ASSOCIATE PROFESSOR

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Job Title:	**Associate Professor in Health Data Science**
Department:	Department of Medical Statistics
Faculty:	Faculty of Epidemiology and Population Health
Location:	London UK
FTE:	1.0
Grade:	G8
Accountable to:	Dean of Faculty through the Head of Department
Job Summary:	We have an exciting opportunity for a full-time health data scientist to contribute to the expanding portfolio of health data science at the School. The successful candidate will take a leading role in health data science research at the school and will have the opportunity to work with a thriving interdisciplinary team to undertake world leading global health data science research. We would be particularly interested in encouraging applications from researchers with expertise in the following areas: machine learning in causal inference or health policy evaluation; big data in health and the environment; and digital health. A key component of the job will be to continue to develop the new MSc programme in Health Data Science in the capacity of Programme Director, liaising with external industry partners and ensuring an excellent student experience.
	Applicants will need a PhD in a relevant field such as health data science, data mining, statistics, machine learning, artificial intelligence or data engineering. They will be familiar with machine learning methods and their application to health settings. Some experience with deep learning would be desirable. They will have experience of managing research projects and coordinating teaching programme delivery, both face to face and online learning, and have excellent written and oral communication skills in English.
	This three-year post, based through the Department of Medical Statistics, will include diverse opportunities in research and teaching and involvement with researchers running studies in a range of disciplines. The successful candidate will be expected to build their own portfolio of research projects, as well as having an opportunity to join other research projects undertaken at LSHTM. They will teach and supervise PhD and MSc students. The post holder will be expected to spend up to 40% of their time on the education component of the job. Although the post is three-years in the first instance, this would ideally be extended into a longer term position with additional research income supplementing the initial funding.

GENERAL INFORMATION

The London School of Hygiene & Tropical Medicine

The London School of Hygiene & Tropical Medicine (LSHTM) is renowned for its research, postgraduate studies and continuing education in public and global health.

Our mission is to improve health and health equity in the UK and worldwide; working in partnership to achieve excellence in public and global health research, education and translation of knowledge into policy and practice.

We embrace and value the diversity of our staff and student population and seek to promote equity, diversity and inclusion as essential elements in contribution to improving health worldwide. We believe that when people feel respected and included, they can be more creative, successful, and happier at work. While we have more work to do, we are committed to building an inclusive

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workplace, a community that everyone feels a part of, which is safe, respectful, supportive and enables all to reach their full potential.

History

Founded in 1899 at the London Docks, LSHTM is now based in Bloomsbury, where it has two main sites at Keppel Street and Tavistock Place, and additional sites in The Gambia and Uganda. Today, our staff, students and alumni work in government, academia, international agencies and health services across the world. Learn more about the history of LSHTM.

Research

Research income has grown to more than £180 million per year from national and international funding sources including UK government and research councils, the European Union, the Wellcome Trust, Gates Foundation and other philanthropic sources.

Our diverse research talents, skills and experience underpin our position as a leader in public and global health. These range from the molecular to the global, the theoretical to the applied, the analytical to the political. Our staff are conducting research in more than 100 countries.

Staff community

We have 3,300 staff based all around the world with core hubs in London and at the MRC Units in The Gambia and Uganda, which joined LSHTM in February 2018. Our outstanding, diverse and committed staff make an impact where it is most needed - deploying research in real time in response to crises, developing innovative programmes for major health threats, or training the next generations of public and global health leaders and researchers.

Partnerships

Working in partnership is central to achieving our mission. Our strategic collaborations in the UK and across high-, middle- and low-income countries deliver health and socioeconomic benefits across the world, especially in the most disadvantaged communities.

LSHTM is also a member of the M8 Alliance of Academic Health Centers, Universities and National Academies, the Association of Schools of Public Health in the European Region, and the Consortium of Universities for Global Health.

Education

We deliver research-led educational programmes to future health leaders, managers and researchers across the world. We have more than 1,200 face-to-face Master's and Doctoral students, 3,000 studying by distance learning, and 1,000 each year on short courses and continuous professional development. Our free online courses are studied by more than 270,000 participants globally.

Excellence in research and education

We perform strongly in various global university league tables. In the ShanghaiRanking's Global Ranking of Academic Subjects 2020 we placed 3rd in public health (1st in the UK). In the 2020 CWTS Leiden Ranking LSHTM is ranked the UK's top university for the proportion of academic research with women listed as authors, and third in Europe for publishing open access research.

