Bringing together the UCL community who use computational and data sciences or digital technologies in their research.

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Dear Colleagues,

Welcome to the second edition of the UCL Digital Research Community newsletter! As we hope you already know, ARC (the UCL Centre for Advanced Research Computing) has joined forces with the eResearch Domain and you are receiving this newsletter because you previously signed up for either (or both) of the old newsletters. We have now merged the mailing lists for the two newsletters so you should only have received one copy; if not, please accept our apologies and let us know so that we can resolve your entry in our database. As always, please do forward this email to any colleagues you think may be interested, in particular any students to encourage them to enter the student cluster challenge (see first item below)!

Community Updates

Join the UCL team for the CIUK Student Cluster Challenge!

Calling all students - gain hands-on experience in High Performance Computing (HPC), Artificial Intelligence (AI) and Cloud technologies at the CIUK 2023 undergraduate and graduate student 'Cluster Challenge'.

Develop your technical skills by completing different online challenges using a variety of powerful HPC clusters and software packages - and then take part in the final challenges at the CIUK 2023 conference in Manchester on 6-8 December, with the winners going forward to the ISC'24 Cluster Challenge in Germany!

Some existing skills will be needed but if you are new to HPC, we have some resources - visit https://www.ucl.ac.uk/advanced-research-computing/events/2023/oct/ciuk-2023-student-cluster-challenge-team for further information and to express interet in joining the team. Deadline is **3rd October 2023.**

Fostering International Collaborations in Advanced Digital Research Call

This new proposal scheme, open to UCL research and professional services staff and led by ARC Digital Research & Innovation and Change & Digital Portfolio, provides seed funding to strengthen UCL's leadership in advanced digital research and to facilitate the emerging Exascale. An increasing number of disciplines are harnessing the power of large-scale computing in research and innovation. Members of UCL seeking access to the global frontiers of supercomputing and data-intensive research will have the opportunity to do so via this scheme. Aligned with UCL's Research Strategy and Global Engagement Strategy the scheme aims to foster international collaborations, develop UCL's expertise and encourage new research funding applications. We are providing seed funding to establish a set of collaborative opportunities for UCL staff with leading international computational science, e-Science and HPC centres.

For further details about the scheme and how to apply, please visit:

https://www.ucl.ac.uk/advanced-research-computing/fostering-international-collaborations-advanced-digital-research

Closing date: 29th September 2023, 17:00 BST

CoSeC (Computational Science Centre for Research Communities) Conference - Call for Presentations

The Computational Science Centre for Research Communities (CoSeC) invites submissions for its next annual conference, to be held at the Manchester Centre Convention Complex on Wednesday the 6th of December 2023 in conjunction with the Computing Insight UK event. This is an opportunity for those involved in activities supported by CoSeC (Collaborative Computational Projects, High-End Consortia, and other activities within the UKRI Digital Research Infrastructure landscape) to present cross-cutting aspects of their work to like-minded researchers as well as leading members of the computing industry.

For detailed information and to apply, please visit: https://web.cvent.com/event/a91842a0-d773-4506-b9f8-96589e4c8906/summary

Closing date: 31st October 2023

Call for Turing Science & Innovation Directors

As the **Alan Turing Institute** ("The Turing") moves to its new model and ways of working (Turing 2.0), it will take a **Grand Challenge-led** approach to its Science and Innovation work. Further information is available in

the Institute [Strategy](). The Missions under each of the Turing's Grand Challenges are being defined and scoped, and there will be opportunities for Turing University Network (which includes UCL) to input as part of this process.

The Turing has now opened recruitment for four new **Science and Innovation Directors**. These roles will report to the Chief Scientist and will be responsible for leading the Institute's Grand Challenges in **Health, Defence and National Security, and Environment and Sustainability**. A fourth final role will head up Turing's capabilities in **Fundamental Data Science and AI**. Each role will be expected to work alongside the existing research leadership to develop new and consolidate existing activity, to advance Turing's strategic ambitions. Candidate packs for these roles are available via the following links.

- Director of Science and Innovation-Grand Challenges ([here]())
- Director of Science and Innovation-Fundamental Research ([here]())

If you are interested in applying to any of these positions, the [UCL Turing University Liaison Team]() encourage you to get in touch directly or at [turinguniversityteam@ucl.ac.uk]().

Closing date: 31st October 2023

CLOSER Webinar Series: Metadata management in the real world
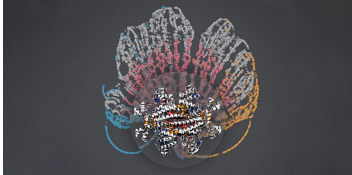
Registration is now open for CLOSER's next 'Metadata management in the real world' webinar, focusing on their recently published Data Audit report. Join the session on **Wednesday 20th September from 15:00 - 16:30 BST** to learn more about the report and feed into the discussion on its findings and recommendations which are aimed primarily

at informing Population Research UK (PRUK) on the current state of the longitudinal population study data landscape.

