

## Network Science Institute - London

## New College of the Humanities

## Northeastern University Global Network

# Research Professor(s) in Network Science

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### POSITION OVERVIEW

<b>Location</b>	London
<b>Term</b>	Permanent
<b>Salary</b>	Full Professor: From £80,000 per annum Associate Professor: From £53,000 per annum Assistant Professor: From £42,000 per annum  Commensurate with experience
<b>Benefits</b>	Generous benefits package including 25 days holiday allowance pro rata (excl. Bank holidays), group life assurance, group income protection, pension schemes and private healthcare
<b>Start</b>	Flexible start date

This is an ongoing research faculty position. Positions are 100% research-focused, with options for teaching commitments, if desired.

### The role

The Network Science Institute at Northeastern University (NetSI) is launching a new site in London, UK. As part of Northeastern University's partnership with the New College of Humanities (NCH), NetSI is pleased to announce a multi-position hiring initiative to create a new network science research hub located at Devon House, London, at NCH. NetSI-London will leverage regional and

national expertise and resources, while maintaining close ties to NetSI's home institute in Boston, Massachusetts.

Several candidates will be selected who share interests around a thematic area to facilitate collaboration. Research pairs or small teams are also encouraged to apply. The goal is to identify a set of cohesive, synergistic teams of researchers to pioneer this initiative. Broadly, we are seeking interdisciplinary scholars, using network science and computational modelling approaches to address population level challenges.

One of the focus areas will be in applied network economics, with a focus on digital markets with decentralised governance, including but not limited to research topics such as: blockchain based ecosystems, non-fungible tokens (NFTs), decentralised autonomous organisations (DAOs), cyber threats in digital communities and/or collective dynamics of dark web markets. Other focus areas will be on contagion processes, behavioural changes, cyber threats and team dynamics.

### **Qualifications**

Must have a Ph.D. or equivalent in network science, complex systems, economics, physics, mathematics, computer science, data science, computational social science, biological sciences, sociology, communication or in related scientific disciplines. Must demonstrate the ability to plan, execute and publish research; and have experience with proposal preparations for external research funding. Excellent interpersonal, communication, and documentation skills are essential, as are time-management and organisational skills.

Successful applicants will have an expertise in network science, with relevant publications and a successful track record obtaining extramural funds (full professors will be expected to have a significant track record of winning major grant funding). Must have a deep understanding of the mathematical, statistical, and theoretical tools used to study complex networks, and the ability to develop algorithms, and statistical and computational models to process and analyse datasets that represent complex dynamical systems. Models of complex systems are often based on very large, unstructured, noisy or uncertain underlying data. Experience with statistical inference, network modelling, and state-of-the-art machine learning techniques for prediction, classification, anomaly detection, null models, and inference is preferred. Applicants are expected to have technical skills that enable them to work collaboratively, with the ability to use common scientific programming languages, such as Python, R, Julia, Matlab.

Northeastern University's partnership between NCH and NetSI will establish new areas of growth, with emphasis on European-United States collaborations in applied network economics, and other applications of social contagion and collective behaviours in digital markets. The partnership is committed to open science and reproducibility and seeks to support an international community of scholars who value learning from people across a wide range of disciplinary and cultural backgrounds, and who take pride in their scientific integrity.

## Job Duties

Faculty will be expected to carry out independent research, proactively seek extramural research funds, and demonstrate success in securing significant external funding. In addition they will design and implement research initiatives; analyse and publish results; prepare reports and publications; lead research proposals; develop and oversee project budgets; and hire and manage research staff. They will provide supervision to students (both those enrolled in master's degree programs at NCH and the network science doctoral program at the main Northeastern campus in Boston). They will be expected to engage in synergistic collaborations with other NCH and NetSI research teams, and develop professional networks within the UK and Europe and contribute to efforts to bridge international communities of network scientists across Europe and the U.S.

Job duties will include the following roles, with distribution of time, dependent on expertise and seniority.

