International Journal of Electric Power and Energy Systems

Honors and Awards

- Fulbright Scholar (2016)
- R & D 100 (2014)

Chinwendu Enyioha
Assistant Professor
 Ph.D., Electrical & Systems Engineering
 University of Pennsylvania, 2014



Contact:
cenyioha@ucf.edu
 407-823-0122

Research: <http://enyioha.eecs.ucf.edu>

- *Distributed optimization, decision theory and control of unmanned autonomous systems*
- *Resource-aware computation in distributed systems*
- *Safety and security in Cyber-physical systems (CPSs)*

Ongoing Research Projects

- Resource Management with Limited Communications in CPNs
- Learning-based distributed control of autonomous vehicles.

Professional Activities

- Invited session organizer and co-chair, IEEE American Control Conference (2016)
- Session Chair, IEEE American Control Conference (2018)
- Technical Reviewer for several IEEE/ACM conferences and journals including the IEEE Transactions on Automatic Control (TAC), Transactions on Network Science and Engineering (TNSE), Transactions on Control of Networked Systems (TCNS), Journal of Optimal Control, Applications and Methods, amongst others
- Member, IEEE and SIAM.
- Member, Technical Program Committee, ICCPS 2020

Honors and Awards

- Fellow, Ford Foundation (administered by the NRC of the National Academies)
- William Fontaine Scholar, University of Pennsylvania Patterson Award, Mathematical Association of America (MAA) Southeast section

Rickard Ewetz
Assistant
Professor
 Ph.D., Electrical and Computer
 Eng.
 Purdue University, 2016



Contact:
Rickard.Ewetz@ucf.edu
 407-823-4766

Research: <http://www.ece.ucf.edu/~ewetz/>

- *Physical Design for VLSI Circuits*
- *In-Memory Computing for Artificial Intelligence and Big Data Applications*
- *Secure Non-Volatile Memory and Storage Systems*
- *Security of Deep Neural Networks*

Professional Activities

Technical Referee for:

- IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)
- ACM Design Automation of Electronic Systems (TODAES)
- Integration, the VLSI Journal
- Design Automation Conference (DAC)
- International Conference on Computer-aided Design (ICCAD)
- International Symposium on Physical Design (ISPD)

Honors and Awards

- Foundation of the Future, Stockholm, Sweden stipend award (2012, 2014)
- Best Paper Nomination at Asia and South Pacific Design Automation Conference, Tokyo, 2019
- NSF CRII Award, 2017.

Yaser P. Fallah
Associate Professor
 Ph.D., Electrical and Computer Engineering
 University of British Columbia, 2007



Contact:
Yaser.Fallah@ucf.edu
 407-823-4182

Research: <http://cavrel.eecs.ucf.edu/>

- *Networked Cyber-Physical Systems: Modeling of Hybrid Systems*
- *Perception, Cooperative Perception, and Modeled Situational Awareness for Autonomous Vehicles*
- *Intelligent Transportation Systems: Connected and Automated Vehicles, Electric Vehicles*
- *Wireless Communication and Networking*
- *Smart Cities, Transportation and Energy Systems*

On-going research projects:

- CAREER: Multi-Resolution Model and Context Aware Information Networking for Cooperative Vehicle Efficiency and Safety Systems, National Science Foundation, NSF CAREER - PI
- V2V Communication Research: Safety Networks, Communication and Congestion Control, CAMP (US-DoT NHTSA) – PI
- Perceptive Stochastic Coordination in Mass Platoons of Automated Vehicles, collaborative project with Univ. of Georgia, Universitat Hamburg and Universitat Koblenz-Landau, NSF -PI
- Cellular V2X Communication for Cooperative Vehicle Safety Systems, Ford Motor co, PI
- Autonomous Vehicle Information Networking and Sensor Processing, Toyota ITC, USA – PI
- Robust Connected Vehicle Applications using Dynamic Object Map Architecture, Hyundai-Kia, USA PI

Professional Activities

- Associate Editor, IEEE Transactions on Vehicular Technology
- Chair, IEEE Connected and Automated Vehicles Symp., 2018 and 2019
- Chair, Program Committee, IEEE International Symposium on Wireless Vehicular Comm., WiVEC 2011, 2014
- Steering Committee Member, IEEE Connected Vehicle Initiative (VTS)
- Workshop Chair, IEEE Cyber Science and Tech. Conf. 2017
- Chair, IEEE Workshop on V2X Communication: Applications and Technology, Oct. 2015
- Co-Chair, Technical Program Committee, Conference on Smart Urban Mobility Services (SUMS) 2015

Honors and Awards

- Outstanding Researcher Award - West Virginia University, College of Engineering (2016)
- NSF Career Award (2015)
- NSERC Canada Post-Doctoral Fellowship (2008)
- Bell Canada Graduate Award (2005)

Michael Georgiopoulos Professor,
Dean of CECS Ph.D.,
 Electrical Engineering
 University of Connecticut, 1986



Contact:

michaelg@ucf.edu
 407-823-5338

Research: <http://www.cecs.ucf.edu/georgiopoulos/>

- *Machine Learning*
- *Pattern Recognition*
- *Applications of Machine Learning*

