



DAFNI NEWSLETTER, NOVEMBER 2025



Dear {{ contact.FIRSTNAME }}

Welcome to the DAFNI November 2025 newsletter!

We are working on a number of exciting initiatives here at DAFNI. On 12th December we will launch a new **DAFNI Fellowship Programme**, to start in April 2026. Look out for further news about this! Applications for the Fellowship programme will open on 12th December. A [webinar on 21st January 2026](#) will provide more information and the chance to ask any questions.

Strategy has always been fundamental to DAFNI and we have been busy preparing for our upcoming Strategy Board meeting in the new year. As part of this, we are continuing to build momentum for our DSIT-funded **Data Infrastructure for National Infrastructure (DINI) project** and are looking for support from our community. If you are interested in supporting this statement of need, please contact us info@dafni.ac.uk.

Our feature case study this month is **USARIS (Uncertainty quantification and Sensitivity Analysis for Resilient Infrastructure Systems)**. Led by Dr Francesca Pianosi of University of Bristol, the USARIS project set out the foundations for integrating functionalities for Uncertainty Quantification and Sensitivity Analysis (UQ&SA) into the DAFNI platform. It developed a range of pilot applications of UQ&SA for infrastructure models, and produced training materials to inform and educate industry, policymakers and early career researchers about the importance of uncertainty and sensitivity analysis, and how to apply it in practice.

The first stage of our OpenLAND project is now underway, we are working with UK academics to upload their data and models onto the DAFNI platform. To learn more, please read the project update below in our partnerships section.

We're also pleased to announce that our new website will launch in December, and will include a showcase of our Centre of Excellence research, originally funded by UKRI.

Dr Brian Matthews, DAFNI Programme Lead

News from our central team

DAFNI Fellows call

Get in touch if you are interested in:

- Community engagement events
- Sponsor White papers
- Help improve exchange of knowledge between policy and academia
- DAFNI Ambassador, inspiring others to use DAFNI
- Travel grants
- Demonstration of technical work
- Collaboration on research projects
- Networking with the community
- Helping shape DAFNI's future direction
- Involvement in Network Hub



Katie Carroll
Project Delivery Manager
DAFNI
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DAFNI Data & Analytics Hub
for National Infrastructure

We are excited to announce the launch of our new DAFNI Fellowship Programme, launching on 12th December and starting in April 2026. Each fellow will become an ambassador for DAFNI, the role will include being involved in sustainable research, promotion of your research and contributing research to the DAFNI Centre of Excellence, building networks across government, industry and academia, and inputting into DAFNI's Roadmap.

What the DAFNI Fellowship involves

DAFNI Fellows will be selected as part of the DAFNI programme's strategic initiative to strengthen relationships with government, industry and academia, generate research outputs to the Centre of Excellence, and boost engagement with the DAFNI platform within the infrastructure engineering scientific community.

Fellows will be supported in developing and promoting their research by the wider DAFNI programme through an opportunity to present their work to the wider DAFNI network of academic, government and

business support. In addition, the Fellows will receive support from the DAFNI team to integrate their research outputs to a wider audience by inclusion on the DAFNI platform.

The Fellows programme launches on the 12th of December, with applications closing on 4 February 2026. For more information, [sign up for our webinar](#) taking place on 21st of January at 12pm.



Save the date for the 2026 DAFNI Conference

10th September 2026
[Rhodes House in Oxford.](#)

We would be delighted to welcome you.

[Registrations are open now.](#)

More information will be circulated as speakers are confirmed.

CASE STUDY

USARIS: Uncertainty Quantification and Sensitivity Analysis for resilient Infrastructure Systems

Dr Francesca Pianosi, Associate Professor,
School of Civil, Aerospace and Design Engineering
at the University of Bristol



Introduction

Mathematical modelling is increasingly used to inform decisions in a variety of sectors, from flood risk management to energy planning, and from UK government decisions to EU policy level. The USARIS project has developed a toolkit to allow researchers and analysts to improve understanding of uncertainty in infrastructure models. Government and industry in the infrastructure sector can use this toolkit to put model results into context and to use model predictions in a more appropriate and responsible way.



