

Georgia Tech College of Engineering George W. Woodruff School of Mechanical Engineering

Woodruff School Advisory Board Welcome Packet

2024 - 2025



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Woodruff School Advisory Board

The role of the Woodruff School Advisory Board is to recommend strategic directions for the Woodruff School, suggest broad-based curriculum changes, and consult with the Woodruff School Chair and the faculty on important issues. Members are invited to join the Advisory Board so that its composition reflects the varied scope of mechanical engineering, nuclear and radiological engineering, and medical physics in industry, the related professions, and the academic community.

Woodruff School Advisory Board Subcommittees

To enrich your board member experience, we have established advisory board subcommittees. Each subcommittee is partnered with an associate chair from the Woodruff School, who will facilitate communication and assist in devising action plans for the group. Please find the summaries of the three subcommittees below and kindly inform us of your preferred committee to join:

1. **Reimagine ME/NRE Education** - This subcommittee is assigned the critical task of reimagining education in ME/NRE). This team is responsible for envisioning innovative strategies and improvements that will enhance the quality and relevance of our engineering education. Their primary focus includes developing a clear vision and long-term strategy for ME and NRE programs, aligning them with the ever-evolving needs of the engineering field and industry. Finally, this group is responsible for assistance with recruitment and retention.

Faculty Lead: Dr. Brandon Dixon

2. **Infrastructure** - This subcommittee is responsible for assessing and providing recommendations regarding the physical resources and facilities necessary to support the program's goals and objectives. Their main focus is evaluating the infrastructure requirements, such as laboratories, research facilities, equipment, and technology, to ensure they align with the evolving needs of the ME/NRE programs. The subcommittee would work collaboratively with the institutions administration and program leadership to plan, prioritize, and advocate for investments and improvements in the program's infrastructure to enhance the overall learning experience and research capabilities for students and faculty.

Faculty Lead: Dr. Anna Erickson

3. **Philanthropy & Student Success** - This subcommittee is aimed at creating greater access to engineering education. The subcommittee will collaborate with university stakeholders, alumni, corporations, and the wider community to garner support and raise awareness about the campaign's objectives. By actively supporting the campaign, the subcommittee aims to make engineering education more accessible and affordable, opening doors for aspiring engineers from diverse backgrounds to pursue their academic and career aspirations.

Faculty Lead: Dr. Kyriaki Kalaitzidou

A Brief History of Georgia Tech and the Woodruff School

A school of technology was established in Atlanta in 1885. In October 1888 the Georgia School of Technology opened its doors and admitted its first engineering class: 129 mechanical engineering students enrolled in Tech's first degree program. As part of their education these early students worked at trades such as forging, woodworking, machining, and mechanical drawing. The products of these shop exercises were then sold to the public to produce income for the School.

The first Head (starting in 1888) and Professor of Mechanical Engineering was John Saylor Coon, a graduate of Cornell University and a charter member of the American Society of Mechanical Engineers. He held this position for 35 years until his retirement in 1923.

Over the years, the mechanical engineering program expanded and changed. By 1896, the contract system of shops had been abandoned. Free from the need to render a profit on instructional time, Dr. Coon implemented an educational format which, while it retained elements of hands-on shop training, placed more stress on the emerging tenets of quantification and analysis. Dr. Coon revised the curriculum, describing a mechanical engineering program that emphasized design, mathematics, and problem solving. Prominent here was a senior thesis, which was an experimental laboratory project emphasizing design and testing. The experimental project requirement survives today as the capstone experimental engineering course.

The notion that an engineer was a technical master first and a businessman second permeated the curriculum of Georgia Tech at the turn of the century. Mechanical engineering students conducted efficiency tests for businesses in Atlanta and experiments using campus facilities. Practical projects at local businesses became a significant part of the educational process at Georgia Tech, especially after the Cooperative Program officially began in 1912. This continues to be the largest optional program of its kind in the country. About forty percent of all mechanical engineering undergraduate students at Georgia Tech are involved in the program. In addition, there is a Graduate Co-op Program, an International Co-op Program, an Undergraduate Professional Internship Program, and a number of study-abroad programs for students to gain international experience.