Ongoing Research Projects

- Collaborative Research: RET in Engineering and Computer Science Site: Research Experiences for Teachers focused on Applications of ImagEs and SiGnals In High Schools (NSF)
- UCF COMPASS: Convincing Outstanding-Math-Potential Admits to Succeed in STEM (NSF)
- CAMP-YES (Career Advancement Young Entrepreneur and Scholar (YES) Scholarship Program (NSF)
- Flit-Path, Collaborative Research: Florida-IT Pathways to Success (NSF)

Professional Activities

- Senior Member IEEE

Honors & Awards

- UCF Undergraduate Student Mentor of the Year Award (2009- 2010)
- Scholarship of Teaching and Learning (SoTL) Award (2009-2010)
- UCF Pegasus Award (2010)
- College of Engineering TIP (Teaching Incentive Productivity) Award (1995, 2000, 2005)
- RIA, Research Incentive Award (2005)
- UConn Academy of Engineering (2014)

Xun Gong Professor
 Ph.D., Electrical Engineering
 University of Michigan, 2005



Contact:

Xun.Gong@ucf.edu 407-823-5762

Research: <http://people.cecs.ucf.edu/xgong>

- *Microwave Filters and Passive Components*
- *Wireless passive sensors for harsh environment applications*
- *Antennas, phased arrays, and reflectarrays*
- *Flexible electronics*
- *Micromachining*
- *Advanced packaging*
- *Ceramic materials, polymer materials, and ferroelectric materials & Material characterization*

Ongoing Research Projects

- Directional Software-Defined Radio (NSF)
- Integrating High Frequency Whispering – Gallery Mode Phononic Cavities with Efficient Electrically-Small Antennas: Pushing the Limits of Wireless Passive Sensing (NSF)
- High Temperature Material Characterization at Microwave Frequencies (AFRL)

Professional Activities

- General Chair: 2012 WAMICON and 2016 iWAT
- ExCom Member: IMS, WAMICON, SiRF, IMBioC
- TPC Chair: AP-S/URSI Int. Symp., RWS, WAMICON, SiRF, iWAT
- TPC Member: AP-S/URSI Int. Symp., IMS, RWS, WAMICON, SiRF, WiSNET, EuCAP, EuMW, IMBioC
- Editor: IEEE TMTT, IEEE MWCL, IET MAP Special Issue, IEEE Microwave Magazine Special Issue
- IEEE AP/MTT Orlando Chapter Chair, 2007-2010
- IEEE Orlando Section Awards Chair (2012-2013), Chair (2011), Vice Chair (2009-2010), and Secretary (2008)

Honors & Awards

- UCF Lockheed Martin Professorship (2018-2023)
- UCF Reach for the Stars Award (2016)
- UCF Research Incentive Award (2011, 2016)
- UCF Teaching Incentive Program Award: (2010, 2015)
- UCF CECS Distinguished Researcher Award (2013)
- UCF CECS CAE Link Faculty Fellow (2010-2012)
- NSF Faculty Early Career Award (2009)

Zhishan Guo
Assistant Professor
 Ph.D., Computer Science
 University of North Carolina at Chapel Hill, 2016

Contact:
Zhishan.guo@ucf.edu
 407-823-0124



Research_
<http://www.ece.ucf.edu/~zsguo/>

- *Modeling and analysis of real-time systems*
- *Machine learning theory and neural networks*
- *Secured and energy-aware cyber-physical systems*

Ongoing Research Projects

- CRII: NeuroMC – Parallel Online Scheduling of Mixed- Criticality Real-Time Systems via Neural Networks (NSF)
- RAISE:CA-FW-HTF: Prepare the US Labor Force for Future Jobs in the Hotel and Restaurant Industry: A Hybrid Framework and Multi-Stakeholder Approach (NSF)
- CPS: Collaborative Research: Trusted CPS from Untrusted Components (NSF)
- RumorHunt: A Next-Generation Online Scalable Streaming System for Early Rumor Detection (Cyber-Florida)
- Development of Rehabilitation Integrated Real-Time Control Ankle Foot Orthosis Algorithm (Korean Gov.)
- F1/10 Autonomous Racing Robots (NSF-REU & Internally Funded)
- Scalable Memory and Storage Management via Neural Networks (NSF)

Professional Activities

- Senior Member of IEEE and Member of ACM
- NSF review panelist
- TPC chair of Workshop on Mixed Criticality (2020)
- TPC member of numerous IEEE/ACM conferences including: RTSS, AAAI, EMSOFT, RTAS, etc.
- Reviewer of numerous journals including: TNNLS, TVT, TCAD, TETCI, TC, TPDS, TIFS, TKDE, TECS, JSA, IPL, JoSH, etc.

