



Leadership Profile

Endowed Professor and Director: Data-Intensive Studies Center (DISC)

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This Leadership Profile is intended to provide information about Tufts University and the position of Endowed Professor and Director for The Data-Intensive Studies Center (DISC). It is designed to assist qualified individuals in assessing their interest.

Opportunity and Summary of Position

Tufts University seeks a dynamic leader and accomplished researcher to occupy a recently endowed professorship and to be the founding Director of the Data-Intensive Studies Center (DISC). DISC is a new Tufts University center dedicated to the promotion, integration, acquisition and application of research, scholarship and education in the science of data. DISC investigators will develop new methods and systems in the science of data as well as employ data analytics to probe a wide range of problems and grand challenges across all disciplines. The Director will provide the leadership and vision for DISC, inspire faculty currently involved in data-intensive research as well as those who aspire to make data a functional methodological feature to advance research outcomes.

As data acquisition, storage and analysis begin to influence every area of research, scholarship and education, from the STEM and biomedical fields to the social sciences to the arts and humanities, DISC will advance Tufts University's ability to collect and curate data through its researchers' cutting edge work in the science of data. Data science and its application is increasingly interdisciplinary, bringing together scholars and researchers from a broad array of domain areas from humanities and arts to social sciences, STEM and biomedical fields to collaborate with computer scientists, mathematicians, statisticians, machine learning and others in a process of discovery.



Tufts University, is a leader in American higher education, distinctive for its success as a student-centered research institution. Tufts is committed to providing transformative experiences for students and faculty and to helping them distinguish themselves as active citizens of the world. The combination of research and liberal arts attracts students, faculty and staff who thrive in an environment of curiosity, creativity and engagement.

The Center Director will report directly to the Provost and work very closely with the Vice Provost for Research, as DISC will be a hub connecting all of Tufts University's unique constellation of schools located on three campuses (Boston, Grafton and Medford) and partner institutions. Candidates must possess a Ph.D. or other terminal degree and must have a deep understanding of the science of data. The successful candidate must also demonstrate an international reputation for productivity and achievement in research and the ability to work collaboratively with colleagues. As not only the intellectual leader of the Center, the ideal candidate should have a strong business sense, experience in new program/center development and an understanding of what it takes to enhance research funding in a competitive environment. Exceptional communication skills, financial acumen, and the potential to fundraise are essential, as is a clear vision for advancing the DISC missions in the midst of a changing funding landscape.

The national executive search firm Witt/Kieffer is assisting Tufts University with this leadership recruitment. For information on how to make a nomination, express interest or apply, please see the end of this document.

Current Strengths and Initiatives in Data Science at Tufts University

DISC will build upon existing strengths, collaborating closely with established institutes, schools and programs, as well as bolstering and integrating new initiatives. Existing complementary expertise and resources at Tufts in the area of data science include: (1) thriving and diverse Mathematics and Computer Science departments, (2) robust statistical expertise for clinical studies (Tufts Clinical and Translational Science Institute) and for epidemiology (InForMID), (3) bioinformatics expertise at Tufts Genomics Core Facility and (4) a wide array of STEM, biomedical, arts, humanities and social science research drawing on data resources such as LinkedIn, Facebook, geographic information systems (GIS) and remote sensing satellite data, as well as major degree programs in data science sponsored by the School of Engineering and the Friedman School of Nutrition. The Director will be able to leverage the insights provided by the 2017 [Data Intensive Study Center \(DISC\) Symposium](#) in its successful integration of many disciplines with representation from government, healthcare, industry and academia.

Goals and Objectives of DISC

Expanding Tufts capabilities in data science emerged as one of the top priorities of the university-wide [strategic plan, T10](#). A committee, which was large and representative of constituents across the entire University, developed a detailed report recommending the establishment of DISC. Faculty from across Tufts' broad range of disciplines are enthusiastic about its development.

DISC is a top strategic priority for the president, provost and university advancement. A trustee emeritus committed a significant gift to the University in FY2017 that will be used to endow the Director's position for the new program. In addition, President Monaco has published several opinion pieces about the importance of strengthening competency in large-scale data analyses.

