



JOHNS HOPKINS
WHITING SCHOOL
of ENGINEERING

Search For

Head, Department of Mechanical Engineering

June 2016

Introduction

The Whiting School of Engineering at Johns Hopkins University invites nominations and applications for the newly created position of the Head of the Department of Mechanical Engineering. Hopkins is one of the world's premier research universities and has more grant and research funding than any other American university – with annual research expenditures of \$3 billion.

This is an outstanding opportunity for an accomplished scholar with leadership experience to lead and grow, in collaboration with the faculty, an exceptional department at the nation's first research university. The best candidates will evidence the leadership, entrepreneurial zest, transparent practices, and collegiality that characterize the department's culture.

Many exciting opportunities await the new department Head and success of the new Head will be measured on a number of dimensions: enhanced quality and stature for the department as evidenced in: increased visibility and reputation (nationally and internationally); an expanded departmental research enterprise encompassing collaborations with Hopkins' other excellent divisions such as the Krieger School of Arts and Sciences, School of Medicine, Bloomberg School of Public Health, Carey Business School, and the Johns Hopkins Applied Physics Laboratory (APL), industry, and national laboratories; enhanced diversity of the department's faculty, staff and students, increased application of discoveries and new knowledge to benefit society; new and expanded opportunities for faculty, staff, and students; and strengthened development activities and alumni relations.

The Johns Hopkins Institutions

At the time of their founding, the Johns Hopkins University and Hospital set the pace for American higher education and medicine. More than a century later, they remain world leaders. Together, the Johns Hopkins Institutions, which comprise the University and the Johns Hopkins Health System, are the largest private employer in Maryland, employing 46,000 people, 40,000 of whom work in Baltimore City. The Johns Hopkins Institutions generate more than \$10 billion annually in regional economic impact.

The Johns Hopkins University

The Johns Hopkins University was incorporated in 1867 under the terms of a \$7 million bequest from Johns Hopkins, a Quaker merchant of Baltimore, who directed that the funds be used for the establishment of a university and a hospital. The Johns Hopkins University was founded for the express purpose of expanding knowledge and putting that knowledge to work for the good of humanity. Today, Johns Hopkins is world renowned for undergraduate and graduate study, research, professional practice, and

patient care. It attracts the finest undergraduate, graduate, and professional students and more federal research funding than any other university in the United States.

Johns Hopkins opened its doors in 1876 under the leadership of its visionary first president, Daniel Coit Gilman. President Gilman and his first board of trustees conceived of and brought together, for the first time in history, the key elements of the American research university: a creative faculty given the freedom and support to pursue research; fellowships to attract the brightest students; education emphasizing original work in laboratory and theory; and scholarly publication.

Currently, Johns Hopkins has approximately 6,500 faculty, 6,200 undergraduate students, and 17,600 graduate students. The University offers approximately 230 degree programs at the baccalaureate, master's, and doctoral levels.

Johns Hopkins comprises nine divisions: the Whiting School of Engineering, the Zanvyl Krieger School of Arts and Sciences, the Carey Business School, the Schools of Education, Medicine, and Nursing, the Bloomberg School of Public Health, the Peabody Institute, the Paul H. Nitze School of Advanced International Studies, and the Applied Physics Laboratory (APL), as well as multiple centers, institutes, and affiliates.

The University's revenue budget for 2016 was \$5.3 billion. The University's endowment was \$3.3 billion at the end of fiscal year 2015. The Homewood campus, site of the schools of Arts and Sciences, Education, and Engineering, is located in north Baltimore. The East Baltimore campus is home of the schools of Medicine, Nursing and Public Health, as well as The Johns Hopkins Hospital. Additional locations include sites in downtown Baltimore, Montgomery County, MD, and Washington, D.C, as well as the 400-acre APL campus in Howard County, MD. In addition, the University has a strong international presence, including, but not limited to, centers in Nanjing, China and Bologna, Italy.

The Whiting School of Engineering

The Johns Hopkins School of Engineering was founded in 1912 to develop pragmatic solutions to real world problems and to ensure Maryland's continued economic growth by providing the state's burgeoning industrial sector with a workforce trained in the latest technologies. Since that time, the School's activities in education, research, and professional service have remained integral to the university's mission. In 1979, the school was named the G.W.C. Whiting School of Engineering in recognition of a gift from the estate of G.W.C. Whiting, co-founder of the Whiting-Turner Contracting Company.

Whiting School faculty and students have a proud history of deep contributions to engineering science as well as breaking down traditional disciplinary boundaries. The school's culture of transformative, cross-disciplinary discovery has enabled the Whiting

School to leverage the expertise and resources of the Johns Hopkins University and positioned it at the forefront of fields including biomedical engineering, data science, materials, mechanics, robotics, and environmental engineering.