Honors & Awards

- Best Student Paper Award, RTSS 2019.
- Outstanding Paper Award, RTSS 2019.
- Outstanding Teaching Award, CS Department, UNC-Chapel Hill (2015)

Linwood Jones Professor
 Ph.D., Electrical Engineering
 VA Polytechnic Institute &
 State University, 1971

Contact:
ljones@ucf.edu
wlinwoodjones@gmail.com
 407-823-6603



Research:

- <http://www.cecs.ucf.edu/cfrsl/>
- *Satellite Microwave Remote Sensing for Ocean, Atmosphere and Global Climate Change*
 - *Microwave remote sensor technology development*
 - *Active (radar) and passive (radiometry) microwave sensor concepts*
 - *Microwave scatterometry, polarimetric radiometry, and synthetic thinned array radiometry*
 - *On-orbit Inter-satellite instrument radiometric calibration*
 - *Geophysical retrieval algorithm development: ocean vector winds and precipitation in tropical cyclones and sea surface salinity*
 - *Microwave radiative transfer model development*
 - *Airborne & satellite microwave remote sensor computer simulation*

Ongoing Research Projects

- Investigation of Rain-Induced Oceanic Surface Salinity Stratification for SMAP
- Inter-satellite Radiometric Calibration (XCAL) for GPM Constellation
- Investigation of Ionospheric Impacts on GPS signals
- Improved Satellite Active/Passive Ocean Vector Wind Retrievals
- Observations of Ocean Surface Wind Speed and Rain Rate with the Hurricane Imaging Radiometer

Professional Activities

- Life Fellow, IEEE
- Geoscience and Remote Sensing Soc, Ocean Engineering Soc, Antennas and Propagation Soc.
- Microwave Theory and Tech Soc.
- Member American Geophysical Union (AGU), American Meteorological Society (AMS)
- Member - Union of Radio Scientists International (URSI), Commission-F

Honors & Awards

- IEEE JSTARS Best Reviewer Award, 2016
- NASA PMM Science Team Award, 2015
- Alan Berman Research Pubs Award, US Naval Research Lab, 2004
- 4 NASA Special Achievement Awards and 12 Group Achievement Award, 1981-2016
- CNFS Space Medal 1993

Brian Kim
Assistant Professor
 Ph.D., Biophysics
 Cornell University, 2013



Contact:
Brian.Kim@ucf.edu
 407-823-1034

Research: <http://ece.ucf.edu/~bkim/>

- *Low-noise analog circuit design*
- *CMOS biosensors and actuators*
- *Brain-machine interface*
- *Neural interface*
- *Single-cell electrophysiology*
- *Portable medical diagnostics test*

Ongoing Research Projects

- Monolithic Integration of 1000-ch Neural Interface System on a Single Silicon Die, sponsored by NSF
- Multiplexed rRT-PCR detection of Zika, dengue, and chikungunya directly from whole blood using an innovative, sponsored by NIH/NIAID

Professional Activities

- Biophysical Society Member
- Biomedical Engineering Society Member
- IEEE Member
- Served as NSF panelist in 2017 and 2018
- Technical Referee for:
- IEEE Transactions on Biomedical Engineering
- IEEE Transactions on Biomedical Circuits and Systems
- IEEE Transactions on Instrumentations and Measurements
- IEEE Circuits and Systems Magazine
- Analytical Chemistry
- PLOS ONE
- Microelectronic Engineering
- Scientific Report
- Lab on a Chip

Qifeng Li
Assistant Professor
 Ph.D., Electrical Engineering
 Arizona State University, 2016



Contact:
Qifeng.Li@ucf.edu
 407-823-0159

Research: <http://www.mit.edu/~qifengli/>

- *Convex/global Optimization*
- *Nonlinear Systems*
- *Power and Energy Systems*
 - *Demand Side Management*
 - *Networked Microgrids*
 - *Distributed Energy Storage*
 - *Grid Integration of Renewable Energy*
 - *Distribution System Optimization*
- *Energy-Water-Food Nexus*

Ongoing Research Projects

- Stability, security and emergency control for reconfigurable networked microgrids, U.S. National Science Foundation, Principal Investigator
- Coordination of Transmission, Distribution and Communication Systems for Prompt Power, U.S. Department of Energy, Principal Investigator
- Exploring the Possibility of Controlling Water Systems as Virtual Energy Storage for Renewable Energy Management in Power Systems, UCF SEED Funding Program,
- Principal Investigator
- Intelligent Water-Energy Micro Nexus MIT/MI
- Cooperative Program, Co-Principal

Professional Activities

- Editor for *CSEE Journal on Power and Energy Systems*
- Chair of panel session in *INFORMS Annual Meeting 2019* for Recent Development in Optimization of Grid-connected Battery Energy Storage Systems
- Member IEEE Battery Energy Storage Work Group
- Professional referee for a number of top-tier journals to include
IEEE Transactions on Power Systems, Smart Grid, Sustainable Energy, Control of Network Systems, Industrial Informatics IEEE Power and Energy Letters, and IEEE Control System Letters

Honors & Awards

- China National Scholarship 2012

Mingjie Lin
Associate Professor
 Ph.D., Electrical Engineering
 Stanford University, 2008



Contact:
Mingjie.Lin@ucf.edu
 407-882-2298

Research: <http://www.eecs.ucf.edu/~mingjie/>

- *FPGA High-Level Synthesis in memory optimization*
- *Hardware acceleration in machine learning and AI.*
- *Hardware security within the domain of FPGA and CPU micro-architecture*

Ongoing Research Projects

- CAREER: iMPACT: Metaphysical and Probabilistic-Based Computing Transformation with Emerging Spin-Transfer Torque Device Technology
- Novel Hardware-Support for Ensuring Confidentiality and Integrity on Emerging Non-Volatile Memories
- SHF:Small: Graph-X: Exploiting Hidden Parallelism of Irregular and Non-Stencil Computation in High-Level
- Synthes