Tech graduated its first two students, with bachelor's degrees in mechanical engineering, in 1890. The first MSME was authorized in 1922, and a doctoral program was added in 1946. The first

MS degrees were awarded in 1925, and the first Ph.D.'s were granted in 1950. Georgia Tech was renamed the Georgia Institute of Technology in 1948. Women were admitted in 1952, and the campus was voluntarily integrated in 1962. In 1949, the Department of Mechanical Engineering officially became the School of Mechanical Engineering with its own director and administrative staff. In 1985 the School was named for its benefactor, distinguished Atlanta business and civic leader, the late George W. Woodruff (class of 1917).

In 2000, the American Society of Mechanical Engineers recognized the Woodruff School as a Mechanical Engineering Heritage Site. Of the 225 landmarks, sites, and collections, we are the only educational institution with this honor, which was granted for the impact that mechanical engineering education at Georgia Tech had on the South and the nation.

Graduates from Georgia Tech have always had a hand in helping build industry in the South. This is as true today as it was when Georgia Tech was opened in 1888 and began to educate engineers and revitalize the economy of the South, devastated after the Civil War. Today's rigorous engineering curriculum allows our students to continue to have a lasting impact on the global society.

Mission

The George W. Woodruff School of Mechanical Engineering is an inclusive, innovative, and thriving educational and research environment committed to fostering the next generation of intellectually curious and globally engaged leaders who are empowered to create solutions to society's most challenging problems and dedicated to improving the human condition.

Vision

The Woodruff School will be a student-centered, research-focused, and service-oriented community recognized for its outstanding education, the development of leaders, and the creation of innovative technological solutions that improve society and the human condition. We will embrace the diversity of our collaborative community, the foundational principles of engineering and science, and ethical behavior as we achieve a culture of inclusive excellence.

Woodruff School 2023-2030 Strategic Plan

The new strategic plan for the George W. Woodruff School of Mechanical Engineering at Georgia Tech will guide our initiatives through 2030, positioning us as a student-centered, research-focused, and service-oriented community recognized for its outstanding education, the development of leaders, and the creation of innovative technological solutions that improve society and the human condition.

Over years of discussions and in close coordination with the Institute's strategic plan, we have identified a new mission statement, aspiring vision, and actionable goals and objectives across three key focus areas:

- Student Success
- Research Preeminence

• Community and Culture

This plan will drive us to strengthen our impact locally, nationally, and globally as we achieve a culture of *Inclusive Excellence*.

Read the 2023-2030 Strategic Plan

School Facts:

- The Woodruff School is the oldest department at Georgia Tech; classes began in October 1888.
- We are a leading producer of graduate degrees to women and minorities in the United States.
- We are one of the top producers of bachelor's degrees in mechanical engineering in the country.
- We have a Five-Year BS/MS Program for outstanding students interested in a graduate degree.

Guiding Principles and Procedures for the Woodruff Advisory Board at Georgia Institute of Technology:

ARTICLE I – NAME

1.1 The name of this organization shall be: The Advisory Board of the George W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, Georgia (hereafter referred to as the "Board"). As used herein, "School" shall mean the George W. Woodruff School of Mechanical Engineering and "Institute" shall mean the Georgia Institute of Technology.

1.2 Any use of the organization's name by anyone other than the Board must have the prior concurrence of the Board and the Institute.

ARTICLE II – OBJECTIVE

2.1 The objective of the Board is to provide assistance in facilitating the highest quality of mechanical and nuclear engineering and medical physics education at the Institute.

2.2 The Board reports to the Chair of the Woodruff School of Mechanical Engineering ("School Chair") and will make appropriate recommendations or reports to the School Chair.

ARTICLE III – PRIMARY FUNCTIONS

3.1 The Board is expected to:

A. Act as an advisory group to the School Chair on specific issues.

B. Advise on modifications that the School might consider to ensure that educational and research programs stay attuned to the needs of industry and the profession. Advise on the various undergraduate and graduate curricula of the School.

C. Examine operations of the School and try to bring about a better understanding of its mission – particularly as it relates to industry and professional practices.

D. Advise and assist the School on ways to raise resources from private, governmental and corporate sources.

E. Serve as an advocate to represent the School's interests to the business, professional and the various governmental communities and to the Administration of the Institute.