DISC is slated to be headquartered in the new signature 140 thousand-square-foot Joyce Cummings Building at Tufts' Medford campus with satellite facilities on the Boston and Grafton campuses. DISC will occupy premier space in the Cummings Building alongside math, computer science and economics. Construction of the building is anticipated to be completed by 2021.

The new Director will facilitate creation of an intellectual environment at Tufts University that allows faculty, staff, fellows and students to conduct transformational interdisciplinary research involving the science of data, statistics and the computational sciences, while also providing resources and training in applied data science and computational science for all of the Tufts University community. The three broad missions of DISC are Research, Education and Community.

Research

The dramatic, ongoing expansion of "big data" is transforming research in every field at Tufts. Seizing these opportunities requires the intellectual inspiration and active help of experts in computational and statistical approaches to data science, both to conceptualize the scientific questions, develop investigative approaches to those questions and to identify data needed to advance inherently multidisciplinary research projects.

By working across schools and campuses, DISC faculty, students and research staff will pursue scientific questions that are central to unstructured data analysis, machine learning, and forecasting as well as

contribute to other new and emerging approaches. The Center will grow a culture of collaboration and partner with other units such as Tufts Technology Services to ensure resources for developing simulations, algorithms, pattern recognition and natural language processing to facilitate data-intensive research in every area of academic endeavor across the University. This will allow researchers to identify and leverage expertise outside of their local departments and collaboratively pursue visionary interdisciplinary research challenges, beyond the expertise of individual faculty members working within the confines of a particular discipline.

Education and Teaching

Knowing how to search, clean, visualize, summarize, manipulate, analyze and interpret large data sets is becoming increasingly important in the workplace. Preparing Tufts graduates for these challenges will require a coordinated effort to build on existing courses and programs and to create new programs in data science, computational and data-intensive research in collaboration with Tufts' degree-granting schools. Just as the opportunities of data-intensive research apply to almost every academic field, these courses and programs must be accessible to students in every school and on every campus. DISC is ideally situated to be the hub for building new Master and Ph.D. academic programs and developing data science expertise across the entire Tufts curriculum, bringing together cross-disciplinary stakeholders to plan courses, degree programs, majors and minors with maximal accessibility and impact. DISC will work with the Provost's Office and Schools to hire teaching faculty with the necessary expertise, allowing new courses or programs to thrive.



Community

The Center will serve as a nexus for students, post-docs, clinical trainees, faculty, and staff, whose research interests involve both the development of new methods in these disciplines as well as the application of these techniques in the context of specific research domains. By hosting web resources and forums, mini-symposia, seminars, journal clubs and research solution panels teleconferenced between campuses, and partnering with other institutions to maximize resources and audiences in shared activities, the Center will grow a much-needed culture of computational, data and statistical sciences. This will allow researchers to identify and leverage expertise outside of their local departments and collectively pursue visionary interdisciplinary research challenges, beyond the expertise of individual faculty members, building institutional knowledge so that specialized expertise is not lost when students or post-docs move on.

Opportunities and Expectations for Leadership

DISC presents an exceptional leadership opportunity to its founding Director. She/he will have the liberty to implement a bold vision in a collaborative, exciting and flexible environment.

Among the responsibilities assigned to this position, the Director is expected to give particular attention to the following goals and objectives in the first two to three years:

Organize DISC to Ensure a Highly-functioning Integrative Center

The Director will champion DISC and set strategic priorities for the short and long-term. For example, one of the first priorities will be to develop and organize the Center so there are affiliated Center faculty, pilot projects are implemented and there are functional resources and service cores providing expertise to Tufts University faculty. Particular attention to understanding the multi-campus environments and needs is critical for success.

Create and Integrate Educational Programs related to Data Science across Tufts University

The Director will work with the Provost's office and Schools to facilitate the development of degree programs and university-wide symposia. By virtue of its cross-campus nature, DISC will reduce duplication of effort and ensure consistency in the educational mission. In addition, there is a great need for practical training in research techniques needed to analyze diverse large data sets and training in design and use of high performance computing techniques and software; DISC will serve as a nexus for these activities.