Honors & Awards

- UCF Rising Star 2017
- UCF Teaching Incentive Program Award 2017
- NSF CAREER AWARD 2016

Wasfy B. Mikhael
Professor
 Ph.D., Electrical Engineering
 University of Concordia, 1973



Contact:
Wasfy.Mikhael@ucf.edu
 407-823-32104

Research: <http://people.cecs.ucf.edu/mikhael>

- *Digital Signal Processing*
- *Adaptive Signal Processing*
- *One and Multidimensional Signal Compression*
- *Filtering with Applications such as*
- *Speaker Recognition*
- *Image Classification/recognition*
- *Interference Cancellation in Wireless Communications*
- *Multi-Signal Fusion*

Ongoing Research Projects

- DSP Application for Facial Recognition, Human Action Recognition, Biometric Signals Machine Learning, etc.

Professional Activities

- Has more than 350 refereed publications
- Holds several patents in his field
- Serves on editorial boards
- Chaired several international, IEEE and other conferences
- Served as VP for the IEEE Circuits and Systems Society
- Chair of the Midwest Symposium on Circuits and Systems steering committee membership

Honors & Awards (Samples)

- Fellow, IEEE, 1987
- UCF, CECS Teaching Incentive Award (TIP), April, 2016, April 2011, April 2006, April 2000, 1994
- UCF, CECS Graduate Teaching Award, 2006
- UCF Undergraduate Teaching Award
- UCF, CECS Research Incentive Award, 2005, 1993
- Best Paper Awards from International Conferences, 2015, 2014 Professional Societies Awards, 2014, 2013

Zhihua Qu
Professor and Chair of ECE
Lead of UCF RISES Cluster
 Ph.D., Electrical Engineering
 Georgia Institute of Technology, 1990



Contact:
qu@ucf.edu
 407-823-5976

Research: <http://www.ece.ucf.edu/~qu>

- *Systems Theory and Control*
- *Optimization and Control of Networked Dynamical Systems*
- *Distributed Control and Optimization for Smart Grid*
- *Autonomous, Unmanned, and Cooperative Systems*
- *Medical Robotics*

Ongoing Research Projects

- Autonomous Inverter Controls for Resilient and Secure Grid Operation: Vector Control Design for Grid Forming (DOE)
- Scalable/Secure Cooperative Algorithms and Framework for Extremely-high Penetration Solar Integration (DOE)
- Building Intelligence with Layered Defense using Security-Constrained Optimization and Security Risk Detection (DOE)
- FEEDER Center (established under DoE grants)
- Nonlinear Autopilot Design and Robustness Analysis (Lockheed)
- Adaptive and Resilient Autonomy for Unmanned Autonomous Systems (L3Harris and FHTCC)
- Long-Duration Energy Storage Study (Duke Energy)
- Unifying Optimization and Control: Data-Driven Adaptive Learning and Real-Time Decision Making (FHTCC)
- Data Analytics for Autonomous Building and Smart Infrastructure (Siemens Building Technology)
- Data Analytics: Electric Grid Data Integration and Support (Siemens Digital Grid)
- An Intelligent Medical Robotic Device (AVRA Medical Robotics)

Professional Activities

- Board Member and Past President, ECEDHA
- Board of Director and Secretary, SCEEE
- Inaugural member, Standing Council, Vision for Engineering

Leadership Multi-sector Alliance

- Associate Editor, *Automatica*
- Editorial Board, *IEEE ACCESS*
- IEEE Educational Activities
- IEEE Smart Grid Operational and Steering Committees
- IEEE CSS liaison to IEEE Smart Grid
- Advisory Board, International Journal of Robotics and Automation

Honors & Awards

- Fellow, IEEE
- Fellow, AAAS
- Lockheed Martin Corporate Award
- Technology Transfer Award, NASA
- ECEDHA service award
- IEEE Distinguished Lecturer

Nazanin Rahnavard
Associate Professor
 Ph.D., Electrical and Computer Engineering
 Georgia Institute of Technology, 2007



Contact:
nazanin@eeecs.ucf.edu
 407-823-1762

Research: <http://cwnlab.eecs.ucf.edu/>

- *Compressive Sensing: New Designs and Applications*
- *Radio Frequency Cartography*
- *Cooperative Spectrum Sensing and Access in Cognitive Radio Networks*
- *Deep learning theory and applications*
- *High-dimensional data analysis*
- *Wireless Ad-hoc and Sensor Networks*

Ongoing Research Projects

- Universal Transferrable Perturbations for Machine Vision Disruption (DARPA)
- A Tensor-based Framework for Reliable Radio Cartography (NSF)
- Cross-layer Adaptive Rate/Resolution Design for Energy-Aware Acquisition of Spectrally Sparse Signals Leveraging Spin-based Devices (NSF)
- STEM Transfer Students Opportunity for Nurtured Growth (STRONG) (NSF)
- Deep Intermodal Video Analytics (IARPA)

Professional Activities

- Frequent NSF Panel Reviewer
- Associate Editor for Elsevier Computer Networks Journal
- Member of Technical Program Committee for numerous conferences such as IEEE International Symposium on Information Theory (ISIT), IEEE Global Communications (Globecom), Military Communications (MILCOM), IEEE International Conference on Communications (ICC)
- Technical Reviewer for several journals including IEEE Trans. on Communications, IEEE Trans. on Wireless Communications, IEEE Trans. on Information Theory, IEEE Trans. on Multimedia, and IEEE Wireless Communications Letter
- IEEE Senior Member

Honors & Awards

- College of Engineering and Computer Science Excellence in Research Award (2020)
- UCF Women's History Month Honoree (2020)
- National Science Foundation CAREER award (2011)
- Outstanding Research Award, Center for Signal and Image Processing, Georgia Institute of Technology, 2007
- UCF College of Engineering and Computer Science CAMP-YES Mentor of the Year Award, 2016.