ARTICLE IV – MEMBERSHIP

4.1 The membership of the Board shall not exceed 30 members selected primarily from Institute alumni.

4.2 Unless they are appointed under the provisions of Section 4.4, members shall be appointed by the School Chair and serve a full term commencing at the conclusion of the fall meeting. The Chair of the School's Student Advisory Committee and the Chair of the Faculty Advisory Committee will automatically become ex-officio members of the Board. The School Chair will be an ex-officio member of the board. Ex-officio members are non- voting members of the Board.

4.3 A full-term membership shall be limited to three (3) years. An individual may serve no more than two (2) consecutive membership terms. Members shall be elected to staggered three-year terms, with the terms of approximately one quarter to one third of the membership expiring in any given year. After two consecutive membership terms (except if they are elected as Board Chair or Vice-Chair), the member needs to rotate off the board for at least one year. The School Chair, in consultation with the Board Chair, can appoint the member, after one year, back on the Board.

4.4 If a member resigns during the term, the School Chair may appoint a new member to complete the resigning member's term.

4.5 Names for consideration for appointment to the Board may be suggested to the School Chair or Board Chair.

4.6 Two (2) consecutive absences may be construed as a resignation. Extenuating circumstances will be reviewed by the School Chair and Board Chair.

4.7 Members shall be available to attend meetings and devote the time necessary to effectively serve the Board, the School and the Institute.

4.8 Members must annually donate to the School or the Institute in an amount that is meaningful to them.

ARTICLE V – OFFICERS

5.1 The officers of the Board shall be Chair ("Board Chair") and, at the discretion of the School Chair and Board Chair, a Vice Chair/Chair-Elect, each appointed by the School Chair in consultation with the Board Chair.

5.2 The Board Chair shall preside over meetings of the Board, serve as the School's representative on the College of Engineering Advisory Board, and provide guidance in the achievement of the School's goals.

5.3 The Vice Chair, if appointed, shall preside over Board meetings in the absence of the Board Chair. Unless he/she is unable to serve, the Vice Chair/Chair-Elect will become the Board Chair at the conclusion of his/her term as Vice Chair/Chair-Elect. The Vice Chair, or another designee of the Board Chair, shall maintain and distribute minutes of the meetings to members of the Board.

5.4 The term of the Board Chair shall be two (2) years. A member may serve more than one

(1) term as Board Chair or Vice Chair/Chair-Elect.

ARTICLE VI – MEETINGS

6.1 Regular meetings of the Board will be held in the fall of each academic year. A second meeting may be held in the spring. Meeting times and locations for the next meeting will be

designated by the Board Chair and communicated to the Board members and nominees within a reasonable time prior to the meeting.

6.2 Special Board meetings may be called by the Board Chair with adequate notice to all members.

ARTICLE VII – COMMITTEES

7.1 The Board Chair, in consultation with the School Chair, will appoint Board committees as required. These committees will be managed by the Associate Chairs of the School. There is no limit to the number of committees which can be appointed. Each committee will have a minimum of four (4) members. Only members of the Board, ex- officio members of the Board or individuals selected by the Board Chair (including Associate Chairs, School Leadership or Staff Members) may serve as members of the committees.

7.2 Each committee will prepare and maintain minutes of each meeting which shall be submitted to the Board Chair and the School Chair within at reasonable time following each meeting.

ARTICLE VIII – EXPENSES

8.1 Board members are individually responsible for personal, lodging, travel, and other expenses incurred in connection with Board duties. Exceptions may be made in special cases at the discretion of the School Chair.

ARTICLE IX – EVALUATION

9.1 At the request of the School Chair, the Board shall conduct an annual self-evaluation of past activities for the purpose of improving the conduct of the Board and making necessary changes as a result thereof.

ARTICLE X – PARLIAMENTARY PROCEDURE

10.1 In the absence of any provision to the contrary in the Bylaws, all business meetings of the Board, and of any Committees, shall be governed by the parliamentary rules and usages contained in the current edition of Robert's Rules of Order. A quorum shall consist of one- third of the membership of the Board. Members unable to attend a meeting may assign a proxy to an attending member or ex-officio member of the Board by writing a letter to the Board Chair or the School Chair.