Further details and registration at:

https://closer.ac.uk/event/mmitrw-closer-data-audit/

UCL Computational Cancer Seminar Series

UCL's Computational Cancer Collaboratorium draws together the extensive and diverse expertise in UCL in the area of computational cancer, and to enhance and enable collaborative working in the area. Our new seminar series reflects this cross-disciplinary interest, bringing together leading speakers from across cancer and computational science. Students and staff from all faculties are welcome!

The next seminar is on **Tuesday 31st October 2023 from 12-1pm**, with Rebecca Shipley – Professor of Healthcare Engineering, UCL Mechanical Engineering and Director of the UCL Institute of Healthcare Engineering; her talk is entitled: "**Combining Experimental, Imaging and *In Silico* Models to Interrogate Tumour Growth and Response to Therapy**".

Further details and registration at: https://www.eventbrite.com/e/ucl-computational-cancer-seminar-series-tickets-621650863467

A report from RSECon23

[RSECon23](#), the 7th annual conference for Research Software Engineering took place from 5th - 7th September at Swansea University and was attended by several members of the ARC team, including Samantha Ahern from ARC Education. In this [blog post,](#) Sam reports back on the workshop that she ran, asking what role(s) does RSE have to play in Education for Sustainable Development?

ARC Drop-in Sessions

A reminder that over the summer, we have resumed our in-person drop-in support sessions - these are for all research staff and research students, where you can get support and advice to help plan and tackle problems with your research. If you have any problems related to the following areas, we should be able to help:

- choosing the right software, hardware and services,
- research programming,
- task automation and scripting,
- high performance computing,
- storing large datasets,
- Research Data Storage (RDS) service induction,
- handling sensitive data,
- research data management (including writing data management plans).

If the problem is likely to need a lengthy discussion (half an hour or more) or requires very specific knowledge (e.g. of an unusual programming language) it would be very helpful if you could email a short summary of your problem to arc@ucl.ac.uk at least 2 days before the session, so we can try to make sure a member of staff with appropriate expertise is available.

For further details of the drop-in sessions and other support available, please visit: https://www.ucl.ac.uk/advanced-research-computing/support

UKDS Computational Social Science Drop-ins

Join these free UK Data Service data drop-ins to get or give some help on computational social science projects. The events will take place on Zoom. There will be a data expert from the UK Data Service present to chair the session. Feel free to join for general advice on getting data, learning to code and much more.

Stuck on a project?

Not sure what to learn next?

Want to meet other computational social scientists?

Learn or teach some data skills with like-minded individuals?

The sessions take place on the second Tuesday of the month, excluding August and December. You only need to book once to attend the sessions from September to November.

To book your place for **10 October or 14 November from 1-2 pm**,, visit: https://ukdataservice.ac.uk/events/computational-social-science-drop-in-7/

Training & Workshops

Data Management Basics: Introduction to data management and sharing

This free, online introductory workshop on data management basics run by the UK Data Service is intended for researchers and anyone who wants to learn about research data management, and is part of a series of two workshops. This first workshop provides an overview of how to manage, document, store and safeguard research data well and how to plan and implement good data management in research projects, with a focus on optimising data sharing. The second workshop will focus on the ethical and legal aspects of data management.

Date: 21 Sep 2023 from 11:00 am - 12:30 pm

Find out more and register at: https://ukdataservice.ac.uk/events/data-management-basics-introduction-to-data-management-and-sharing-5/

The UK Data Service runs a comprehensive programme of introductory training - for details of their full autumn series, please visit:

https://ukdataservice.ac.uk/2023/08/16/uk-data-service-introductory-training-series-autumn-2023/

Shared memory programming with OpenMP

ARCHER2 Training is provided by EPCC (Edinburgh Parallel Computing Centre) as part of the ARCHER2 (Tier 1) national high performance computing service.

OpenMP is the industry standard for shared-memory programming, which enables serial programs to be parallelised easily using compiler directives. Users of desktop machines can use OpenMP on its own to improve program performance by running on multiple cores; users

of parallel supercomputers can use OpenMP in conjunction with MPI to better exploit the shared-memory capabilities of the compute nodes. This course covers an introduction to the fundamental concepts of the shared variables model, followed by the syntax and semantics of OpenMP and how it can be used to parallelise real programs. Hands-on practical programming exercises will be included, with access to HPC provided for the duration of the course.