- 35-40% Carry out basic or applied research in an area of considerable scope and complexity, and analyse and publish findings
- 20-25% Design & implement independent research initiatives and project budgets
- 15-20% Prepare grant proposals and obtain sponsored funds for research
- 10-15% Provide mentorship and training opportunities to students
- 5% Attend meetings, present research and participate on hiring and strategic committees, as needed
- 5% Other assignments as deemed necessary

## Network Science Institute (NetSI)

Research faculty will be core members of the Network Science Institute, which has its central office in Boston MA and additional hub sites forming across Northeastern's satellite campuses. NetSI, founded in 2014, has emerged as a world leader of multi-disciplinary research communities in the field of network science. NetSI brings together expertise from diverse disciplines, from the physical, information and social sciences, with the goal to build and expand common, synthesising methodology and theory of networks, and to apply these tools to important societal challenges. With the goal of training a new generation of scholars, the Institute has developed the first U.S. based doctoral program in network science. Research faculty will be connected to NetSI's vibrant community, with dozens of externally funded research programs, diverse faculty, and a uniquely skilled pool of doctoral students.

## New College of Humanities (NCH)

Founded in 2012, New College of the Humanities at Northeastern has established itself as a prestigious higher education institution based in the heart of London. After becoming part of Northeastern University's global network in early 2019, the College has undergone a period of rapid growth, having been granted taught degree awarding powers in February 2020 and moving to

new premises in 2021. NCH continues to grow taking in more students every year, further expanding its courses, networks, and opportunities for research.

### **About Northeastern University**

Founded in 1898, Northeastern is a global research university (\$181m external research funding in 2020 – 2021) and the recognized leader in experience-driven lifelong learning. Our world-renowned approach empowers our students, faculty, alumni, and partners to create impact far beyond the confines of discipline, degree, and campus.

Our locations—in Boston; Charlotte, North Carolina; London; Portland, Maine; San Francisco; Seattle; Silicon Valley; Toronto; Vancouver; and the Massachusetts communities of Burlington and Nahant—are nodes in our growing global university system. Through this network we expand opportunities for flexible, student-centred learning and collaborative, solutions-focused research.

Northeastern’s comprehensive array of undergraduate and graduate programs— in a variety of on-campus and online formats—lead to degrees, through to doctorate, in nine colleges and schools. Among these, we offer more than 195 multi-discipline majors and degrees designed to prepare students for purposeful lives and careers.

Northeastern University is an equal opportunity employer, seeking to recruit and support a broadly diverse community of faculty and staff. Northeastern values and celebrates diversity in all its forms and strives to foster an inclusive culture built on respect that affirms inter-group relations and builds cohesion.

### **Enquiries**

Informal enquiries may be made to Kate Coronges, the Executive Director of the Network Science Institute ([london@networkscienceinstitute.org](mailto:london@networkscienceinstitute.org)). To be considered for the position, applications must be made in accordance with the process specified.

### **Application Process**

Applications should be made via [this link](#) by 20:00 on 4 June 2022. Please reference your application “NTRP422”

Please ensure that your application includes a CV and cover letter. Applicants should address the selection criteria and indicate how their background and expertise are aligned with those at NetSI and NCH. You may use bullet points if you wish.

Names and contact information of references should be provided through the cover letter. References will only be sought for finalists.

Research pairs or small teams are welcome to apply - all team members who meet the criteria should apply independently, and the team membership should be indicated in the cover letter. If applying as a team, the dossier should include any previous work and accomplishments of the team; synergistic and complementary expertise or skills; and capabilities of the team that have potential to go beyond the contributions of individual scholars. Junior researchers should apply to the Postdoctoral Research Assistant position here: <https://www.jobs.ac.uk/job/COS270/postdoctoral-research-assistants-in-network-science>

Participation in the equal opportunities section is encouraged, but voluntary. Applications are welcome from all sections of the community and will be judged on merit alone. We welcome applications from underrepresented groups. Candidates must be able to demonstrate their eligibility to work in the UK in accordance with the Immigration, Asylum and Nationality Act 2006. We may be able to offer sponsorship for this role. Please detail your requirements in your cover letter.