SEARCH PROFILE:

CHAIR OF THE DEPARTMENT OF BIOINFORMATICS AND GENOMICS





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The College of Computing and Informatics (CCI) within The University of North Carolina Charlotte (UNC Charlotte) invites applications and nominations for the position of Chair of the Department of Bioinformatics and Genomics (BIG). This is a unique opportunity to lead and grow innovative programs with a mission to turn biological data into knowledge for the benefit of humanity. This is a 12-month, tenured position at the rank of professor. The expected start date is July 1, 2024, or sooner depending on the successful candidate's availability.



ABOUT THE DEPARTMENT OF BIOINFORMATICS AND GENOMICS

The Bioinformatics and Genomics (BIG) department is one of the three departments in the College of Computing and Informatics (CCI). The Department was established within the College of Computing and Informatics in 2009 to foster research and education in Bioinformatics and Computational Biology. Located in the Bioinformatics Building on the UNC Charlotte Campus, the Department offers a Ph.D. in Bioinformatics and Computational Biology, a Master of Science and a Graduate Certificate in Bioinformatics, a Bioinformatics concentration within undergraduate Computer Science degrees, and an undergraduate Minor in Bioinformatics and Genomics. The department employs 21 faculty members dedicated fulltime to the Department and its programs as well as research staff, full-time office and laboratory staff, and part-time instructors. The Department has excellent BSL-2 and BSL-3 wet lab facilities, several high-performance computer clusters, and dedicated space for postdoctoral fellows, graduate students, and staff. The Department also operates a Bioinformatics Services Division on the North Carolina Research Campus, a billion-dollar, 350-acre research park in nearby Kannapolis. The focus of this group is the development and application of novel analytical methods for knowledge discovery involving large biological datasets.

Learn more about the <u>Department of Bioinformatics and</u> <u>Genomics</u> programs.



POSITION DESCRIPTION AND RESPONSIBILITIES

The Chair of the Department of Bioinformatics and Genomics will be responsible for the daily operation of the department. The Chair will promote excellence in department programs within the University and support faculty teaching, research, and service to advance college and university strategic goals. Chair responsibilities require long-term vision and planning and mentoring of faculty. The Chair reports to the Dean of the College of Computing and Informatics (CCI) and interacts closely with members of the Dean's leadership team and other leaders within and external to the College. The Chair will foster and enhance an atmosphere of fairness, equity, and transparency among the faculty, staff, and students. The Chair also oversees the Kannapolis Research Center. The successful candidate will have a demonstrated record of administrative accomplishments with evidence of working collaboratively in a team-oriented environment. Applicants should have a strong commitment to teaching excellence and innovation at the graduate and undergraduate levels and a clear understanding of the unique contributions of Bioinformatics as a separate discipline. Candidates will be expected to present a forward-thinking vision that aligns with department and University goals, especially with regards to establishing UNC Charlotte as an R1 research University and make a positive impact on the department, college, and university community.

REQUIRED QUALIFICATIONS

- A Ph.D. in Biology, Bioinformatics, Computer Science, or a related scientific field.
- The successful candidate must have an academic record that would qualify for the rank of Full Professor consistent with the Department, College and University Promotion and Tenure criteria (https://legal.charlotte. edu/policies/up-102.13).



ABOUT THE COLLEGE OF COMPUTING AND INFORMATICS

The College of Computing and Informatics (CCI) at UNC Charlotte is one of the most comprehensive and most innovative computing colleges in the country. With over 140 faculty and staff and nearly 5,000 students, CCI graduates more than 1300 Bachelors, Masters, and Ph.D. students a year. The College is organized in four academic units: Department of Computer Science (CS), Department of Software and Information Systems (SIS), Department of Bioinformatics and Genomics (BIG) and the School of Data Science (SDS). CCI has distinct research strengths in AI & Machine Learning, Cybersecurity & Privacy, Computational Bioinformatics & Genomics, Human-Centered Design, High-Performance Computing and CS education. Located in Charlotte, the largest and fastest growing city in the Carolinas, CCI engages with the community and neighboring industries around common social, research, and development initiatives. The College is an active innovation partner with every major industry in the region.

The College's curricula, pedagogy, and administrative structures are designed to be modern, agile, adaptable, and socially responsible.