What would you identify as the main impact of this work?

Infrastructure projects cost billions of pounds and take years or even decades to plan and build. USARIS work will help to ensure that infrastructure systems are better suited to future demands and needs by identifying key uncertainties present in scenario building.

Who's involved?

The USARIS project is led by Dr Francesca Pianosi, Associate Professor in Water and Environmental Engineering, and Saskia Salwey, Research Associate, both in the School of Civil, Aerospace and Design Engineering at the University of Bristol. *Saskia is now a postdoctoral researcher at Utrecht University

When did the project start and finish?

The project ran from October 2023 to September 2025.

Key challenges that USARIS aims to solve

Model outputs are conditional on many uncertain assumptions, due to our incomplete or imperfect knowledge of the external drivers and internal properties of the systems being modelled, data gaps and errors, and simplified assumptions.

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[Click to download or read the full case study](#)



Our first webinar of 2026 is 'DAFNI Fellows' on the 21st of January 2026 at 12pm.

We will cover the DAFNI Fellowship announcement of opportunity in more detail, discussing what the fellowship involves, funding available, application process, high level programme goals, the duration of the fellowship and eligibility. In addition, we will cover frequently asked questions and allocate time for questions from attendees.

If you are interested in this event [please sign up the event here](#).

The DAFNI Fellows will launch on 12th of December at midday. If you have any questions, please email info@dafni.ac.uk



Watch our past webinars

View recordings of past webinars <https://dafni.ac.uk/past-events/>

DAFNI YouTube channel: catch up on conferences and interviews

Visit <https://www.youtube.com/@dafnifacility118>

Partnership news

DINI to be showcased at December Computing Insight UK conference

The Computing Insight UK (CIUK) event runs from 3rd - 5th December in Manchester.

We are pleased to announce our DSIT funded project 'Data Infrastructure for National Infrastructure' (DINI) will be showcased at the event. Tom Kirkham (DAFNI Science Lead) will be there on the day to discuss the poster and take any questions.



It's not too late to sign up, [click to view more information and registration details](#).

The theme for the conference is *Computing Unites*.

The conference will include two full days of presentations about high performance computing and associated science and research, alongside the CIUK exhibition with 50 exhibitors showcasing the latest hardware and software releases. A series of parallel breakout sessions will explore the latest "hot topics" and include some relevant user group meetings.



UrbanAIR partners visit Rutherford Appleton Laboratory

On Wednesday 26th November, DAFNI and STFC welcomed 18 UrbanAIR partners to the Rutherford Appleton Laboratory (RAL) at Harwell Campus. This visit followed the two-day consortium meeting at Imperial College London and included colleagues from TU Delft, the lead institution for the project.

The day was designed to showcase the cutting-edge work taking place at Harwell, highlight the pivotal role of the DAFNI platform, and strengthen collaboration across Europe.

The visit began at **RAL Space**, where Michelle Hamilton, Earth Observation Lead, shared insights into current research being executed at RAL Space, Professor Femke Vossepoel (TU Delft) [introduced the UrbanAIR project](#), followed by Wendy Garland, Senior Environmental Data Scientist, who presented an overview of the Centre for Environmental Data Analysis (CEDA).

Guests also toured the [Satellite Integration and Testing facilities](#) and experienced the innovative **PufferSphere** display.

The afternoon featured a tour of the **data centre**, a presentation on DAFNI by **Bethan Perkins, DAFNI Group Lead**, visits to the **Central Laser Facility**, offering a closer look at world-class research infrastructure.

This event not only celebrated the collaborative spirit of UrbanAIR but showcased Harwell Campus's role as a hub for innovation and international partnership.

User liaison news



OpenLAND is a three-year project that builds on DAFNI's previous work on OpenCLIM. It focuses on exploring how changes in UK land use could support net zero goals, soil health, biodiversity, and agriculture.