In the US News Best Global Universities Ranking 2021, we ranked 3rd in the world for public, environmental & occupational health, 4th in the world for infectious diseases, 11th in the world for social sciences & public health, and 12th best University in the UK overall. We ranked 27th for medicine in the 2019 QS World University Rankings.

In 2017, the inaugural Center for World University Rankings by Subject placed LSHTM first in the world for tropical medicine research, second for parasitology and seventh for infectious diseases, public, environment and occupational health, and social sciences and biomedical.

LSHTM was named University of the Year 2016 by Times Higher Education and awarded a Queen's Anniversary Prize for Higher and Further Education in 2017 in recognition of our response to the 2014 Ebola epidemic in West Africa. LSHTM does not appear in the Times Higher Education World University Rankings as universities are excluded if they do not teach undergraduates.

We seek to foster and sustain a creative and supportive working environment based upon an ethos of respect and rigorous scientific enquiry. We embrace and value the diversity of our staff and student population and seek to promote equality as an essential element in contribution to improving health worldwide.

LSHTM is one of around 20 specialist institutions that receive institution specific funding from the Office for Students (OfS). This funding recognises the additional costs that LSHTM incurs because of its unique range of teaching, specialist facilities, and the scale of its contributions to national and international agencies.

FACULTY INFORMATION

The Faculty of Epidemiology & Population Health (EPH) houses a large group of epidemiologists, demographers, statisticians and nutritionists working on issues of major public health importance in the UK and globally. EPH has approximately 400 staff members organised into four research departments.

- Department of Infectious Disease Epidemiology
- Department of Medical Statistics
- Department of Non-communicable Disease Epidemiology
- Department of Population Health

The Faculty has a teaching programme consisting of ten MSc courses: Epidemiology, Demography and Health, Medical Statistics, Public Health for Development (run jointly with the Faculties of Infectious & Tropical Diseases and Public Health & Policy), Nutrition for Global Health, Reproductive & Sexual Health Research, Veterinary Epidemiology (run jointly with the Royal Veterinary College), Global Mental Health (run jointly with Kings College London - Institute of Psychiatry) and the Distance Learning courses in Epidemiology, Clinical Trials and Demography in Health. The Faculty also has approximately 120 research students studying for an MPhil, PhD or DrPH degree.

The Dean of Faculty is Professor Elizabeth Allen.

DEPARTMENT INFORMATION

The Department of Medical Statistics (MSD) specializes in methodological research in medical statistics, especially in relation to clinical trials, observational epidemiology and disease prevention. The Department incorporates a Clinical Trials Research Group (concerned with planning, co-ordination, statistical analysis and reporting of clinical trials), and has a special interest in cardiovascular disease, asthma, HIV and perinatal studies. The Department has recently developed a strong interest in methodological and applied research in pharmaco-epidemiology.

MSD has established a reputation for being one of the leading innovative centres in Europe for biostatistical methodology relevant to the planning and reporting of medical research. The Head of Department is Professor Linda Sharples. Professors are Elizabeth Allen, James Carpenter, Tim Clayton, Diana Elbourne, Stephen Evans, Chris Frost, Nick Jewell, Ruth Keogh, Neil Pearce, Stuart Pocock, Stijn Vansteelandt and Elizabeth Williamson.

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The portfolio of duties outlined below will vary in accordance with the detailed expectations of the role and any additional role to which you are formally appointed (attached), all of which may be varied from time to time, and as agreed at your annual Performance and Development Review (PDR).

JOB DESCRIPTION

Main Activities and Responsibilities

KNOWLEDGE GENERATION

1. To deliver high quality research & scholarship in your field of study, individually and in collaboration with others, by developing and maintaining a research grant portfolio from good[1] research funders, publishing peer-reviewed outputs, generating and securing (where relevant) intellectual property, and evaluating teaching practice;

2. To participate in doctoral student supervision and examination;

3. To lead and manage research teams and promote and ensure compliance of self and others with good practice in relation to the conduct of research, the ethics policy, inclusivity, and other relevant School policies;

4. To support the development of early-career researchers;

5. To take a leading role in developing collaborations in health data science, both with groups at LSHTM and with external partners.