Leverage the Unique Constellation of Resources at Tufts

The Director will have the opportunity to apply his/her vision and understanding to build upon current strengths in data science, faculty research and scholarship and existing computing and technology infrastructure. We seek to position Tufts University as a leader in the science of data and substantially strengthen the impact of its research and educational missions. A focus of the DISC Director will be the creation of external funding for novel, interdisciplinary collaborations and faculty hires. It is expected that DISC will be competitive for federal agency center level grants in quantitative science, especially in interdisciplinary programs. DISC will create a vital intellectual center capable of empowering the Tufts research and teaching enterprise with all that data science promises.

Professional Qualifications and Qualities

The ideal candidate will have the following professional qualifications and personal characteristics:

- Ph.D. or comparable terminal degree;
- National and international recognition for achievement and productivity in data science;
- Evidence that the candidate will provide excellent administrative leadership in a research intensive environment;
- Strong track record of obtaining external research funding from different sources and fundraising;
- Broad perspective on data science and its applications;
- Evidence of the necessary skills to succeed in new program/center development;
- Excellent strategic skills and financial acumen;
- Strong commitment to collaboration and learning in a diverse environment;
- Democratic, collaborative and inclusive leadership style;
- Entrepreneurial spirit;
- Evidence of ability to lead large grants (e.g., multi-center or training grants);
- Motivator and mentor capable of growing strong teams and developing others;
- Exceptional interpersonal and transparent communication skills;
- Capacity to embrace change with an appropriate respect for culture and tradition;
- Analytical and intellectual skills to lead cogent planning and sound management systems; and
- Unquestioned personal integrity.

Tufts University: An Overview

Tufts University was founded as Tufts College in 1852 by Universalists who, inspired by a movement that was tolerant and inclusive, envisioned a non-sectarian institution of higher education. The new College occupied approximately 100 acres of land provided by businessman and philanthropist Charles Tufts. Perched on a hillside with an expansive view of Boston, Tufts, with a civically minded, activist tradition at its core, differed almost immediately from the array of small colleges that emerged in nineteenth-century New England. Tufts' students gained an education grounded in the liberal arts, informed by Universalist notions of social justice, with a useful practicality not often found in a classic liberal arts college.



Today, Tufts University is a nationally recognized, private university committed to its mission as “a student-centered research university dedicated to the creation and application of knowledge.” Tufts fulfills this mission by “providing transformational experiences for students and faculty in an inclusive and collaborative environment where creative scholars generate bold ideas, innovate in the face of complex challenges and distinguish themselves as active citizens of the world.” Characterized by a high level of student engagement, the University strives to make the Tufts experience accessible to a diverse student body and to enhance the sense of connection among its community members.

The University is ranked 27th among *U.S. News and World Report's* top 50 National Universities and 15th among top Research Universities by *Forbes*. The University is committed to making an impact on society as well as individuals, and is ranked as one of the top producers for its size of Peace Corps and Teach for America participants as well as Fulbright grant recipients. Tufts' global perspective reflects a long history of international engagement and the presence of the oldest graduate-only school for international relations in the United States. A distinguished array of programs in the life and health sciences includes the nation's only graduate school of nutrition and the only veterinary school in New England.

Tufts Campuses

Tufts' unique constellation of schools is located on four Massachusetts campuses: a residential campus in Medford/Somerville; a health sciences campus in downtown Boston; a school of fine arts near Fenway Park; and a veterinary campus in Grafton, to the west of Boston. It also operates the Tufts European Center in Talloires, France. Tufts' degree-granting schools include the School of Arts and Sciences and its Graduate School of Arts and Sciences, the School of Engineering and The Fletcher School of Law and Diplomacy, all on the Medford/Somerville campus; the School of Dental Medicine, the Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy, the School of Medicine and the Sackler School of Graduate Biomedical Sciences on the Boston campus; and the Cummings School of Veterinary Medicine on the Grafton campus. The Jonathan M. Tisch College of Citizenship and Public Service, which is based on the Medford/Somerville campus but has a Tufts-wide mission, works to infuse the values and practices of active citizenship across all the degree-granting schools of the University. The Boston campus is also home to the Jean Mayer USDA Human Nutrition Research Center

on Aging, which is closely associated with the Friedman School.