Marwan Simaan

Florida 21st Century Chair and
Distinguished Professor Ph.D.,
Electrical Engineering University of Illinois
at Urbana-Champaign, 1972

Contact:

simaan@ucf.edu 407-882-2220



Research: <http://www.ece.ucf.edu/simaan>

- Optimization and Control
- Signal Processing
- Knowledge-Based Signal Processing and Control

Ongoing Research Projects

- Self-organizing Control and Scalable Game-theoretical Dispatch of Distributed Generations for High-Penetration Smart Grids (NSF)
- FEEDER Center (DoE)
- The 21st Century World Class Scholars Program – Simaan Endowed Chair (Florida Board of Governors)

Professional Activities

- Member, AIMBE Fellow Evaluation Committee
- Member, IEEE Systems Journal Editorial Advisory Board
- Member, AAAS Engineering Section Steering Committee
- Member, AAAS Committee on Fellows
- Member, AAAS Committee on Governance Modernization
- Member, Integrated Computer-Aided Engineering Editorial Advisory Board

Honors & Awards

- Member, National Academy of Engineering
- Life Fellow, IEEE
- Fellow, NAI
- Life Fellow, ASEE
- Fellow, AAAS
- Fellow, AIMBE
- Fellow, Electromagnetics Academy
- Distinguished ECE Alumnus Award, Univ. of Illinois
- Distinguished Service in Engineering Award, Univ. of Illinois
- IEEE William E. Sayle Award for Achievement in Education

Wei Sun**Associate Professor**

Ph.D., Electrical and Computer Engineering
Iowa State University, 2011

Contact:

sun@ucf.edu
407-823-2344



Research: <http://www.eecs.ucf.edu/~weisun>

- *Power System Restoration and Self-healing Smart Grid*
- *Secure and Resilient Cyber-Physical Systems*
- *Renewable Integration and Microgrid Operation*
- *Interdependent Critical Infrastructure*

Ongoing Research Projects

- Scalable/Secure Cooperative Algorithms and Framework for Extremely-high Penetration Solar Integration (SolarExPert) (US Department of Energy)
- Autonomous Inverter Controls for Resilient and Secure Grid Operation: Vector Control Design for Grid Forming (US Department of Energy)
- Building Intelligence with Layered Defense using Security-Constrained Optimization and Security Risk Detection (BUILD-SOS) (US Department of Energy)
- Parameterization of Aggregated Distributed Energy Resource Model for Bulk Power System Transient Stability Analysis (Electric Power Research Institute)
- Long-Duration Energy Storage Study (Duke Energy)

Professional Activities

- Director of Siemens Digital Grid Lab
- Associate Editor of Energy Systems
- Co-chair of WG on Power System Restoration in IEEE PES
- Panel Chair in IEEE conferences
- Panelist and reviewer for NSF and DoE

Honors & Awards

- Microsoft Software Engineering Innovation Foundation Award (2014)
- Best Paper Award, 2019 IEEE PES ISGT Asia
- Mentor of the Year, UCF Graduate Student Association, 20

Kalpathy Sundaram
Professor and ECE Graduate
Coordinator
 Ph.D., Electrical Engineering
 Indian Institute of Technology, 1980



Contact:
kalpathy.sundaram@ucf.edu
 407-823-5326

Research: <http://people.cecs.ucf.edu/sundaram>

- *Thin Film Microelectronic Materials and Processing*
- *Optoelectronic Thin Film Materials*

Ongoing Research Projects

- Preparation of Boron Carbon Nitride (BCN) films by RF Sputtering (Intel Corporation)
- Transparent p-type conducting semiconductor films

Professional Activities

- IEEE Senior Life Member
- Member of Electrochemical Society
- IEEE Orlando Section, Education chair, Historian

Honors & Awards

- Thomas Callinan Award, Dielectric Science & Technology Division of ECS
- 2014 IEEE Student Branch Counselor Award
- Fellow, Electrochemical Society (ECS 2013)
- 2008 Outstanding Engineer, IEEE Region-3
- 2008 UCF Teaching Incentive Program (TIP) Award
- 2011 Outstanding Service Award, IEEE Region-3
- 2008 Outstanding Engineer Award, IEEE Region-3
- 2000 Joseph Biedenbach Outstanding Engineer Educator Award, IEEE Region-3

Honors & Awards

- UCF CECS CAE Link Professorship (2018-2013)
- NSF Faculty Early Career Award (2011)
- Wilmot Assistant Professor in College of Arts, Sciences, and Engineering at the University of Rochester
- Recipient of Furth Award for Junior Faculty at the University of Rochester (2006)