EDUCATION

1. To deliver high quality, inclusive education and assessment in relation to your specific subject and within the broader area covered by your department and disciplinary field;

2. To contribute to the improvement of the quality and inclusivity of the School's education, by participating in the development and review of new and updated learning and teaching materials or approaches, and/or improving assessment practices, and/or improving aspects of the student experience;

3. To support educational leadership and management by active participation in Faculty and Programme or curriculum leadership roles, as appropriate, and by collaborating with professional services staff both centrally and in the Faculty office in carrying out relevant administrative processes;

4. To be responsible for the academic management and delivery of the MSc Health Data Science programme. This would include the following:

    a. Overseeing academic and quality processes

    b. Leading on the development of the programme, ensuring that the curriculum reflects state-of-the-art health data science

    c. Ensuring appropriate methods of assessment are in place

    d. Ensuring an excellent student experience

    e. Ensuring academic teams are supported in their teaching activities

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[1] Good research funders are: Research Councils; Government Departments; NIHR; National and overseas charities recognised by HEFCE for QR; Overseas research councils or equivalent including NIH; EU; other agencies (eg NGOs, commercial companies) supporting commissioned research that is consistent with School's mission and meets School's cost recovery targets

f. Working with Registry services to ensure student recruitment processes are appropriate

g. Chairing Programme Committee meetings

h. Liaising with external industry partners.

INTERNAL CONTRIBUTION

1. To demonstrate good internal citizenship by undertaking PDRs and promoting staff development, and by participating in the recruitment, mentoring and support of more junior colleagues as appropriate;

2. To participate in the activities of School committees and undertake a leadership or administrative role at School/Faculty/Department/MRC Unit level, as appropriate;

3. To proactively demonstrate LSHTM's EDI goals in your work and behaviour;

EXTERNAL CONTRIBUTION

1. To demonstrate good external citizenship by linking with and supporting appropriate external organisations;

2. To promote knowledge translation and enterprise by exploiting academic knowledge beyond academia;

PROFESSIONAL DEVELOPMENT & TRAINING

1. To keep up-to-date with the latest research/thinking in your academic field and with changes to pedagogic practice within the School and more generally;

2. To undertake and successfully complete the mandatory training required by the School appropriate to the role;

GENERAL

All academic staff are free within the law to question and test received wisdom, and put forward new ideas and controversial or unpopular opinions, to enable the School to engage in research and promote learning to the highest possible standards.

All staff at LSHTM are also expected to:

1. Act at all times in the School's best interests;

2. Treat School staff, students and visitors with courtesy and respect at all times;

3. Comply fully with School policies, procedures and administrative processes relevant to the role including when acting as Principal Investigator, accepting academic, managerial, financing and ethical responsibility for a project;

4. Uphold and support the School's values (as set out in the School Strategy);

5. Act as ambassadors for the School when hosting visitors or attending external events;

The above list of duties is not exclusive or exhaustive and the role holder will be required to undertake such tasks as may reasonably be expected within the scope and grading of the role.

Role descriptions should be regularly reviewed to ensure they are an accurate

representation of the role.

[JUL 2021]

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PERSON SPECIFICATION

This form lists the essential and desirable requirements needed by the post holder to be able to perform the job effectively.

Applicants will be shortlisted solely on the extent to which they meet these requirements.

ESSENTIAL CRITERIA:

1. A doctoral degree in a relevant field (data science, machine learning, data mining, statistics, artificial intelligence, data engineering).

2. Expertise in Machine Learning

3. A consistent and significant track record of attracting research grant income, including salary recovery, from major research funders (PI, co-PI or leadership within a large proposal such as work-package lead).

4. A track record of contributions as lead and co-author to peer-reviewed outputs, as expected by the subject area/discipline in terms of types and volume of output; significant contributions to at least four outputs within the most recent 5 years that are at least internationally excellent[2].

5. Proven ability to work independently, as well as collaboratively as part of a research team, including experience of supervising and supporting junior researchers and non-academic staff and proven ability to meet research deadlines.

6. An understanding of the strategies for improving equity and inclusion in research and/or learning and teaching.

7. Some experience of doctoral degree supervision.

8. Proven ability to build collaborative research relationships with external researchers and/or institutions, or industry (where relevant).

9. Evidence of ability to deliver high quality research-informed teaching.

10. Evidence of excellent interpersonal skills, including the ability to communicate effectively both orally and in writing.