The CCI enrolls and graduates one of the most diverse student populations in the country. CCI graduates the largest number of women, the largest number of Black students, and the largest number of Hispanics in the Carolinas. It was featured in a 2020 Communications of the ACM article and presented as a model of inclusive

excellence for other computing programs. At the Master's level, CCI has been broadening its offerings to meet the growing needs of lifelong learning for professional development and personal growth.

The College has a vibrant and innovative research program with an annual expenditure of more than \$10M/ year. In Dec. 2022, CCI ranked 39th in the latest NSF Higher Education Research & Development (HERD). Nine faculty members are NSF Career awardees, one is a AAAI Feigenbaum Awardee, and six were ranked among the top two-percent of scientists in the world based on the study conducted and published in 2020. The CCI faculty research and programs rank high in almost every metric (Visualization top 30, parallel and high-performance computing (PHPC) top 40, and Robotics top 45). Expertise in the college is clustered around the scientific foundations of computing and algorithms; the engineering of complex, high performance, reliable, and secure computing systems; the nature and quality of collaborations between humans and computing systems; and the use of computational methods to understand, predict, and affect biological and human systems. By design, the College's research is driven by a balance between an unbounded curiosity for fundamental questions and an urgent sense of mission to affect the important issues we face as a society. Crosspollination between the researchers and the disciplines is highly encouraged and supported. This is what led, for example, to the creation of the School of Data Science,

ABOUT THE COLLEGE OF COMPUTING AND INFORMATICS (CONT.)

a school grounded in CCI and composed of faculty from four other university colleges interested in the application and use of data analytics to a wide range of areas from genomics to political science, criminal justice, misinformation detection, to education.

The college has more than 20 faculty members whose primary area is in Artificial Intelligence. Research includes machine learning, natural language processing, computer vision, robotic collaboration, augmented reality, visualization, and high-performance computing. Our research is supported by NSF, NIH, DOE, DoD, NASA, and DoEd. The college, through the School of Data Science, runs an annual conference on data analytics, highly attended by the local fintech and other industries. CCI also houses an Industry – University Cooperative Research Center (IUCRC) site in Visual and Decision Informatics, and has partnerships in AI with the Electric Power Research Institute, Intel, Lowe's, Wake Forest University Health Sciences, and Duke University Medical Center.

For more than 20 years, cybersecurity and privacy has been a cornerstone of CCI's education and research. CCI was one of the first colleges to obtain the designation of Center of Academic Excellence in Cyber Defense Education and Research by the National Security Agency in recognition of the wide range of cybersecurity educational programs and cutting-edge research conducted by its faculty and students to enable industry and government professionals to protect their organizations from cyber threats. CCI hosts an annual <u>Cybersecurity Symposium</u> every fall, attended each year by more than 900 professionals. CCI also houses an IUCRC site in Cyber Security Analytics and Automation. In line with the national trend towards cross disciplinary research with a focus on impact, CCI has been growing its research imprint and collaboration as measured by the number of collaborative proposals, the number of ongoing collaborations with other disciplines and the focus on mitigating current and future risks. The relevance and impact of the research of our bioinformatics faculty in understanding the genetic signatures of viruses and their mutational trajectories came to full light during Covid-19 epidemics and reinforced the need to redouble these areas of focus. The application of their work to wastewater testing in student living spaces was featured in the New York Times in 2020. One of the new interdisciplinary research awards is the site of an NSF Engineering Research Center (ERC), Precision Microbiome Engineering Research center (PreMiEr), led by Duke University.

CCI is a founding member of the Center for Computational Intelligence to Predict Health and Environmental Risks (*CIPHER*), to understand, prevent and combat disease outbreaks, drawing on the creativity of researchers across the University to advance vital outcomes. Through CIPHER, experts in computer science, bioinformatics, biological sciences, mathematics, geography, public health, education and communications use computational and empirical research to counter the spread of infectious diseases, and address antibiotic resistance, food safety and ecosystem health.

Most recently, in 2023 two pilot interdisciplinary centers have been established: the AI Center for Human Digital Twins and Computational Health (*AI4Health*), and the Center for Environmental Monitoring and Informatics Technologies for Public Health (CEnMoIT).



ABOUT THE UNIVERSITY OF NORTH CAROLINA CHARLOTTE

UNC Charlotte is North Carolina's urban research university nestled in one of America's fastest growing and most diverse cities. It leverages its location in the state's largest city to offer internationally competitive programs of research and creative activity, exemplary undergraduate, graduate, and professional programs, and impactful community engagement initiatives. UNC Charlotte is committed to working collaboratively with community partners to address the cultural, economic, educational, environmental, health, and social needs of the greater Charlotte region in line with the community's focus on racial equity and economic mobility.