This free **in-person only** course is aimed at attendees with prior experience of programming in C, C++ or Fortran. Some familiarity with HPC systems is helpful but not essential.

You can see full details of the course and register at:
https://www.archer2.ac.uk/training/courses/230928-openmp/

Date: 28-29 September, 10:00 - 17:00 BST
Venue: Imperial College London

For details of other training provided by ARCHER2, please visit:
https://www.archer2.ac.uk/training/

ARC Training

You can find a full list of ARC-provided training on our Education pages at:

https://www.ucl.ac.uk/advanced-research-computing/education/training

including self-paced courses via Moodle.

If an in-person or online instructor-led course has no dates listed, please fill in our expression of interest form and we will contact you as soon as we have dates for the next session.

CLOSER Learning Hub

Longitudinal studies track the same individuals and households over time. They are powerful research tools to help us understand how our early circumstances and experiences influence our later lives. The CLOSER Learning Hub has information and resources to help you explore longitudinal studies and get you started using the data.

Visit:
https://learning.closer.ac.uk/
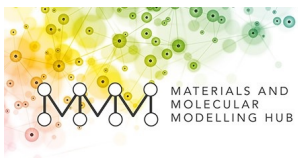
Event Dates for your Diaries!

IHE Research Symposium

The Institute of Healthcare Engineering's annual research symposium is back for 2023! Come along on **19th October (09:00 - 17:00)** and see the latest and greatest healthcare engineering advances taking place at UCL. There are talks on mental health and engineering (how does that work?!), women's health, cybersecurity, panel discussions on solutions to pollution, how you can commercialise your research, how we work with our public plus live demos from our researchers. The event is open to all so please do pass along to friends or family who are interested in healthcare engineering.

For detailed information and registration, please visit:
https://www.ucl.ac.uk/healthcare-engineering/events/2023/oct/ucl-institute-healthcare-engineering-research-symposium

MMM Hub Conference & User Meeting

The Materials and Molecular Modelling (MMM) Hub is holding a conference and user meeting on **8-9 November 2023**, to bring together the national community of modellers in materials and theoretical chemistry to present the latest research in the field, and provide the opportunity to network and discuss with like-minded researchers.

The conference will highlight the high-calibre scientific throughput produced across the MMM Hub's partner community and beyond, highlighting particularly the contribution of modern HPC resources (including MMM Hub's 'Young'), in enabling these advances. A selection of breakthrough materials and molecular modelling research taking place across the country will be presented, addressing challenges to society and industry through simulation at the atomic scale, alongside discussion in emerging computing trends and how this impacts materials scientists.

For detailed information and registration, please visit:

https://thomasyoungcentre.org/event/mmm-hub-conference-user-meeting/

World Digital Preservation Day
2nd November 2023

World Digital Preservation Day (WDPD) is held on the first Thursday of every November. This year we celebrate all things digital preservation on 2nd November 2023!

The DPC invites all data creators, archivists, curators, community members and digipres folk from around the world to celebrate digital preservation by participating in a whole day dedicated to all of the benefits and opportunities

enabled by the hard work of our dynamic and collaborative community.

With the theme '**Digital Preservation: A Concerted Effort**', World Digital Preservation Day 2023 is a great opportunity to connect the digital preservation community and celebrate the positive impact digital preservation has had in another year where digital information and infrastructure have been so instrumental in supporting all parts of our global society. Taking digital preservation to the next level takes time and actively working together with colleagues, partner institutions, open-source developers, friends and other community members. Or, in the words of this year's WDPD theme: "*No one can whistle a symphony. It takes a whole orchestra to play it!*" (quote by H.E. Luccock)

For further information, please visit: https://www.dpconline.org/events/world-digital-preservation-day

CIUK (Computing Insight UK) 2023

Computing Insight UK 2023 will be held at Manchester Central on the 7-8 December. The theme for this year's conference is "Productive Supercomputing (Accessible and diverse large scale computing)" with sub-themes including "User Support", "Industry Use of HPC", "Making HPC More Accessible", "User Portals", "Convergence of AI and Simulation" and "Co-Design of Supercomputing Services and Systems". There will also be a session on the UKRI Digital Research Infrastructure including the ExCALIBUR project.

CIUK 2023 will include an exhibition of the latest hardware and software releases plus a full, two day programme of presentations and a series of parallel breakout sessions, including our annual Women in HPC breakfast. There will be a student poster competition plus the fourth

instalment of the [Student Cluster Challenge](#). We will also present our annual [Jacky Pallas Memorial Award](#).

For detailed information and registration, please visit:
www.ukri.org/CIUK

Early bird registration ends on 3rd November

Regards,
UCL Centre for Advanced Research Computing (ARC)