DESIRABLE CRITERIA

1. Teaching qualification (or Fellow/ Senior Fellow of HEA).

2. Experience of building and leading a research team.

3. Experience of innovation in teaching delivery and assessment and/or senior teaching management such as Programme Director, Exam Board member, Periodic Review panel member.

4. Demonstrable evidence of improving equity and inclusion in research and/or

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[2] i.e. of a quality that would be rated highly in assessments of research quality such as those done by UK government, and in peer review processes used by funders

learning and teaching.

5. Experience of engagement with national and/or international research and/or policy advisory bodies.

SALARY AND CONDITIONS OF APPOINTMENT

The post is initially funded for 3 years at 1FTE and is available from 1 December 2021. The salary will be on the Academic scale, Grade 8 scale in the range £57,320 - £65,789 per annum (inclusive of London Weighting). The post will be subject to the LSHTM terms and conditions of service. Annual leave entitlement is 30 working days per year, pro rata for part time staff. In addition to this there are discretionary "Wellbeing Days". Membership of the Pension Scheme is available.

Applications should be made on-line via our website at http://jobs.lshtm.ac.uk. Applications should also include the names and email contacts of 2 referees who can be contacted immediately if appointed. Online applications will be accepted by the automated system until 10pm of the closing date. Any queries regarding the application process may be addressed to jobs@lshtm.ac.uk.

The supporting statement section should set out how your qualifications, experience and training meet each of the selection criteria. Please provide one or more paragraphs addressing each criterion. The supporting statement is an essential part of the selection process and thus a failure to provide this information will mean that the application will not be considered. An answer to any of the criteria such as "Please see attached CV" will not be considered acceptable.

Please note that if you are shortlisted and are unable to attend on the interview date it may not be possible to offer you an alternative date.

ASYLUM AND IMMIGRATION STATEMENT

The School will comply with current UKVI legislation, which requires all employees to provide documentary evidence of their legal right to work in this country prior to commencing employment. Candidates will be required to email a copy of their passport (and visa if applicable) to HR prior to their interview and if appointed will be asked to bring the original documents in to be copied and verified before their start date.

Applications from candidates who require sponsorship to work in the UK will be considered alongside other applications. Applicants who do not currently have the right to work in the UK will have to satisfy UK Visas & Immigration regulations before they can be appointed.

Further information about Sponsorship and eligibility to work in the UK, can be found at: https://www.gov.uk/guidance/immigration-rules/immigration-rules-appendix-skilled-worker

Date amended: JUL 2021

Academic Expectations: Associate Professor

Examples of expected types of activities are listed; the selection of activities will vary from year to year and not all activities in each category would necessarily be done in any one year. The statement in each shaded heading summarises the general expectations for contributions in each category. A research-focused academic will not be expected to demonstrate the same spread and depth of activities in Education as an Education-focused academic. Vice versa, an Education-focused academic will not be expected to demonstrate the same spread and depth of activities in Knowledge Generation as a research-focused academic. Job descriptions will set out the expected balance between Knowledge Generation and Education.

Knowledge generation: Excellent contributions to knowledge generation, effective support to doctoral degree students, and effective leadership and management of knowledge generation and support to others' success

Research and scholarship
- Research grant portfolio from good[3] research funders (PI, CoI or leadership within a large proposal such as work-package lead) that is consistent with the requirements for financial sustainability across the Department/Faculty
- For those on without duration contracts, salary recovery from research grants (whether as direct costs or directly allocated costs) and consultancy, on a rolling 3 year average, of not less than around 40% of salary (for those with substantial teaching or managerial responsibilities), and up to around 80% of salary for those spending the majority of their time on research; fellowship holders will usually recover 100% of their FTE[4]; these salary recovery expectations will be applied flexibly, allowing for individual circumstances and the balance of activities
- Collaborations with other research teams/institutions/industry
- Contributions, including as lead, to peer-reviewed and other research outputs, as expected by the subject area/discipline in terms of types and volume of output; significant contributions to at least four outputs within the most recent 3 years that are at least internationally excellent[5][2][6]; generation and securing of intellectual property including patents as appropriate
- At least one oral presentation at international conference and one invited seminar or other talk per year over 3 year rolling average

Reflective practice and critical enquiry (RPaCE)
- Leading elements of RPaCE and considering their impact in broader context
- Designing evaluation studies
- Disseminating learning and experiences through presentations, articles etc
- Leading on initiatives to enhance teaching practice of others: e.g. programme review

