THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON, DC

DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING
www.ece.seas.gwu.edu

Fact Sheet

LEADERSHIP

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MISSION

The mission of the Department of Electrical and Computer Engineering is to inspire our diverse students by providing rigorous and comprehensive programs in electrical engineering and computer engineering in order to provide leadership in a rapidly developing technological society and to advance the state of knowledge in our disciplines by actively pursuing scholarly research.

ACADEMICS

Enrollment Figures
Enrollment (Full-Time)
Academic Year 2020-2021

Bachelors	81
Masters	73
Ph.D.	85
Total	**239**

Degrees Granted
Academic Year 2020-2021

Bachelor of Science	13
Master of Science	77
Ph.D.	8
Total	**98**

Faculty
Academic Year 2020-2021

Professors	11
Associate Professors	3
Assistant Professors	4
Teaching Professors	1
Assistant Professors of Practice	1
Research Professors	1
Associate Research Professors	1
Total	**22**

RESEARCH INSTITUTES

Institute for Massively Parallel Applications and Computing Technologies (IMPACT)
Dr. Tarek El-Ghazawi
IMPACTS's objective is to establish an interdisciplinary GWU academic excellence program in High-Performance Computing (HPC) that spans research, education, and outreach.

Institute for MEMS and VLSI Technology
Dr. Mona Zaghloul
The MEMS research at GWU is focused on using different technologies combined with pre- and/or post-processing steps. Several devices have been realized using CMOS technology, including RF MEMS devices, Power Sensors, SAW Gas Sensors, and many others. The research group uses CMOS to add active circuitry to the sensor, hence creating a complete system.

GW Institute for Nanotechnology
Dr. Michael Keidar (Mechanical & Aerospace Engineering) The ECE department's faculty members are an integral part of The George Washington University Institute for Nano-technology (GWIN). GWIN was founded in 2009 with the primary objective to improve laboratory equipment for nanotechnology research, support undergraduate research, and begin seeding new nanotechnology research projects and forming core teams.

ACADEMIC PROGRAMS

Degrees

Bachelor of Science
(ABET-accredited)
Computer Engineering
Electrical Engineering

Master of Science
Computer Engineering
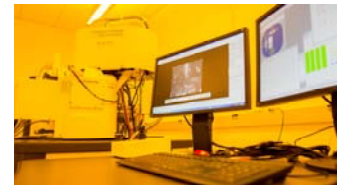Electrical Engineering

Combined Five-Year Programs
BS / MS Computer Engineering
BS / MS Electrical Engineering
BS Computer Engineering / MS Electrical Engineering
BS Electrical Engineering / MS Computer Engineering

Doctor of Philosophy
Computer Engineering
Electrical Engineering

Minors & Certificates
Minor in Computer Engineering
Minor in Electrical Engineering
Graduate Certificate in 5G and Beyond
Graduate Certificate in High-Performance Computing
Graduate Certificate in Machine Intelligence
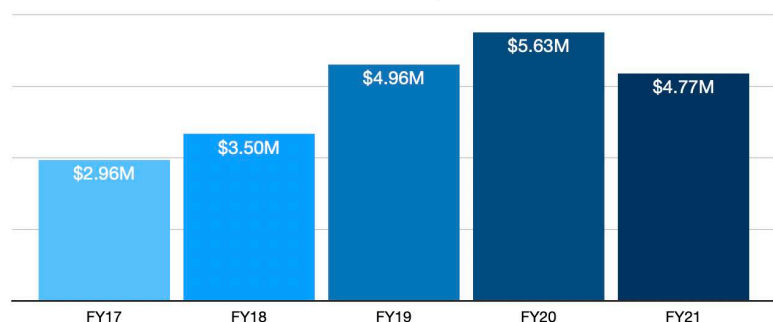

FACULTY HONORS

IEEE Fellows: 5

PECASE: 1

CAREER Awards: 3

Humboldt Awards: 1

AFOSR-YIP Awards: 1

FINANCIALS

ECE Research Expenditures

FY17	FY18	FY19	FY20	FY21
$2.96M	$3.50M	$4.96M	$5.63M	$4.77M

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Spring 2022

RESEARCH AREAS

Communications and Networks
Dr. Milos Doroslovacki
Dr. Hermann J. Helgert
Dr. Tian Lan
Dr. Roger H. Lang
Dr. Omur Ozel
Dr. Suresh Subramaniam