The project is being delivered in collaboration with researchers from the Tyndall Centre for Climate Change Research and the School of Environmental Sciences at the University of East Anglia (UEA), as well as partners from UKCEH, Newcastle University, and Sayers & Partners.

OpenLAND will quantify the implications of land interventions on soil carbon and health, biodiversity, agriculture, and flood risk, while exploring the synergies and trade-offs between interventions. Potential land use interventions include ecosystem restoration and sustainable agriculture.

The first stage of the project is now underway, and we are working closely with the modellers to make sure all outputs and models are stored on DAFNI in a way that supports future reuse.

The most recent paper published by one of the partners can be found here: <http://dx.doi.org/10.1111/jfr3.70151>

DAFNI platform features and updates



Access our help

If you are a user of the platform and have any feedback or platform requests, please contact support@dafni.ac.uk

We are pleased to announce that since the release of basic user accounts onto the platform, we have received over 80 registrations for this new account type. As of this month, users with a basic user account can also access our workflows catalogue alongside the previously accessible data and models catalogues. As we continue to upgrade the DAFNI platform web application, users with basic user accounts will be able to access more of the site.

This month we also held our latest Technical User Group meeting, a quarterly meeting between the platform technical team and a group of technical users, sharing platform updates and ideas for future development. There were some very useful discussions and suggestions, including reviewing our plans around how users will access workflow logs through the web application in the near future, and a look at our visualisation tools and which possible changes could bring the most benefit to the platform. The input we receive from the technical user group is extremely useful in ensuring that, as the platform develops, it continues to meet the needs of our users.

DAFNI researchers' speaking engagements

Get involved with Professor Qiuchen Lu and put forward a book chapter for "Digital Twins in the Built Environment", aiming to document the latest theories, best practices, and technological advancements in leveraging DTs to advance the SDGs globally. Qiuchen and co editors are working with Emerald Publishing and ICE Publishing on this edition, aiming to document the latest theories, best practices, and technological advancements in leveraging DTs to advance the SDGs globally.

Submit a chapter title and abstract by the 15th December 2025 (Dr. Jiayi Yan, University of Cambridge, jy547@cam.ac.uk)

We are pleased to work with Qiuchen and Professor Tao Cheng on the IMPACT project (Improving flood disrupted road networks with a dynamic people-Centric digital Twins), [find out more here](#).



Congratulations Dr Fabian Steinmann on showcasing the MARS (Modelling Aviation Resilience Scenarios) work and wider research on addressing long-term resilience for civil aviation during a trip to New Zealand in November!

The event was organised by the ITF (International Transport Forum at the OECD) in partnership with the New Zealand Ministry of Transport.

It brought together representatives from industry, government, and academia to explore how civil aviation resilience challenges can be addressed at the national and international governance levels.

[Click to read more about the MARS project.](#)

Digital Twins in the Built Environment towards the UN SDGs: Development and Global Cases

The editorial team is pleased to announce an upcoming peer-reviewed Emerald volume titled *Digital Twins in the Built Environment towards the UN SDGs: Development and Global Cases*. The book will showcase leading-edge research, innovations, and case studies that systematically demonstrate how DTs can contribute to and sustainable development through specific SDG targets within urban and built environment.

Editors:



Qiuchen Lu Long Chen Pengjun Zhao Jiayi Yan NG Shiu Tong Thomas Tim Broyd

Synopsis:

Digital twins (DTs) have demonstrated remarkable potential in advancing sustainability objectives such as urban planning, resource optimisation, flood forecasting, climate adaptation, public health, and water management, as well as in improving energy efficiency and community resilience. Despite their growing impact, the contribution of DTs to global sustainability frameworks, particularly the United Nations Sustainable Development Goals (SDGs), remains underexplored. This book aims to bridge that gap by systematically exploring how DTs contribute to specific SDG targets through empirical evidence and global case studies, providing a comprehensive resource for students, researchers, practitioners, and policymakers. We invite chapter proposals from researchers and professionals in sustainable construction, urban planning, computer sciences, information systems and related fields that align with this convergent perspective.