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[3] Good research funders are: Research Councils; Government Departments; NIHR; open competitive calls from UK and overseas charities; Overseas research councils or equivalent including NIH; EU; other agencies (eg industry) supporting commissioned research that is consistent with School's mission and meets School's cost recovery targets

[4] exceptions include, for example, where staff hold prestigious fellowships which do not pay salary (eg Wellcome)

[5] i.e. of a quality that would be rated highly in assessments of research quality such as those done by UK government, and in peer review processes used by funders

[6] Where publications are co-authored with other School staff, the volume should be such that each person has at least 4 distinct outputs

Doctoral degree supervision
- Effective doctoral degree supervision within the supervision teams of at least two students, and contribution to at least two advisory panels or serving as chair of two final viva examinations, on average over a year
- Supporting timely completions and peer-reviewed outputs
- Examination as internal and/or external examiner

Research management, leadership and support
- Leading and managing research teams
- Support to career development of research team members and others (e.g. named as mentor on fellowship application)

Professional development referenced to RDF
- Senior management/leadership development and other development activities (e.g. advanced methods training, methods/conceptual development workshops, doctoral degree examiner training/observation)

Education: *Delivering and developing high-quality research-informed education*

Teaching and assessment
- High quality research-informed teaching, supervision and assessment, demonstrating adaptability to different needs and contexts; participation in quality assurance and quality enhancement processes, course committees and examination boards
- Personal tutoring allocation and/or specialist support for particular student groups (e.g. international, disability, student representatives)
- Development of less experienced educators (e.g. as peer-observer/mentor or leading staff development activities)

Educational development and innovation
- Research-informed educational development and innovation, including acting on student feedback; evaluation of selected aspects of developments/innovations
- Contributions to solving significant learning, teaching or assessment challenges; contributions to Education Task & Finish Group, Review Group, or similar
- Soliciting and using peer review of education delivery and/or development[7]

Education leadership and management
- A leadership role in Education [8]
- Contributions to education strategies, policies and development through committees, forums or review groups
- Leadership and/or management of selected aspects of the curriculum, (e.g. as module organiser/deputy, responsibility for another aspect of the student experience), or engagement in periodic reviews

Professional development referenced to UKPSF

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[7] e.g. publication, conference presentation, special interest group, engagement with external examiners or reviewers, peer-observation

[8] For example, Programme Director/deputy, Admissions Tutor, leadership role within collaborative education programme with other institution(s), representing Programme Directors'/Module Organisers' Forum on SLTC, member/Chair of Education Task & Finish Groups, Exam Board Chair/Deputy

•   Working towards fulfilling the criteria for Senior Fellow HEA through ongoing commitment to professional development activities

Internal contribution: *Contributions to School functioning and development*

Internal citizenship including contributing to supportive academic environment
- Engagement in: Council; Senate or Senate subcommittees; Ethics, Biological Safety, AWERB and other safety committees;
- Ongoing contributions to School/Faculty/Department/MRC Unit interview panels and committees; organising events (e.g. related to education, research, capacity strengthening, research uptake); supporting broader education and doctoral degree processes; significant contributions to EDI related committees, networks and roles
- Contributing to success of those outside immediate research group and to flourishing academic environment (eg contributing to research proposal reviews and mock interview panels, mentoring both within formal scheme and informally) to help develop and motivate colleagues

School leadership and management roles
- ADoE, TPD, FRDD, DRDC, Centre Director/Deputy Director or theme leader, safety officer roles, Chair of Faculty or School committees
- Supporting School partnerships (beyond own specific research activities)

External contribution: *Broad engagement in activities beyond the School*

External citizenship
- Invited research and/or educational contributions to peer review bodies/roles, DSMBs, journal leadership, participation in professional organisations, learned societies, government and or parliamentary (e.g. APPG) committees, national/international meetings/working groups etc.

Knowledge translation and enterprise
- Exploiting research-based knowledge beyond academia, e.g. through IP exploitation, consultancies
- Participating in and developing external networks for the School's benefit, such as identifying sources of funding, contributing to student recruitment, securing student placements, marketing the institution, facilitating outreach work, or building relationships for future activities
- Documenting impact of research and helping prepare impact case studies
- Supporting public engagement including MOOCs/OERs or other educational outreach