THE GEORGE WASHINGTON UNIVERSITY

WASHINGTON, DC

DEPARTMENT AT A GLANCE (2020)

21

FULL-TIME FACULTY

$4.6M

RESEARCH SPENDING

107

GRADUATE STUDENTS

GRANTS & COLLABORATIONS

Katzen Cancer Research Center

National Aeronautics & Space Administration

National Science Foundation

Office of Naval Research

Smithsonian National Zoo

U.S. Air Force

U.S. Department of Energy

U.S. Department of Transportation

Vector Space

Department of Mechanical & Aerospace Engineering

FACULTY AND RESEARCH FACT SHEET (2020)

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

• **COMPUTATIONAL MECHANICS** • **FLUID STRUCTURE INTERACTIONS** • **PARALLEL COMPUTING**	**Faculty:** Elias Balaras, Professor **Website:** seas.gwu.edu/~balaras
• **COMPUTATIONAL FLUID DYNAMICS AND BIOPHYSICS** • **HIGH-PERFORMANCE COMPUTING** • **REPRODUCIBILITY AND OPEN SCIENCE**	**Faculty:** Lorena A. Barba, Professor **Website:** lorenabarba.com
• **EXPERIMENTAL FLUID DYNAMICS** • **NAVAL HYDRODYNAMICS** • **THERMAL HYDRAULICS**	**Faculty:** Philippe Bardet, Professor **Website:** home.gwu.edu/~bardet
• **MIXING & COMBUSTION IN SCRAMJETS** • **OPTICAL DIAGNOSTICS** • **TURBULENCE EXPERIMENTS**	**Faculty:** Andrew Cutler, Professor **Website:** mae.seas.gwu.edu/andrew-d-cutler
• **AERODYNAMICS** • **HYPERSONIC TURBULENT FLUID DYNAMICS**	**Faculty:** David S. Dolling, Professor **Website:** mae.seas.gwu.edu/david-s-dolling
• **THERMAL SYSTEM DESIGN & ENERGY**	**Faculty:** Charles Garris, Professor **Website:** cgarris.com
• **TAILORED ENGINEERED SURFACES** • **FRICTION CONTROL, ICEPHOBICITY** • **AUTONOMOUS SYSTEM SELF-REPAIR**	**Faculty:** Stephen M. Hsu, Professor **Website:** mae.seas.gwu.edu/stephen-hsu
• **ADVANCED SPACECRAFT PROPULSION** • **PLASMA MEDICINE** • **PLASMA-BASED NANOTECHNOLOGY**	**Faculty:** Michael Keidar, Professor **Website:** mpnl.seas.gwu.edu

• **ENERGY CONVERSION SYSTEMS** • **THERMAL & ELECTRICAL TRANSPORT IN ADVANCED MATERIALS** • **ADVANCED MANUFACTURING PROCESSES**	**Faculty:** Saniya LeBlanc, Associate Professor **Website:** leblanclab.com
• **ENGINEERING PHYSICS** • **THEORETICAL & APPLIED MECHANICS**	**Faculty:** James D. Lee, Professor **Website:** home.gwu.edu/~jdlee
• **AEROSPACE SYSTEMS** • **GEOMETRIC MECHANICS** • **NONLINEAR CONTROL** • **ROBOTICS**	**Faculty:** Taeyoung Lee, Professor **Website:** seas.gwu.edu/~tylee
• **BIOLOGICAL FLOWS** • **EXPERIMENTAL FLUID DYNAMICS**	**Faculty:** Megan Leftwich, Associate Professor **Website:** leftwichlab.seas.gwu.edu
• **NANOTRIBOLOGY** • **COMPUTATIONAL NANOSCIENCE** • **MULTISCALE MODELING**	**Faculty:** Yongsheng Leng, Professor **Website:** seas.gwu.edu/~leng
• **EXPERIMENTAL FLUID DYNAMICS** • **BIOLOGICAL, BIOMEDICAL AND BIOINSPIRED ENGINEERING** • **TURBULENCE AND COMPLEX FLOWS**	**Faculty:** Michael W. Plesniak, Department Chair & Professor **Website:** cbbe.seas.gwu.edu
• **ACOUSTICS & BUBBLES** • **CONTRAST ULTRASOUND IMAGING & DRUG DELIVERY** • **COMPUTATIONAL MULTIPHASE BIOLOGICAL FLOWS**	**Faculty:** Kausik Sarkar, Professor **Website:** sarkarkausik.com
• **COMPUTER-INTEGRATED DESIGN & MANUFACTURING** • **METROLOGY** • **PRECISION ENGINEERING**	**Faculty:** Yin-Lin Shen, Professor **Website:** seas.gwu.edu/~yshen
• **ENGINEERING DESIGN** • **AUTOMATION AND ROBOTICS** • **SMART MANUFACTURING AND ADDITIVE MANUFACTURING**	**Faculty:** Steven Shooter, Professor **Website:** seas.gwu.edu/~yshen
• **COMPUTATIONAL & EXPERIMENTAL FLUID DYNAMICS** • **SHIP AIR WAKE IMPACT ON SMALL UAVS** • **AUTONOMOUS UAV OPERATIONS IN THE SHIPBORNE ENVIRONMENT**	**Faculty:** Murray Snyder, Professor **Website:** mae.seas.gwu.edu/murray-snyder

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maeng@gwu.edu

Admissions Information:
graduate.seas.gwu.edu
engineering@gwu.edu

• **NANOMECHANICS** • **SCANNING PROBE MICROSCOPY** • **SURFACE FUNCTIONALIZATION & RECONSTRUCTION**	**Faculty:** Santiago Solares, Professor **Website:** solaresspmlab.com
• **CONTROL, OPTIMIZATION, MACHINE LEARNING** • **ARTIFICIAL INTELLIGENCE** • **AIR TRANSPORTATION & AVIATION SYSTEMS**	**Faculty:** Peng Wei, Assistant Professor **Website:** web.seas.gwu.edu/pwei
• **3D/4D BIOPRINTING** • **NANOMEDICINE** • **TISSUE ENGINEERING**	**Faculty:** Lijie Grace Zhang, Professor **Website:** home.gwu.edu/~lgzhang

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