

## Job Description

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| <b>Job Title:</b>                            | Eric and Wendy Schmidt AI in Science Postdoctoral Fellows, a program of Schmidt Sciences                      |
| <b>Department/Division/Faculty:</b>          | All Imperial Departments in FoNS and FoE  |
| <b>Campus/Location:</b>                      | White City Campus   |
| <b>Job Family/Level:</b>                     | Research Job Family, Research Fellow ( <a href="#">Research salary scale</a> )                                |
| <b>Responsible to:</b>                       | Head of Host Department   |
| <b>Key Working Relationships (Internal):</b> | Staff and Students of the Host Department, I-X and the other The Eric and Wendy Schmidt AI in Science Fellows |
| <b>Key Working Relationships (External):</b> | Other Eric and Wendy Schmidt Fellows from across their network  |
| <b>Contract type:</b>                        | Full time, fixed term for 2 years   |

### Purpose of the Post

I-X is Imperial's new flagship interdisciplinary campus devoted to AI and its applications. It is located within Imperial's Translation and Innovation Hub (I-HUB) and I-X hosts academics from across Imperial's departments and faculties: <https://ix.imperial.ac.uk/>. Its aim is to bring together interdisciplinarity, AI and grand challenges.

The Eric and Wendy Schmidt Centre for AI in Science Postdoctoral Fellows will support over 110 years of independent and original research by fellows using AI to advance Science. The grant lasts 6 years with over twenty fellows hosted in any year. The Centre and fellows are based within I-X and are seated next to I-X faculty and research groups. Details of the Centre and other recruitment can be found [here](#)

Fellows will produce independent and original research, using AI to advance Science, within Imperial's departments and I-X, submit publications to refereed journals, and, without obligation, but in accord with their career development goals, help with teaching and administration.

Here 'AI' is interpreted very broadly, e.g.: topics in Bayesian Inference and Robotics; 'Science' covers any typical topic in Natural Science and Engineering (Epidemiology, Biology and basic science in biomedicine are included but very clinical medical themes are not covered, including conventional medical imaging). Examples include Bayesian optimization for molecular or materials design; machine learning for single cell data; physics-based ML for turbine design and astrostatistics. These posts are not suitable for generic AI research with general application: candidates must be aiming to substantially advance a *particular* area of science. Applicants could view themselves as AI researchers tackling particular pieces of science or science researchers using AI to transform their area. Extensive AI knowledge is not a prerequisite.

Applicants working in AI-based industry, with a desire to return to academic research, are encouraged to apply. The Schmidt Fellows will be colocated with each other within Imperial's dynamic new AI campus, I-X, and alongside other AI researchers including across Imperial's faculties and departments. Please note that applications that focus on AI alone or use one area of AI to contribute to another area of AI or focus on AI with broad application to numerous example areas, will not be considered: a focus on advancing new science in a particular area is essential. Please check remit [here](#).

The use of AI must serve a catalytic role: applications which use AI in a manner judged routine across the specific field (e.g., this would apply to some parts of bioinformatics) may be at a disadvantage. With exceptions like AI for Mathematical Proofs, publications/ outputs in mainstream venues read by a broad

range of scientists/ engineers, will typically be expected. AI needs to have a central and catalytic role such that removing it from the proposal would compromise the whole project.

An FAQ on the Fellowships and video can be found on here at [Apply | Research groups | Imperial College London](#)

## Key Responsibilities

### Research Duties:

- To undertake a self-directed program of research and scholarship
- To take initiatives in the planning and leading of research
- To supervise postdoctoral researchers, postgraduate students, and undergraduate research projects
- To direct the work of small research teams, supervising and taking responsibility for the research team
- To write regular (monthly) internal reports
- To manage research projects
- To write reports for submission to research sponsors
- To prepare material for presentation in oral and poster formats
- To draft publications and prepare them for submission to refereed journals
- To contribute to writing bids for research grants
- To provide guidance to staff and students
- To undertake instruction of PhD students as agreed
- To supervise practical work and advise students on techniques.
- To take responsibility for organising resources and effective decision making in support of research
- To present findings to colleagues and at conferences.
- To submit publications in refereed journals.
- To attend relevant workshops and conferences, as necessary.
- To develop contacts and research collaborations within the College and the wider community.
- To play a role in the national and international research community and learned societies.
- To develop and obtain research grants from national and international funding bodies.
- To promote the reputation of the Department, I-X and the College through scientific meetings and other activities.

### Management Duties

- To appropriately manage the resources allocated to their funding.