Azadeh Vosoughi
Associate Professor
 Ph.D., Electrical and Computer
 Engineering
 Cornell University, 2006



Contact:
Azadeh@ucf.edu
 407-882-0137

Research: <http://www.eecs.ucf.edu/~vosoughi>

- *Communication theory and wireless communications*
- *Detection and estimation theory*
- *Distributed detection, estimation, and data fusion with communication constraints*
- *Spectrum sensing for cognitive radio networks*
- *Brain signal processing*
- *Enhanced radio spectrum via directional sensing and communications*

Ongoing Research Projects

- Directional Software-Defined Radio (NSF)
- Foundations for Engineering Education for Distributed Energy Resources (DoE)

Professional Activities

- IEEE Senior Member
- Frequent NSF review panelist
- TPC Member of numerous IEEE conferences including: ICC, SPAWC, GLOBECOM, DCOSS, PIMRC, VTC, WCNC, MILCOM, WCSP
-

Parveen Wahid
Professor, Associate Chair
of ECE and Undergraduate Program
Coordinator of EE and CpE
 Ph.D., Electrical Communication
 Engineering Indian Institute of Science,
 Bangalore, India, 1979



Contact:

Parveen.Wahid@ucf.edu
 407-823-2610

Research: <http://cecs.ucf.edu/wahid>

- *Antenna Miniaturization*
- *Antennas for Biomedical Applications*

Professional Activities

- General Chair, IEEE APS/USNC-URSI International Symposium, 2013
- IEEE WIE Committee Member, 2012-2014
- Associate Editor, IEEE Antennas and Propagation Magazine, 2001
- Reviewer, IEEE Transactions on Antennas and Propagation
- Reviewer IEEE Antennas and Wave Propagation Letters
- IEEE Orlando Section, Chair WIE Committee, 2012

Honors and Awards

- Provost Faculty Fellow, 2013
- Women of Distinction: Excellence in Mentoring Award, UCF Center for Success of Women Faculty, 2012
- Provost Teaching Faculty Fellow, 2011
- Teaching Incentive Program (TIP), College of Engineering and Computer Science
- Excellence in Teaching Award, 2010
- Excellence in Professional Service Award, College of Engineering and Computer Science, 2010

Jun Wang
Professor

Ph.D., Computer Science and Engineering
 University of Cincinnati, 2002



Contact:

Jun.Wang@ucf.edu
 407-823-0449

Research: <http://www.cecs.ucf.edu/~jwang>

- *Big Data and Big Learning Computer Systems*
- *Massive Storage and File Technology*
- *Data Intensive Computing*

Ongoing Research Projects

- National Science Foundation: Revamping I/O Architectures Using Machine Learning Techniques on Big Compute Machines
- National Science Foundation: Developing a Highly Efficient and Accurate Approximation System for Warehouse-Scale Computers with the Sub-dataset Distribution Aware Approach
- National Science Foundation: Multi-criteria optimization control for temperature constrained energy efficient data center using fuzzy decision making theory

Professional Activities

- Associate editor for the IEEE Transactions on Parallel and Distributed Systems 2012 - 2014; 2016-present
- Associate editor for the IEEE Transactions on Cloud Computing 2016-present
- Program co-Chair for 2018 the 20th IEEE Conference on High Performance Computing and Communications
- Local arrangement chair for the IEEE/ACM IPDPS'17

Honors & Awards

- University of Central Florida Research Incentive Award 2017
- UCF Reach for the Stars Award, 2015
- University of Central Florida Dean's Research Professorship Award 2013
- University of Central Florida Research Incentive Award 2010
- Charles N. Millican Faculty Fellow in EECS at University of Central Florida, 2010
- US National Science Foundation Early Career Award, 2009
- US Department of Energy Early Career Principal Investigator Award, 2005
- Senior Member of IEEE
- 2019 Editorial Excellence and Eminence Award by
- IEEE Transactions on Cloud Computing Editor Board

Arthur Weeks
Associate Professor

Ph.D., Electrical Engineering

University of Central Florida, 1987

Contact:

Arthur.Weeks@ucf.edu

407-823-0767

Research: <http://people.cccs.ucf.edu/weeks/>

- *Biomedical Sensors*
- *Patient Monitoring*
- *Tele Healthcare*
- *Image Processing*
- *Wireless Computing*

Honors & Awards

- 2009-2010 Teaching Incentive Program Award



Lei Wei
Associate Professor

Ph.D., Electrical Engineering

University of South Australia, 1996

Contact:

Lei.Wei@ucf.edu 407-823-5098

Research: <http://people.cccs.ucf.edu/lei/>

- *Bio-logically inspired signal processing*
- *Modulation and error control coding*
- *Wireless communications*
- *Homeland security for campus emergency alert*

Ongoing Research Projects

- GPRAM and its applications

Professional Activities

- Senior Member IEEE

Honors & Awards

- Who's Who in America, 2010
- Semi-finalists in Homeland Security Awards from
- Columbus Fellowship in June 2007



Yuxiao Yang
Assistant Professor
Ph.D. Electrical and Computer Engineering
University of Southern California, 2019



