THE GEORGE WASHINGTON UNIVERSITY

WASHINGTON, DC

DEPARTMENT AT A GLANCE (2021)

18
FULL-TIME FACULTY

$4.77M
RESEARCH SPENDING

158
GRADUATE STUDENTS

GRANTS & COLLABORATIONS

Air Force Office of Scientific Research
Army Medical Research & Materiel Command
Army Research Development & Engineering Command Booz Allen Hamilton, Inc.
CISCO
DARPA
Department of Energy
Department of the Army
Hoth Therapeutics
NASA-Goddard
National Institute of Standards and Technology National Science Foundation
Naval Research Laboratory
Office of Naval Research
Omega Optics, Inc.
Optelligence
Orange Labs
Purdue University
Raytheon Compay
The University of Texas at Austin
Tuckerman & Associate, Inc.
University of Virginia

Department of Electrical & Computer Engineering

FACULTY AND RESEARCH FACT SHEET (2021)

Research areas feature only a sample. Please visit websites for full research details and current projects.

Research Areas	Faculty
• EMERGING RESISTIVE SWITCHING TECHNOLOGY (RRAM) • HARDWARE NEURONAL NETWORKS	**Faculty**: Dr. Gina Adam, Assistant Professor **Website**: ece.seas.gwu.edu/gina-adam
• MEMS/NEMS • MICROELECTRONICS-PHOTONICS • NEUARAL NETWORK/ MACHINELARNING/VLSI	**Faculty**: Dr. Shahrokh Ahmadi, Teaching Professor **Website**: ece.seas.gwu.edu/shahrokh-ahmadi
• ELECTROMAGNETICS • MAGNETIC MATERIALS & DEVICES • MEMS/NEMS	**Faculty**: Dr. Amir Aslani, Assistant Professor of Practice **Website**: ece.seas.gwu.edu/amir-aslani
• SMART GRID RELIABILITY & RESILIENCE • SMART GRID CYBER-SECURITY • DATA-DRIVEN ENERGY ANALYTICS	**Faculty:** Dr. Payman Dehghanian, Assistant Professor **Website:** ece.seas.gwu.edu/payman-dehghanian
• ADAPTIVE SIGNAL PROCESSING • DETECTION & ESTIMATION • MACHINE LEARNING	**Faculty:** Dr. Milos Doroslovacki, Associate Professor **Website:** ece.seas.gwu.edu/milos-doroslovacki
• HIGH-PERFORMANCE & DISTRIBUTED COMPUTING • PARALLEL & RECONFIGURABLE COMPUTING ARCHITECTURES • FUTURE & INTELLIGENT PROCESSING TECHNOLOGIES	**Faculty:** Dr. Tarek El-Ghazawi, Professor **Website:** ece.seas.gwu.edu/tarek-el-ghazawi
• AUTOMATIC TARGET RECOGNITION • IMAGE RESTORATION • RANDOM FIELD MODELING	**Faculty:** Dr. Kie-Bum Eom, Professor **Website:** ece.seas.gwu.edu/kie-bum-eom
• COMMUNICATION SYSTEMS • WIRELESS NETWORKS • ERROR CONTROL CODING	**Faculty:** Dr. Hermann Helgert, Professor **Website:** ece.seas.gwu.edu/hermann-j-helgert
• BIG DATA • COMPUTER ARCHITECTURE & SYSTEMS • GRAPH ANALYTICS	**Faculty:** Dr. Howie Huang, Professor **Website:** ece.seas.gwu.edu/howie-huang

	Faculty
- **MAGNETICS** - **MEMS/NEMS** - **NEURAL COMPUTING**	**Faculty:** Dr. Can Korman, Professor **Website:** ece.seas.gwu.edu/can-korman
- **NETWORK OPTIMIZATION** - **LEARNING ALGORITHMS** - **MACHINE LEARNING**	**Faculty:** Dr. Tian Lan, Professor **Website:** ece.seas.gwu.edu/tian-lan
- **APPLIED ELECTROMAGNETICS** - **WAVE PROPOGATION** - **COMMUNICATION CHANNEL MODELING**	**Faculty:** Dr. Roger Lang, Professor **Website:** ece.seas.gwu.edu/roger-h-lang
- **COMPUTER ARCHITECTURE & HIGH-PERFORMANCE COMPUTING** - **NETWORK-ON-CHIPS & PHOTONICS INTERCONNECTS FOR MULTICORES** - **MACHINE LEARNING, DNN, & GNN ACCELERATORS**	**Faculty:** Dr. Ahmed Louri, Professor **Website:** ece.seas.gwu.edu/ahmed-louri
- **COMMUNICATION & NETWORKS** - **SIGNAL PROCESS & OPITIMIZATION** - **SYSTEMS & CONTROLS**	**Faculty:** Dr. Omur Ozel Assistant Professor **Website:** ece.seas.gwu.edu/omur-ozel
- **AI/ML ASICs** - **PHOTONIC INTEGRATED CIRCUITS** - **CRYPTOGRAPHIC ACCELERATORS**	**Faculty:** Dr. Volker Sorger, Associate Professor **Website:** ece.seas.gwu.edu/volker-j-sorger
- **EDGE & CLOUD COMPUTING** - **DATA CENTER NETWORKING** - **OPTICAL NETWORKING**	**Faculty:** Dr. Suresh Subramaniam, Professor & Department Chair **Website:** ece.seas.gwu.edu/suresh-subramaniam
- **COMPUTER ARCHITECTURE** - **COMPUTER SYSTEMS SECURITY**	**Faculty:** Dr. Guru Venkataramani, Professor **Website:** ece.seas.gwu.edu/guru-prasadh-v-venkataramani
- **NANO & MICROSENSORS WITH INTEGRATED ELECTRONICS** - **MICRO-ELECTRO-MECHANIC SYSTEMS** - **INTEGRATED CIRCUITS CHIP DESIGN**	**Faculty:** Dr. Mona Zaghloul, Professor **Website:** ece.seas.gwu.edu/mona-zaghloul