

Big imaging data 25 - 2025-08-14 - career paths

Discussion session group:

Discussion topic

What would a bioimage analyst career path look like? How would it relate to generalist imaging specialist or digital Research Technology Professional career paths? Would responsibilities be? How would it be funded?

Participants

Please list the group members here and identify people to act as Chair and Note-taker.

Chair: Virginia

Note-taker: Mateusz

Notes from the discussion

Please use the area below to capture notes from the discussion session. You can find general information about the Discussion session in the workshop pages:

<https://www.software.ac.uk/cw24-discussion-session-and-collaborative-ideas>

The scope of such a job can be extremely wide. To tackle complex tasks, a large team is needed.

Software services sprouted out from the IT department at UCL/SWC through grant funding.

Based on the current grant success rate it allowed for the anticipation that the funding stream will be continuous. Which in turn allows for indefinite contracts to be created..

Policy making seems to be key. The universities should understand that sacrificing one or two research groups for the creation of the software services could benefit the whole uni community.

Once people realise that their experiments / new methods they use generate massive and complex data, the need for Software services becomes obvious.

Career path/progression:

*How do we make this path appealing? **It must not depend on the grant funding.***

Also it can be tedious, so one needs to get a solution for this kind of job to be stimulating.

Career ladder: for some jobs career progression can be based on managerial skills or technical skills.

<https://www.researchgate.net/profile/Marcela-Lopez-16/publication/360726933/figure/fig1/AS:1157762876747782@1653043588974/Typical-career-pathway-for-technicians-at-the-University-of-Warwick-Two-career-pathways.png>

Give more granularity to an academic career — something that industry realised a long time ago. Instead of having just one or two promotions in the traditional Assistant Professor – Associate Professor – Full Professor track, academia should introduce a greater number of intermediate steps (e.g., Scientist I, II, III; Project Lead I, II, III; Team Lead, etc.). This would provide researchers with more frequent milestones and the psychological satisfaction of achieving a new professional level every one to two years, rather than waiting many years for advancement in the current system.

A fear of getting stuck in a position that may lead one to lose the market value. Similar to getting stuck in a forever postdoc with a possibility of sudden unemployment if a PI/grant funding is no more ;)

Service and Resources:

Average salary for the department (usually it's a senior postdoc salary) is what UCL uses for charging a grant personnel costs for digital research technology professionals. Services through partner (peer to peer, not client and service provider). Equipment and other resources are going through the core college funding.

Licensing for dependencies and other resources are taken care of by the college law/business department.

Speed Blog

Please use the area below to draft the speed blog (aim for your post to be 500 – 1,000 words long). You can find more information about speed-blogging here:

<http://www.software.ac.uk/term/speed-blogging> and find the SSI's guide for content contributors here: <https://software.ac.uk/resources/guides/guides-content-contributors>

Title

Please add the blog post title here.

Authors

Please list the blog post authors here (Full name, Affiliation, Email address) and identify the corresponding author. Hyperlink the authors to the ORCID/social media profile/website they prefer. Include any Bluesky handles and LinkedIn profile links if you wish to be tagged in the social media posts promoting the blog post when it is published.

Blog post image

Please add a relevant image with appropriate attribution here.

Introduction

Introduce the topic and why it matters. Grab attention: why should people care?

Main Body

Use this section to discuss a problem and its solution, share insight into a topic, and/or teach/explain something, for example. Please use subheadings to help structure the text.

Conclusion

Wrap up your main points; this could include a call to action to let your readers know where they can go to find out more or next steps they can take.

Title (LLM)

From Short-Term Grants to Long-Term Careers: Rethinking Research Software Roles in Academia

Authors

[Your Name] (Affiliation, Email, ORCID) – *Corresponding author*

[Additional authors as needed]

Blog post image

(Suggested) A diagram showing branching technical and managerial career ladders (e.g., adapted from University of Warwick technician pathway), with attribution.

Introduction

In many universities, research software services are treated like an afterthought – assembled piecemeal from short-term grants and dissolved when funding dries up. Yet without them, much of modern science would grind to a halt. From managing terabytes of microscopy images to supporting custom data pipelines for experimental neuroscience, these roles are essential infrastructure.

The problem? We're building that infrastructure on temporary scaffolding. While some institutions, like UCL, have managed to secure indefinite contracts through strategic grant funding, most rely on a fragile patchwork of short-term hires. If academia is serious about retaining skilled staff (computational or imaging-wise) – and avoiding the “forever postdoc” trap – it needs to treat technical contributions as a core part of the research ecosystem, not a disposable add-on.

The Scope of the Job – and Why It Needs Teams

The demands on research software teams can be huge. They support multiple labs, handle a diverse array of technologies, and troubleshoot problems that often have no manual. At University College London's Advanced Research Computing Centre (ARC), for example, software services grew out of the IT department via grant funding. With a relatively high grant success rate, ARC anticipated a steady funding stream, enabling indefinite contracts. This kind of long-term thinking is rare – and it makes a difference.

In truth, no single person can meet the full scope of these challenges. Building and maintaining research software infrastructure requires a **team** – one that blends technical, domain-specific, and collaborative skills.

Funding Beyond the Grant Cycle

Current academic structures tend to treat software roles as bolt-ons to research projects, funded only for the project's lifespan. This is shortsighted.

Policy changes are needed so that universities see the bigger picture: sacrificing the budget for one or two research groups to fund centralised software services could deliver far greater benefit to the whole institution. Once researchers realise how much data their experiments generate – and the complexity of handling it – the case for dedicated software support becomes obvious.

Making the Career Path Appealing

Even with stable funding, there's another challenge: how do we make these roles both attractive and sustainable?

Right now, academic career progression for technical staff is often limited to one or two promotions over a decade. Industry has long recognised the motivational power of **granular career ladders** – Scientist I, II, III; Project Lead I, II, III; Team Lead, and so on – offering milestones every year or two. This not only boosts morale but also helps staff build CVs with clear evidence of progression, avoiding the “forever postdoc” trap where years of experience can paradoxically make someone less marketable outside academia.

Keeping the Work Stimulating

Research software roles can be deeply rewarding – solving novel problems, enabling groundbreaking science – but they can also become repetitive if not managed well. Institutions should build in opportunities for staff to:

- Rotate between projects and departments.
- Contribute to open-source tools.
- Attend conferences and training courses.
- Collaborate with peers across institutions through formal networks.

These activities not only keep the work fresh but also strengthen the institution's research capacity.

Sustainable Services and Resources

At ARC, the personnel cost charged to grants is set at the department's average salary (typically equivalent to a senior postdoc). Partner institutions often operate on a **peer-to-peer service model**, while core equipment and resources come from central college funding. Licensing, legal, and business support are handled by the institution's administrative departments – freeing software teams to focus on their technical work.

This integrated approach could serve as a blueprint for other universities.

Conclusion – A Call to Action

Universities can't afford to treat research software roles as disposable. If we want sustainable, world-class research, we need to:

- **Fund software services as core infrastructure**, not project extras.
- **Create granular, dual-track career pathways** to retain and motivate talent.
- **Keep roles stimulating** through variety, collaboration, and skill development.

The payoff is clear: a robust, well-supported software team benefits the entire academic community – and makes every grant go further.