

Postdoctoral Researcher

UK - 2026 - Eco

Call for Applications

Topos is looking for a **Postdoctoral Researcher** to work on declarative scientific modelling in the context of ecological systems, building upon our work around [CatColab](#); to be based in **Oxford, UK**.

Summary

We are a non-profit research institute dedicated to realising a world where the systems that surround us benefit us all, so that society can better cooperate on critical issues – the climate crisis, pandemic responses, agricultural modelling, global access to education, and more – through interconnected systems that consider holistic impacts. We develop new tools for collective inquiry and modelling, enabled by a combination of novel foundational mathematics, open-source software engineering, and meaningful collaboration with domain specialists. Collaboration and discussion are fundamental to our work culture, so we deeply value gathering in person at the office.

Title	Postdoctoral Researcher
Start date	From the 1st of October 2026
Location	Oxford, UK
Employment type	1.0 FTE (full time)
Duration	2 years*
Salary	£49,119 – 53,483

This is a 2-year position, with **possibility for extension for a further 2 years depending on external funding body approval.*

Topos is committed to building a team with diverse perspectives and life experiences, so those with personal or professional backgrounds under-represented at Topos are highly encouraged to apply.

Further information about Topos Institute, including our [Blog](#) and [YouTube](#) pages, can be found on our website: topos.institute.

[Topos Research UK](#) is a charity start-up in the UK (inc. 2024) with affiliated charity start-up [Topos Institute](#) in the US (inc. 2019). For more information, see topos.institute/legal.

About the position

Interventional approaches to problems of ecosystem resilience can be extremely effective, but we know that perturbing even the seemingly smallest of components in a system can have unexpected effects further down the line. In order to better understand potential adverse effects of any changes to an ecological system we can turn to formal scientific models. Such models help policy-makers and oversight boards to interrogate the embedded domain-expert knowledge by asking “what if?” questions. But building these models is not easy: from the theoretical perspective, they must span multiple biological scales; from the practical perspective, they must be legible to different audiences, describing both quantitative and qualitative structure. The aim of this project is to integrate different modelling paradigms across different scales into a coherent, reusable framework that can be used for decision support within the context of ecological interventions, both within this programme and beyond.

The main focus of our work in this project is on enabling lab-science teams to build, inspect, and query models in a collaborative manner. We will do this through fundamental research in categorical approaches to declarative modelling, participatory model building with the teams in question, and working closely with the software development team at Topos. The models in question span various paradigms, from Bayesian belief networks to stock-flow diagrams to systems of differential equations. We will be building upon our previous and ongoing software ecosystem surrounding [CatColab](#).

You will be working as part of the wider Topos team, in person in our Oxford office, supervised by Tim Hosgood and working alongside other researchers and software engineers. This is a 2-year position, with possibility for extension for a further 2 years, depending on external funding body approval.

Responsibilities

- Producing high-quality fundamental research in categorical approaches to declarative modelling
- Attending conferences and workshops to collaborate with ecologists in building formal models, soliciting user needs
- Working with software and research software engineers at Topos to prototype and deploy research into software capabilities
- Disseminating research and software output through academic publishing, conference talks, and other media
- Contributing positively to a collaborative and ambitious research culture through open communication, knowledge exchange, and constructive engagement with colleagues

About you

- This position is a research position, but situated in the context of an applied programme, working in a mixed team. You should be excited to work across disciplines, to communicate with domain experts outside your area of expertise, and to disseminate your research into both traditional academic papers and other formats (such as software, or blog posts).
- You should have, or should soon have, a PhD in, or have made significant contributions to, mathematics or its adjacent fields (such as computer science, statistics, etc.), with a focus in at least one of the following areas: category theory, categorical statistics, (probabilistic) graphical models, systems dynamics, decision analysis, ecological modelling.
- Relevant industry experience can be a substitute for a historical record of publication, though this is an academic research role.
- Experience with scientific computing is a bonus but not necessary; experience with software development (Rust, Julia, or TypeScript) is a bonus but not necessary.

There is evidence to suggest that women and people of colour are less likely to apply for jobs unless they believe they meet every one of the qualifications as described in the job description. If this role speaks to you, we encourage you to apply, even if you don't believe you tick all the boxes.

Eligibility criteria

Successful applicants need the right to work in the UK.

Topos will consider sponsoring a UK visa for a successful applicant. **Please include details of your visa requirements (if any) in your cover letter.**

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, or disability.

Us and you

We are dedicated to shaping the future of technology to ensure a more equitable and just world, and we believe that a technology that supports a healthy society can only be built by an organisation that supports its team members. As such, Topos is committed to ensuring that we clearly and compassionately negotiate your role and responsibilities while you're at Topos, and then ensuring that you have the support that you need to fulfil that role.

Topos UK offers benefits including private health and dental insurance, 30 days paid holiday (plus public holidays), and a variable pension plan.

Why Topos?

Exceptional Team. Collaborate with world-leading researchers and high calibre funding agencies.

Inclusive Environment. Be part of building a diverse team where different perspectives are valued and everyone can contribute their best work.

Meaningful Impact. Lead breakthrough research on humanity's most pressing challenges—from climate change to public health to collaborative open science.

Technical Innovation. Support the development of genuinely novel technologies that could transform how humanity approaches complex, collaborative decision-making.

Supportive Culture. Join a caring, inquiry-driven community that values both intellectual rigor and personal wellbeing, with a strong focus on in-person office culture but flexibility to support work-life balance.

Growth Opportunity. Shape a team poised for significant expansion and impact.

Application process

To apply for this position, please email **uk-2026-eco@topos.institute** with the subject line “**UK-2026-Eco**” and two PDF attachments:

1. a copy of your CV; and
2. a cover letter **including the contact details for two references** who we can contact.

Your cover letter might describe your interest in the Topos Institute and this position, your professional experience, your future goals, your specific relevant experience, and your potential contribution to a diverse and inclusive environment at Topos. Please feel free also to convey any information about preferred names and pronouns.

Please note that we will **not** contact your references without first notifying you.

We will review applications on a rolling basis.

If you have any questions about the application, or the role in general, please email **uk-2026-eco@topos.institute**.