Accreditation and Degrees Offered

Tufts University has been accredited without interruption by the New England Association of Schools and Colleges (NEASC) since 1929 and its accreditation by NEASC encompasses the entire institution. Tufts University enrolls about 5,400 undergraduate students in the Schools of Arts and Sciences and Engineering, and 5,700 graduate or professional students, about evenly divided between women and men. Tufts awards Bachelor of Arts and Bachelor of Science degrees for more than 30 academic departments and programs that encompass nearly 100 majors and minors, including 30



interdisciplinary programs. The graduate and professional schools offer degrees including Master of Arts and Master of Arts in Law and Diplomacy, Master of Science, Master of Fine Arts, Master of International Business, Doctor of Dental Medicine, Doctor of Medicine, Doctor of Veterinary Medicine, Doctor of Occupational Therapy, Master of Public Health and Doctor of Philosophy. The University also offers a number of combined graduate and professional degree programs, both across Tufts' own schools and with other institutions.

Faculty

The University has more than 900 full-time faculty members of whom approximately 45 percent are tenured. As a student-centered research university, Tufts prides itself on its high standards for teaching effectiveness and service, as well as faculty research and scholarship. Faculty development programs offered by the Center for the Enhancement of Learning and Teaching (CELT) strive to promote teaching innovation and support teaching-related initiatives, while helping to coordinate faculty development initiatives across disciplines and between campuses. Tufts faculty value their autonomy in their approach to teaching and scholarship and embrace a shared governance approach. At Tufts University, change comes through the active involvement of faculty, staff and students in committees and task forces that focus on specific issues. The University employs approximately 3,330 FTE non-faculty staff.

Student Body and Student Experience

About 27 percent of the undergraduate student body is composed of domestic students of color; a further 10 percent of undergraduates are international students. Domestic students are drawn from all 50 states and the District of Columbia. Additionally, international students include representation from over 100 countries. Undergraduate admissions are highly selective, with an acceptance rate of 14 percent for the more than 20,200 applications received for admission to the Class of 2020.



An undergraduate student-faculty ratio of 8:1 allows students to work closely with their professors, and more than two-thirds of undergraduate courses have fewer than 20 students enrolled. Students are encouraged to advance their intellectual development through undergraduate research with faculty members and through a wide variety of service learning and community engagement projects, many

offered through Tisch College of Citizenship and Public Service. Undergraduate research has been supported by the Tufts Undergraduate Research Fund, a university-wide program in every school, department and research center, as well as by grants from the Howard Hughes Medical Institute for students in STEM (Science, Technology, Engineering and Mathematics) disciplines and the Andrew W. Mellon Foundation for students in the arts, humanities, and humanistic social sciences.

Nearly half of Tufts undergraduate students study abroad for at least one full semester. Approximately 30 percent of those undergraduates who study abroad do so at one of Tufts' ten highly regarded study-abroad programs.

Student Housing

Sixty-two percent of the undergraduate student body lives on campus in 37 residence halls, including special-interest houses, apartment complexes and fraternities. Sixteen designated housing units offer undergraduates a chance to live with peers who share social, cultural or academic interests; including an array of culture- and language-based options, they each offer an assortment of activities for residents. Tufts hosts chapters of nine men's fraternities, four women's sororities and one local co-ed fraternity, as well as chapters of a number of citywide culturally based fraternities and sororities. Approximately 16 percent of the undergraduate student population is affiliated.

University Governance

The University is governed by a 39-member Board of Trustees, composed of leaders from a range of professions and walks of life. Almost all of Tufts' trustees are graduates of the University, and the Board has a distinguished history of generous philanthropy. The Tufts University Alumni Association was established in 1860 and now includes more than 100,000 living alumni. The Tufts Faculty Senate was established in 2017.