Enrollment exceeds 30,000 students – making it the third largest university in the UNC System. UNC Charlotte is also the fastest growing institution in the UNC System, comprising nine academic colleges offering 171 undergraduate majors in 77 programs leading to Bachelor's degrees, 65 Master's degrees, and 24 Doctoral degrees. UNC Charlotte is proud to have 1,019 passionate and committed faculty members and more than 120,000 living alumni.

Responding to the need to serve returning veterans immediately after WWII, UNC Charlotte is one of a generation of schools founded in metropolitan areas just after the war to meet the rising post- war demands for higher education. On September 23, 1946, the State of North Carolina opened the Charlotte Center of the University of North Carolina with an enrollment of 278 students. In 1961, the school moved its main campus from Uptown Charlotte to its current location on 1,000acre campus ten miles from the city center. The main campus is connected to the city center of Charlotte and the Dubois Center at UNC Charlotte Center City by Charlotte Area Transit System light rail. From its inception, in keeping with the State of North Carolina's commitment to provide affordable access to quality education, the University has worked to make learning accessible to all. Though now a large researchintensive urban university and the third largest of the 17 institutions within the state system, the University has maintained its entrepreneurial culture and its commitment to innovation. As the system's "Urban Research University," UNC Charlotte continues to be essential to the region's economic and civic vitality. The University's Civic Action Plan, adopted in 2018, articulates an institutional strategy "to improve social outcomes by organizing University resources, community-based research efforts, and community collaborations to effectively address regional needs through collective impact." The recently created Office of Urban Research and Community Engagement serves as the hub of the University's engaged scholarship ecosystem, mobilizing, assessing, and advancing efforts that connect the University's interdisciplinary, urban research resources to community assets to co-create a thriving, inclusive region.

Largely because of this commitment, UNC Charlotte is the No. 1 institution in North Carolina in awarding bachelor's degrees to Latinx students, enrollment among Black/African American freshman has grown by 30%, enrollment has increased 43% for first year Latinx students, and nearly 33% of the incoming class are firstgeneration college students.

The University has a strong focus going forward on student success and access, and research results that strive to advance the institution's quality and growth through diversity, equity, and inclusivity. This pursuit has been reinforced through key administrative appointments and adoption of forward-looking <u>strategic documents</u>.





APPLICATIONS, INQUIRIES, AND NOMINATIONS

Academic Search is assisting University of North Carolina Charlotte in this search. Nominators and prospective candidates may arrange a confidential conversation about this exciting opportunity with one of the two senior consultants: Cynthia M. Patterson at <u>Cynthia.Patterson@academicsearch.org</u> or Maria Thompson at <u>Maria.Thompson@academicsearch.org</u>.

To apply, a candidate should submit the following:

- 1. A letter of intent addressing how the candidate's experiences match the position requirements.
- 2. A current CV/resume.
- Contact information for at least five professional references, including email addresses and a brief note on the candidate's working relationship with each. References will not be contacted without the prior knowledge and approval of the candidate and at a later stage in the search.
- **4.** A leadership statement that summarizes relevant research and administrative experience.

For full consideration, applicant materials should be submitted by **January 29, 2024**.

Please send materials by email as PDF document attachments (four separate documents) to <u>BIOGCHAIR@academicsearch.org</u>

As an EOE/AA employer and an ADVANCE institution that strives to create an academic climate in which the dignity of all individuals is respected and maintained, the University of North Carolina at Charlotte encourages applications from all underrepresented groups. The candidate chosen for this position will be required to provide an official transcript of their highest earned degree and submit to a criminal background check. For additional information about the department, please visit our website at <u>https://bioinformatics.charlotte.edu</u>.

ABOUT ACADEMIC SEARCH

Academic Search is assisting University of North Carolina Charlotte in this work. For more than four decades, Academic Search has offered executive search services to higher education institutions, associations, and related organizations. Academic Search was founded by higher education leaders on the principle that we provide the most value to partner institutions by combining best practices with our deep knowledge and experience. Our mission today is to enhance institutional capacity by providing outstanding executive recruitment services, executive coaching, and transition support, in partnership with our parent organization, the American Academic Leadership Institute.



Committed to IDENTIFYING AND DEVELOPING LEADERS by providing the highest level of EXECUTIVE SEARCH to our higher education partners.