### Teaching Duties

- If in accord with the career development goals of the fellow: teaching students at undergraduate level, masters, and higher research degree level: this will be a mix of lecturing, academic tutoring, classwork demonstrating, personal tutoring and marking, on courses agreed with the Head of Section.
- If in accord with the career development goals of the fellow: Develop course proposals and contribute to curriculum development.
- If in accord with the career development goals of the fellow: Develop approaches to teaching and learning which are innovative and reflect developing practice elsewhere.

## Other Duties:

- To undertake any necessary training and/or development
- To undertake appropriate administration tasks
- To attend relevant meetings

Where Imperial or funder conditions necessitate, you will be required to complete timesheets for your work on projects in a timely manner.

## Person Specification

| Requirements   | Essential (E)/<br>Desirable (D) |
|--|---------------------------------|
| Candidates/post holders will be expected to demonstrate the following:   |                                 |
| <b>Education</b>   |                                 |
| Hold a PhD (or equivalent) in an appropriate discipline.   | E                               |
| <b>Knowledge &amp; Experience</b>  |                                 |
| The potential for strong leadership qualities in the subject as illustrated, for example, through showing initiative on research projects  | E                               |
| An outstanding research record commensurate with their level of experience as demonstrated, for example, through an outstanding thesis, publications, conference presentations etc.                | E                               |
| Significant experience in research or AI-based industry  | E                               |
| <b>Skills &amp; Abilities</b>  |                                 |
| Experience supervising team members  | E                               |
| An exceptional ability in the chosen research area   | E                               |
| The ability to contribute significantly to the research environment of the host Department and I-X as demonstrated, for example, through a proven track record of successful research interaction. | E                               |
| Ability to keep accurate records of research results and activity  | E                               |
| Ability to exercise initiative and judgement in carrying out research tasks  | E                               |
| Ability to conduct a detailed review of recent literature  | E                               |
| Ability to develop and apply new concepts  | E                               |
| Creative approach to problem-solving   | E                               |
| Excellent verbal communication skills and the ability to deal with a wide range of people  | E                               |
| Excellent written communication skills and the ability to write clearly and succinctly for publication   | E                               |
| Ability to organise own work with minimal supervision  | E                               |
| Ability to prioritise own work in response to deadlines  | E                               |
| <b>Other</b>   |                                 |
| Participation in the wider program of events and training for AI in Science Fellows  | E                               |
| Commitment to meeting deadlines  | E                               |
| Commitment to a kind treatment of others   | E                               |
| Discipline and regard for confidentiality and security at all times  | E                               |
| Willingness to travel both within the United Kingdom and abroad to conduct research and attend conferences/workshops and other meetings  | E                               |
| Flexible attitude towards work.  | E                               |
| Interest in engaging with high-school students   | E                               |
| Interest in engaging with LMIC researchers   | E                               |

## Further Information

Please note that job descriptions cannot be exhaustive, and the post-holder may be required to undertake other duties, which are broadly in line with the above key responsibilities.

Imperial College is committed to equality of opportunity and to eliminating discrimination. All employees are expected to follow the [Imperial Values & Behaviours framework](#). Our values are:

- Respect
- Collaboration
- Excellence
- Integrity
- Innovation

Employees are also required to comply with all College policies and regulations paying special attention to: Confidentiality, Conflict of Interest, Data Protection, Equal Opportunities, Financial Regulations, Health and Safety, Information Technology, Smoking, Private Engagements and Register of Interests. They must also undertake specific training and assume responsibility for safety relevant to specific roles, as set out on the [College Website Health and Safety Structure and Responsibilities](#) page.

*The College is a proud signatory to the San-Francisco Declaration on Research Assessment (DORA), which means that in hiring and promotion decisions, we evaluate applicants on the quality of their work, not the journal impact factor where it is published. For more information, see <https://www.imperial.ac.uk/research-and-innovation/about-imperial-research/research-evaluation/>*

*The College believes that the use of animals in research is vital to improve human and animal health and welfare. Animals may only be used in research programmes which are ultimately aimed towards finding new treatments and making scientific and medical advances, and where there are no satisfactory or reasonably practical alternatives to their use. Imperial is committed to ensuring that, in cases where this research is deemed essential, all animals in the College's care are treated with full respect, and that all staff involved with this work show due consideration at every level. [Find out more about animal research at Imperial.](#)*

*We are committed to equality of opportunity, to eliminating discrimination and to creating an inclusive working environment for all. We therefore encourage candidates to apply irrespective of age, disability, marriage or civil partnership status, pregnancy or maternity, race, religion and belief, gender reassignment, sex, or sexual orientation. We are an [Athena SWAN Silver Award](#) winner, a [Disability Confident Leader](#) and a [Stonewall Diversity Champion](#).*

**July 2024**