University Leadership

President

Tufts University has been led since August 2011 by Dr. Anthony P. Monaco, the University's thirteenth president. An internationally renowned geneticist, he holds faculty appointments as a Professor of Biology in the School of Arts and Sciences and as a Professor of Neuroscience at Tufts University School of Medicine. An accomplished leader, scientist and teacher, Dr. Monaco brings to the Tufts presidency deep-rooted commitments to academic excellence, diversity and inclusion, a global perspective and a keen awareness of the power of higher education to advance individuals and society.

Under President Monaco's leadership, the University began a comprehensive strategic planning effort, led by Provost and Senior Vice President David Harris, in the fall of 2012. The result of a collaborative planning process, the [T10 Strategic Plan](#), approved by the Board of Trustees in November 2013 sets a framework for Tufts' development over the next ten years, defining both an aspirational future for the University and the resources required to get there. Since the release of the T10 Strategic Plan, the Office of the Provost in collaboration with students, faculty, staff, alumni, parents, and friends from around the University have begun to implement T10 initiatives including the establishment of DISC.

Provost

Dr. Deborah T. Kochevar was appointed Provost and Senior Vice President *ad interim*, in April 2018. She served formerly as Dean and Henry and Lois Foster Professor at Cummings School of Veterinary Medicine at Tufts University where she holds an appointment in the Department of Biomedical Sciences. She received a Doctor of Veterinary Medicine degree from Texas A&M University and a Ph.D. degree in

cellular and molecular biology from the University of Texas, Southwestern Graduate School of Biomedical Sciences. Dr. Kochevar is an accomplished educator and scholar committed to clinical and translational science and research, innovation in learning and teaching and inter-professional aspects of global health education. In her role as interim provost, Dr. Kochevar engages faculty, staff, students and alumni to address quality and sustainability of undergraduate and graduate education and to advance research and scholarship priorities across the institution. She is a champion for diversity, inclusion and internationalism and the need to develop effective and respectful communication among groups and individuals. A search is currently underway and President Monaco expects to name Tufts' next provost in Spring 2019.

Vice Provost for Research

Simin Meydani is the Vice Provost for Research (VPR) as of August 15, 2016. An internationally recognized scientist, Dr. Meydani holds faculty appointments as Professor in Friedman School of Nutrition Science and Policy and Sackler Graduate School of Biomedical Sciences. Prior to her appointment as VPR, she served as the Director of Jean Mayer USDA Human Nutrition Research Center on Aging where she has an active research program. As Vice Provost for Research, Dr. Meydani works with faculty and university leadership to develop and help implement strategic research priorities at Tufts, advocates for the research and scholarship mission of all disciplines across all schools, facilitates strategies to enhance extramurally supported research across the schools from all sources, accelerates interdisciplinary initiatives and promotes university research accomplishments. Dr. Meydani's scientific interests include the basic mechanisms of aging, impact of nutrition on the aging process and age associated diseases, role of nutrition on immune and inflammatory responses and predisposition to infectious diseases in developed and less developed countries.

Tufts at a Glance

General information about Tufts may be found at:

[Tufts At A Glance](#) and [Institutional Research Fact-Book](#)

Procedure for Candidacy

Inquiries, nominations and applications are invited. Applications will be reviewed as they are received, and will continue until the position is filled. For fullest consideration, candidates should provide a curriculum vitae, a letter of application that addresses the responsibilities and requirements described in the Leadership Profile, and the names and contact information of five references. References will not be contacted without prior knowledge and approval of candidates. These materials, along with any questions, should be sent electronically via e-mail to Tufts University's consultants Joyce De Leo, Manny Berger and Arlene Anshel at [Tufts DISCDIR@wittkieffer.com](mailto:Tufts_DISCDIR@wittkieffer.com) or by reaching Sarah Olsen at 630-575-6177.

Tufts University values diversity and is committed to equal opportunity for all persons regardless of age, color, disability, ethnicity, marital status, national origin, race, religion, sex, sexual orientation, veteran status or any other status protected by law.

The material presented in this leadership profile should be relied on for informational purposes only. This material has been copied, compiled, or quoted in part from Tufts University documents and personal interviews and is believed to be reliable. While every effort has been made to ensure the accuracy of this information, the original source documents and factual situations govern.

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