The Whiting School of Engineering comprises over 200 full time tenure-track, research, and teaching-track faculty in nine academic programs with a total annual research budget of over \$100 million. Research partnerships with the Johns Hopkins School of Medicine, APL, Bloomberg School of Public Health and the Krieger School of Arts and Sciences make the Whiting School of Engineering a unique research and educational environment. Student enrollment exceeds 1,800 at the undergraduate level and includes over 1,000 full time MS and PhD students. The Engineering for Professionals program enrolls over 2,000 part-time continuing education students and is the largest program of its kind in the country.

The Department of Mechanical Engineering

The Department of Mechanical Engineering has 22 full-time tenured and tenure-track faculty members, 4 full-time teaching faculty, over 20 full-time and adjunct research faculty members, 300 undergraduates, 150 graduate students, and 25 postdoctoral fellows. The department's research focus areas include Energy and the Environment; Fluid Mechanics and Heat Transfer; Mechanics and Materials; Materials in Extreme Environments; Micro/Nanoscale Science and Engineering; Mechanical Engineering in Biology and Medicine; Robotics; Systems, Modeling, Dynamics, and Control. Over the last decade the Department's Graduate Program ranking by US News and World Report has risen from 24th in the nation to 15th. The most recent NRC Assessment of American Ph.D. Programs (S-basis) placed the Department 5th in research productivity and 10th overall.

The Department has strong affiliations with major research centers including the Laboratory for Computational Sensing and Robotics, the Hopkins Extreme Materials Institute, the Institute for NanoBioTechnology, the Center for Environmental and Applied Fluid Mechanics, the Environment, Energy, Sustainability & Health Institute, the Institute for Data Intensive Engineering and Science, and the Institute for Computational Medicine. More information about the Department of Mechanical Engineering can be found at <http://me.jhu.edu>.

Opportunities for the new Department Head

The newly created Mechanical Engineering Department Head position will be only the second in the Whiting School of Engineering, and the Dean and ME faculty are committed to providing the resources and support that will allow the Department to dramatically advance its mission. Moving the Departmental leadership from Chair of the Department to Head of the Department signifies the increased responsibility for achieving the Departmental aspirations described in this document and the increased

scope of responsibility for faculty, staff, and students, financial resources, research and scholarship, and fund raising and alumni relations. The position offers a unique leadership opportunity and will require the majority of the individual's time, energy, and commitment; the ability and willingness to make this commitment will be critical for advancement in the following areas.

Expanding the overall research program of the Department is expected to be an important priority for the new Head. The Department Head's role will include promoting research collaborations across the institution, developing incentive programs for new research endeavors, and recruiting, developing, and retaining faculty who will thrive in Hopkins' rich intellectual and entrepreneurial research environment. The new Head will work to enhance and expand diversity at all levels in the department.

Whiting attracts substantial numbers of the very best students at all levels and the Head will create opportunities for curricula review and development, work with leaders within the department to expand popular programs (bachelors and masters level offerings), and better link student experiences with future employment opportunities.

Connections with industry can be further enhanced with greater attention on applications of discoveries. The new Head will work with the university's technology commercialization program, faculty and students, and industry partners. S/he will also work closely with the school's Development and Alumni Affairs leaders to increase philanthropic support.

Qualifications

The new Head will be an exceptional and proven leader who can lead in a shared governance environment and inspire and collaborate with faculty, staff, and students. S/he will have a dossier that includes a strong track record of scholarship, teaching and evidence of a passionate commitment to research, discovery, and application.

The new Head will have strong skills for mentoring junior faculty and will promote the interests of the entire department. Fundraising experience is preferred.

Education and Qualifications:

- An earned doctorate in mechanical engineering or related field, and a record deserving appointment as tenured full professor at the Johns Hopkins University;
- Recognized leader in his/her respective field of engineering with a distinguished national and international reputation for research and education; appointment is expected to be at the level of tenured full Professor.
- Excellent communication skills in both internal and external interactions;
- A strong commitment to diversity at all levels among faculty, students, and staff, and

- Three or more years of leadership experience within a complex research environment.

The best candidates will also have many of the following capabilities, and personal attributes:

- Strong budgetary and operational skills;
- A collegial, problem-solving style based on personal integrity and ethics, professional confidence, and excellent relationship management skills;
- Nuanced judgment and personal maturity; and
- A participatory leadership style that models the values of service, initiative, and collaboration.

Please send nominations and applications to:

Nicholas Brill and Jennifer McDonough
Brill Neumann Associates
Email: JohnsHopkinsME@brillneumann.com

The Whiting School of Engineering and the Department of Mechanical Engineering are committed to building a diverse educational environment, and women and minorities are strongly encouraged to apply.

Johns Hopkins University is an equal opportunity employer and does not discriminate on the basis of gender, marital status, pregnancy, race, color, ethnicity, national origin, age, disability, religion, sexual orientation, gender identity or expression, veteran status, other legally protected characteristics or any other occupationally irrelevant criteria. The University promotes Affirmative Action for minorities, women, individuals who are disabled, and veterans. Johns Hopkins University is a drug free, smoke free workplace.