Contact:
Office: Research 1 Room 378,
4353 Scorpius St., Orlando, FL 32816
Office Phone: (407)823-0167

Research:

- Brain-Machine Interfaces
- Neural Engineering
- Control Theory
- Stochastic Signal Processing
- Machine Learning

Ongoing Research Projects

- Designing closed-loop brain-machine interfaces for treatment of neuropsychiatric disorders such as depression
- Machine learning of large-scale brain network dynamics
- Developing personalized brain-machine interfaces for controlling brain inactivation under anesthesia

Professional Activities

- Member, Society for Neuroscience (SfN)
- Member, IEEE Engineering in Medicine and Biology Society (EMBS)

Honors & Awards

- Winner of the International Brain-Computer Interface (BCI) Award (2019)
- Winner of the EMBS Student Best Paper Competition (2015)
- McMullen Fellowship, Cornell University (2013)

Fan Yao
Assistant Professor
Ph.D., Computer Engineering
The George Washington University,
2018



Contact:
Fan.Yao@ucf.edu 407-823-0147

Research: <http://ece.ucf.edu/~fanyao/>

- *Computer Architecture*
- *Hardware/ System Security*
- *AI Security*
- *Energy Efficiency Computing*
- *Cloud Computing*

Ongoing Research Projects

- Detection and defense techniques for microarchitecture attacks.
- Understanding and taming hardware-based model tampering in deep learning systems.
- Investigating and defeating information leakage threats in emerging NVM-integrated systems.
- Architecting secure and high-performance crossbar ReRAM memory systems.

Professional Activities

- Conference Program Committee: NAS'21, MICRO'20 (ERC), ICCD'20, HPCA'20, ICCD'19, MICRO SRC'18
- Journal Technical Reviewer: IEEE IoT Journal'20, IEEE Transactions on Parallel and Distributed Systems'20, IEEE Transaction on Computers'20, IEEE Transaction on Communications'20, IEEE Computer Architecture Letters'19, IEEE TCAD'19, IEEE Transactions on Cloud Computing'18, IEEE Transactions on Service Computing'18, Springer Journal Of Hardware and Systems Security'18
- Organizing Committee: ICCD 2020 (Proceeding Chair), HPCA 2019 (Registration Chair), IISWC 2019 (Local Chair/Session Chair)

Honors & Awards

- NSF GW I-Corps Site Grant Award, 2018
- Best Dissertation Award, GWU, 2018.
- The Norris & Betty Hekimian Engineering Endowment Fellowship, GWU, 2017.

Ongoing Funded Research Projects

- Understanding and Taming Deterministic Model Bit Flip Attacks in Deep Neural Networks (PI), NSF SaTC, 2020-2023.
- Towards Secure-By-Design Integration of Emerging Non-Volatile Memory in Future System (PI), NSF CNS, 2020-2023.
- Architecting Secure-by-Design Memristor-Based Memories (Co-PI), NSF CNS, 2019-2022.

Murat Yuksel Professor
Ph.D. Computer Science
Rensselaer Polytechnic Institute, 2002



Contact:

Murat.Yuksel@ucf.edu
407-823-4181

Research: <http://www.ece.ucf.edu/~yukse>

- *Networked, wireless and computer systems*
- *Optical wireless*
- *Spectrum sharing*
- *Cloud networking*
- *Network economics*
- *Network architectures*

Professional Activities

- Editor; IEEE Networking Letters; 2018-Present
- Editor; Computer Networks, Elsevier; 2014-Present
- NSF panelist
- Steering Committee Member; IEEE LANMAN Symposium (2015-Present) ACM CoNEXT CAN Workshop (2017-2018)
- Chair; ACM CoNEXT CAN 2016, IEEE LANMAN 2014
- TPC Chair, IEEE LANMAN 2013
- TPC Track Chair; IEEE MILCOM 2019,
- IEEE/ACM NAS 2012
- TPC Member; IEEE ICNP, IEEE INFOCOM, ACM VLCS, IEEE ICCN, IEEE GLOBECOM, IEEE ICC

Honors & Awards

- *Best Paper Runner-up Award*, IEEE Conference on Dependable and Secure Computing (DSC), Hangzhou, China, 2019.
- *Prize Paper Award, Best Paper Award*: IEEE Power & Energy Society (PES) General Meeting, 2019
- *Distinguished TPC Member*, IEEE INFOCOM 2019
- *Best Demo Award*; IEEE LANMAN 2018
- *Faculty Excellence Award*; College of Engineering, UNR, 2016
- *Senior Member*; ACM, 2015
- *Best CSE Researcher Award*; Computer Science and Engineering, UNR, 2014
- *Senior Scholar Award*; College of Engineering, UNR, May 2014
- *Senior Member*; IEEE, 2011
- *Best Paper Award*; IEEE LANMAN 2008
- *Best Paper Nominee*; IEEE ISCC 2003
- *Achievement Award*; Sun Labs, 2001

Ongoing Funded Research Projects

- Directional Software-Defined Radio (NSF)
- Multi-Element Mobile Visible Light Communication for Smart Cities (by NSF)
- Stable and Efficient Peering Through Internet Exchange Points (IXPs) (by NSF)
- Modeling and Development of Resilient Communication for First Responders in Disaster Management (by NIST)
- US Ignite: Rapid and Resilient Critical Data Sourcing for Public Safety and Emergency Response

