

LEADERSHIP

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MISSION

The Electrical and Computer Engineering Department (ECE) at the George Washington University seeks to educate the next generation of engineers and leaders with the intellectual capacity and engineering design fundamentals necessary for pursuing dynamic careers of technological innovations and discoveries that can significantly improve quality of life. Central to its mission are the educational and research programs of distinction characterized by their high quality, innovation, societal impacts, and focus on cutting-edge multidisciplinary research and global entrepreneurial partnerships. ECE at GW is proud of its heritage of innovation and entrepreneurship that has produced leaders in industry and academia worldwide.

ACADEMICS

Enrollment Figures

Enrollment (Full-Time)

Academic Year 2018-2019

Bachelors	92
Masters	255
Ph.D.	60
Total	407

Degrees Granted

Academic Year 2017-2018

Bachelor of Science	19
Master of Science	103
Ph.D.	8
Total	130

Faculty

Academic Year 2018-2019

Professors	12
Associate Professors	4
Assistant Professors	3
Teaching Professors	1
Assistant Professor of Practice	1
Research Professors	2
Total	23

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 Magnetics Research

Dr. Edward Della Torre
IMR focuses its work on modeling, experimental measurements, and the use of magnetic materials. The materials most commonly studied are magnetic recording media, magneto-optical media, magnetocaloric materials, and magnetostrictive materials.

Institute for MEMS and VLSI Technology

Dr. Mona Zaghoul
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 Nanotechnology (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
Telecommunications 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 High-Performance Computing



FACULTY HONORS

IEEE Fellows: 7

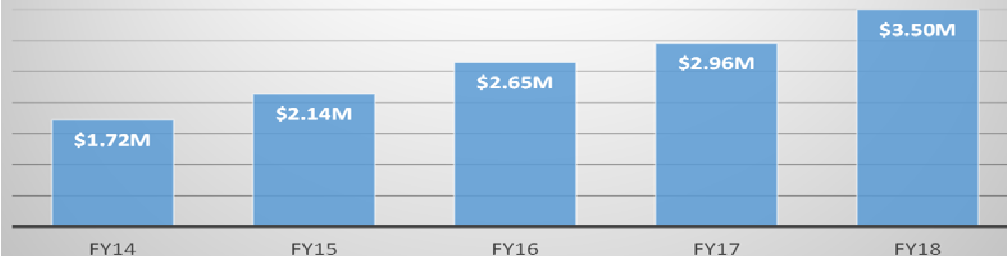
Recent NSF CAREER Awards: 2

Humboldt Awards: 1

AFOSR-YIP Awards: 1

FINANCIALS

ECE Research Expenditures



RESEARCH AREAS

Applied Electromagnetics

Dr. Amir Aslani
Dr. Lawrence H. Bennett (Research Professor)
Dr. Edward Della Torre
Dr. Can E. Korman
Dr. Roger H. Lang

Communications and Networks

Dr. Milos Doroslovacki
Dr. Hermann J. Helgert
Dr. Tian Lan
Dr. Omur Ozel
Dr. Suresh Subramaniam

Computer Architecture and High-Performance Computing

Dr. Tarek A. El-Ghazawi
Dr. Howie Huang
Dr. Ahmed Louri
Dr. Guru Venkataramani

Electrical Power and Energy

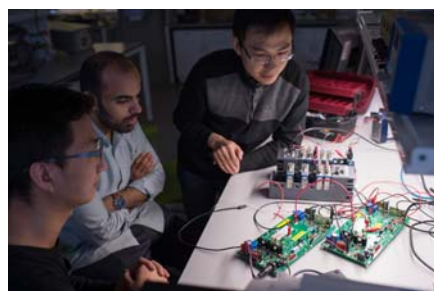
Dr. Payman Dehghanian
Dr. Robert Harrington

MEMS, Electronics, and Photonics

Dr. Gina Adam
Dr. Shahrokh Ahmadi
Dr. Can E. Korman
Dr. David J. Nagel (Research Professor)
Dr. Volker Sorger
Dr. Mona Zaghoul

Signal and Image Processing, Systems and Controls

Dr. Robert L. Carroll
Dr. Milos Doroslovacki
Dr. Kie-Bum Eom



RESEARCH FACILITIES

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 Zaghoul

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

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

Magnetic Material Testing Laboratory

Dr. Edward Della Torre

Magnetic Refrigeration Research Laboratory

Dr. Edward Della Torre

Magneto-Optics Laboratory

Dr. Edward Della Torre

Orthogonal Physics Enabled Nanophotonics

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://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.