Computer Architecture and High-Performance Computing
Dr. Tarek El-Ghazawi
Dr. Howie Huang
Dr. Ahmed Louri
Dr. Guru Venkataramani

Electrical Power and Energy
Dr. Payman Dehghanian

MEMS, Electronics, and Photonics
Dr. Gina Adam
Dr. Shahrokh Ahmadi
Dr. Hamed Dalir (Associate Research Professor)
Dr. Can E. Korman
Dr. Roger H. Lang
Dr. David Nagel (Research Professor)
Dr. Volker Sorger
Dr. Mona Zaghloul

Signal and Image Processing, Systems and Controls
Dr. Milos Doroslovacki
Dr. Kie-Bum Eom

RESEARCH GRANT FUNDERS

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

RESEARCH FACILITES

Adaptive Devices and Microsystems
Dr. Gina Adam

Applied Electromagnetics Laboratory
Dr. Roger H. Lang

Electronics, Circuits, and Sensors Research Laboratory
Dr. Gina Adam
Dr. Shahrokh Ahmadi
Dr. Can E. Korman
Dr. Mona Zaghloul

Graph Computing Laboratory
Dr. Howie Huang

GW-Intel Parallel Computing Center
Dr. Tarek El-Ghazawi

GW SmartGrid Laboratory
Dr. Payman Dehghanian

High Performance Computing Architectures and Technologies Laboratory
Dr. Ahmed Louri

High-Performance Computing Laboratory
Dr. Tarek El-Ghazawi

Institute for Massively Parallel Applications and Computing Technology
Dr. Tarek El-Ghazawi

Lab for Intelligent Networking and Computing
Dr. Suresh Subramaniam
Dr. Milos Doroslovacki
Dr. Tian Lan
Dr. Omur Ozel
Dr. Guru Venkataramani

LENR Energy and Spectroscopy Laboratory
Dr. David Nagel

Orthogonal Physics Enabled Nanophotonics
Dr. Hamed Dalir
Dr. Volker Sorger

SCHOLARSHIPS & FELLOWSHIPS

Undergraduate Scholarships
Patrick J. Martin Foundation Scholarships
Freshman and Transfer Scholarships
District Scholars Program
Stephen Joel Trachtenberg Scholarship

Graduate Scholarships & Fellowships
Graduate Teaching Assistantships
Graduate Research Assistantships
Phillip/Temofel Sprawcew Endowment Scholarship
The Hetherington Family Scholarship
For more scholarship/fellowship information please visit:
https://financialaid.gwu.edu
https://graduate.seas.gwu.edu/funding

ACTIVITIES & ORGANIZATIONS

AOE (Alpha Omega Epsilon)
Alpha Omega Epsilon is a professional and social sorority composed of female engineering students and alumnae.

EWB (Engineers Without Borders)
Engineers Without Borders is an international, non-profit organization that partners student engineers with professional engineering mentors to create sustainable, technological solutions for communities in the developing world.

IEEE (Institute of Electrical and Electronics Engineers)
The IEEE is a non-profit, technical professional association of more than 377,000 individual members in 150 countries.

GW Optical Society
GW Optical Society is a student-run organization at The George Washington University interested in the promotion of optical science and technology.

GW Tech Collective
GW Tech Collective is a group of students at the George Washington University interested in technology and innovation.

NSBE (National Society of Black Engineers)
NSBE's mission is "to increase the number of culturally responsible Black Engineers who excel academically, succeed professionally, and positively impact the community."

SWE (Society of Women Engineers)
SWE is the driving force that establishes engineering as a highly desirable career aspiration for women. SWE empowers women to succeed and advance in those aspirations and be recognized for their life-changing contributions and achievements as engineers and leaders.

Tau Beta Pi (The Engineering Honor Society)
Tai Beta Pi Formed to foster a spirit of liberal culture in engineering colleges and to mark in a fitting way those who have conferred honor upon their Alma Mater, based on either distinguished scholarship and exemplary character as students of engineering, or based on their attainments as alumni in the engineering field.

Theta Tau (Professional Engineering Fraternity)
Founded at the University of Minnesota in 1904, Theta Tau is the largest (as well as the oldest) professional fraternity in the field of engineering.

GW Robotics
The purpose of the GWU Robotics Group is to provide an outlet for those of the George Washington community interested in robotics.