ARTICLE XI – AMENDMENTS

11.1 Amendments to these Bylaws and Procedures may be initiated by any Board member.

11.2 Proposed amendments to these Bylaws and Procedures shall be submitted to the Board members before consideration and action by a majority vote of those present.

ARTICLE XII – ADOPTION

12.1 Adoption of these Bylaws and Procedures shall be by majority vote of the entire Board membership and they shall be effective from the date of adoption.

ARTICLE XIII – CONFIDENTIALITY

13.1 Board members shall maintain confidentiality regarding sensitive information discussed during Board meetings. Unauthorized disclosure may result in removal from the Board.

ARTICLE XIV – DISCLAIMER OF LIABILITY

14.1 The Board does by this Article, for itself and on behalf of its individual members, disclaim any and all liability for any losses, claims, demands or actions, arising or resulting from the recommendations or advice made or given in good faith to the School pursuant to the activities anticipated herein. Board Members do not owe a fiduciary duty to the School or the Institute, while acting in good faith, they are not responsible for financial or operational decisions. It is intended that the School exercise independent judgment and evaluate for itself the usefulness of the advice and recommendation so given. It is further declared that the Board is not a legal entity, has no assets, and cannot enter into contracts.

Adopted October 28, 1994

Revised December 16, 2009

Revised April 19, 2024



George W. Woodruff School of Mechanical Engineering

Leadership



Devesh Ranjan, Ph.D. Eugene C. Gwaltney, Jr. School Chair and Professor schoolchair@me.gatech.edu

Devesh Ranjan assumed the role of the Eugene C. Gwaltney, Jr. School Chair in the Woodruff School of Mechanical Engineering at Georgia Tech on January 1, 2022. Prior to this appointment, he served as the Associate Chair for Research and held the Ring Family Chair in the Woodruff School. Additionally, Ranjan holds a courtesy appointment in the Daniel Guggenheim School of Aerospace Engineering and serves as a co-director of the \$100M Department of Defense-funded University Consortium for Applied Hypersonics (UCAH).

Throughout his tenure at Georgia Tech, Ranjan has held various leadership positions, including chairing the Mechanical Engineering's Fluid Mechanics Research Area Group, serving as the Associate Chair for Research, and co-chairing the "Hypersonics as a System" task-force. He also served as Interim Vice-President for Interdisciplinary Research from February 2021 to June 2021.

Ranjan joined the faculty at Georgia Tech in 2014, following a tenure as a director's research fellow at Los Alamos National Laboratory in 2008 and as a Morris E. Foster Assistant Professor in the Mechanical Engineering department at Texas A&M University from 2009 to 2014. He earned his bachelor's degree from NIT-Trichy (India) in 2003 and completed his master's and Ph.D. degrees in mechanical engineering at UW-Madison in 2005 and 2007, respectively.

Ranjan's extensive experience and leadership in mechanical engineering and interdisciplinary research exemplify his dedication to advancing education, research, and innovation at Georgia Tech and beyond.

Leadership continued



Lula Baker Director of Human Resources



Steve Biegalski Nuclear and Radiological Engineering and Medical Physics Program Chair



Bert Bras Associate Chair for Administration, Brook Byers Professorship in Energy and Environmental Systems



Melody Foster



J. Brandon Dixon Associate Chair for Undergraduate Studies and Professor



Anna Erickson Associate Chair for Research, Woodruff Professor



Andrei Fedorov Associate Chair for Graduate Studies, Professor and Rae S. and Frank H. Neely Chair



Stephen Fuller Director of Information Technology



Jonathan Gaines Associate Chair for Inclusive Excellence



Jaimie Hayes Senior Director of Development



Angela Hicks Director of Business Operations



Kyriaki Kalaitzidou Associate Chair for Faculty

Development, Rae S. and Frank H. Neely Professor



Resources

ME Website

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Georgia Tech enrollment statistics

Campus Map

Explore Philanthropic Giving

http://me.gatech.edu/ https://www.me.gatech.edu/school-leadership https://lite.gatech.edu/home https://map.gatech.edu/ https://development.gatech.edu/

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