Jiann S. Yuan Professor
Ph.D. Electrical Engineering
University of Florida, 1988



Contact:

Jiann-Shiun.Yuan@ucf.edu
407-823-5719

Research: <https://sites.google.com/site/yuanjs168/>

- *Semiconductor devices and ICs*
- *Analog, mixed-signal, and RF circuits*
- *Ultra-low power spiking neural network using emerging RRAMs for neurons and synapses*
- *GaN power devices and reliability analysis*
- *Deep Learning for 3DICs*
- *Using artificial Intelligence for new drug discovery*
- *Using generative adversarial examples for cyber defense*

Ongoing Research Projects

- Phase II for Industry/University Cooperative Research Center: Multi-functional Integrated System Technology (MIST), NSF, Principal Investigator
- Machine learning for smart semiconductor manufacturing and 3D IC design, TEL Technology Center, America, Principal Investigator
- Developing a robust and scalable system to defend against deep fakes, Florida Center for Cybersecurity, Principal Investigator

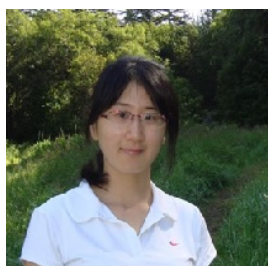
Professional Activities

- Editor, IEEE Transactions on Device and Materials Reliability, 2002-2018
- Distinguished Lecturer, *IEEE Electron Devices Society*, 2006- present
- Reviewer, IEEE Transactions on Electron Devices, IEEE Transactions on Circuits and Systems, Electron Device Letters, Microelectronics Reliability

Honors & Awards

- UCF Pegasus Professor Award, 2016
- TIP Award, University of Central Florida, 2020, 2015, 2010, 2004, 1996
- RIA Award, University of Central Florida, 2018 and 2004
- Distinguished Lecturer, IEEE Electron Devices Society, 2006- present
- Outstanding Engineering Award, IEEE Orlando Section, 2002
- Outstanding Researcher Award, College of Engineering and Computer Science, 2002
- Outstanding Engineering Educator Award, Florida Council of IEEE

Qun Zhou
Assistant Professor
Ph.D. Electrical Engineering
Iowa State University, 2011



Contact:
Qun.Zhou@ucf.edu
407-823-3284

Research: <http://www.eecs.ucf.edu/~qzhou/>

- *Smart Grid and Smart Buildings*
- *Smart Infrastructure Data Analytics*
- *Demand Response and Customer Engagement*
- *Solar Energy Forecasting and System Integration*

Ongoing Research Projects

- Autonomous Buildings and the Digital Grid (Siemens)
- Leveraging Data to Secure Smart Infrastructures under Cyber-Physical Attacks (CyberFlorida)
- GOALI: Highly Integrated Grid-Tied Multi-Port Power Module for PV and Storage (NSF)
- REU Site: Research Experiences for Undergraduates Site on Internet of Things (IoT)

Professional Activities

- Director, Smart Infrastructure Data Analytics Lab
- Associate Editor, IEEE Transactions on Smart Grid
- Technical Committee Program Chair, IEEE Power and Energy Society (PES) Smart Building, Load and Customer Systems (SBLC) Committee
- Committee Member, IEEE PES Big Data Analytics (BDA) Subcommittee
- Committee Member, IEEE PES Power System Economics Subcommittee
- Technical Reviewer for IEEE Transactions on Power Systems, IEEE Transactions on Sustainable Energy, etc

Electrical and Computer Engineering

Facts & Figures

EE and CpE Programs

- BSEE, BSCpE
- MSEE, MSCpE
- PhDEE, PhDCpE

US News and World Report (2021 Rankings)

- Electrical Engineering 58 (out of 185 ranked programs)
- Computer Engineering 61 (out of 149 ranked programs)

Faculty & Staff

- 35 Tenured/Tenure-Track Faculty (13 Professors, 10 Associate Professors, 12 Assistant Professors)
- 6 Lecturers/Instructors (Including 1 Senior Lecturer and 1 Associate Lecturer)
- 10 Postdoctoral Researchers and Research Faculty Members
- 27 Joint Faculty Members
- 4 Emeritus Professors
- 2 Staff Engineers
- 8 Office Staff Members

External Recognitions

- 1 Member of National Academy of Engineering
- 15 Fellows of IEEE
- 5 Fellows of AAAS
- 1 Fellow of ASEE
- 1 Fellow of AIMBE
- 1 Fellow of ECS
- 7 NSF Career Awardees
- 1 DoE Young Investigator Awardees
- 5 Fellows of National Academy of Inventors

Degrees Conferred (AY 2019-2020)

- 26 PhD EE and 12 PhD CpE
- 19 MSc EE and 17 MSc CpE
- 116 BSc EE and 108 BSc CpE

Student Enrollment (FALL 2020)

- 113 Electrical Engineering PhD students
- 46 Computer Engineering PhD students
- 39 Electrical Engineering MSc students
- 28 Computer Engineering MSc students
- 601 Electrical Engineering undergraduate students
- 226 Electrical Engineering pending students
- 628 Computer Engineering undergraduate students
- 303 Computer Engineering pendin



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