We welcome technical book chapters centred (but not exclusive) on the following themes:

1 Ending Hunger Through Precision Agriculture (SDG 2 – Zero Hunger)	2 Improving Health Systems with Digital Twins (SDG 3 – Good Health and Well-Being)
3 Improving Campus Management and Education via Digital Twins (SDG 4 – Quality Education)	4 Managing Water Resources with Digital Twins (SDG 6 – Clean Water and Sanitation)
5 Advancing Affordable and Clean Energy (SDG 7 – Affordable and Clean Energy)	6 Building Innovative Infrastructure with Digital Twins (SDG 9 – Industry, Innovation, and Infrastructure)
7 Reducing Inequalities with Digital Twin Solutions (SDG 10 – Reduced Inequalities)	8 Enhancing Sustainable Cities with Digital Twins (SDG 11 – Sustainable Cities and Communities)
9 Combating Climate Change with Digital Twins (SDG 13 – Climate Action)	10 Protecting Biodiversity with Digital Twins (SDG 15 – Life on Land)
11 Ethics, Governance, and Inclusivity in Digital Twin Development (SDG 16 – Peace, Justice, and Strong Institutions)	12 Driving Partnerships for Sustainable Development (SDG 17 – Partnerships for the Goals)

Important date:

15 Dec 2025	15 Jan 2026	15 April 2026	31 May 2026	30 Jun 2026	TBD
Chapter Proposal	Notification of Acceptance	Full Chapter Submission	Review Results Returned	Revised Chapter Submission	Publication of Book (Tentative)

Submission guidelines:

Researchers and professionals are invited to submit book chapter proposals by the 15th Dec, 2025, via email: qiuchen.lu@ucl.ac.uk and jy547@cam.ac.uk. Each proposal should contain the proposed title of the chapter, an abstract, and tentative sections and subsections of the chapter. Contributors are required to follow Emerald Publishing preparation guidelines (<https://www.emeraldgroupublishing.com/books/prepare-your-manuscript/books-publishing-author-guidelines>). Authors of accepted proposals will be notified by the 15th Jan, 2026. For any questions, please contact the corresponding editor, Dr. Jiayi Yan, at jy547@cam.ac.uk.

DAFNI technical training



DAFNI TECHNICAL TRAINING EVENT



A great opportunity to get up to speed quickly on DAFNI and to ask our technical experts your burning questions. **Especially recommended for those developing a research proposal and are thinking of including DAFNI as the platform of choice for the research.**

Our technical training events (Wednesdays, 1:30pm-4:30pm) are available to book via Eventbrite (see weblink below).

Next training date:

- 4 February 2026

To attend the event you will need experience of entering code through a command line interface, for more information and to book, please visit: <https://www.eventbrite.co.uk/o/dafni-31793198351>

Access our help

Please contact us directly for any assistance on info@dafni.ac.uk



Apply for a DAFNI account

Apply for a DAFNI account

Join our community

If you would like to join the community of DAFNI users, please visit the [DAFNI website](#) for more information.

Current users of DAFNI

Get updated on the latest technical updates and features, visit: <https://www.dafni.ac.uk/dafnilogin/>

Community news

Project ACCORD (A Community for Contract Regulation for Data) are currently building their community

This is an initiative from the [National Federated Compute Services - NetworkPlus](#) which seeks to bring together communities from across the UK and across disciplines, working together on a federated approach to a Digital Research Infrastructure (DRI).

If you are interested in finding out more, visit: <https://nfcs-networkplus.ac.uk/>

If you'd like to join the community and be kept up to date, [sign up here](#).

New UKCRIC courses on systems thinking in the built environment

In partnership with the [Built Environment Connective](#), UKCRIC Services (formally UKCRIC Limited) has launched the first listing of UK courses that apply systems thinking to the built environment to improve and create buildings, infrastructure, and human-made constructions.

Read the prospectus on courses including BA and MA degrees at: https://www.ukcric.com/media/q4alnckn/stbe-prospectus_september-2025_final.pdf

Outcomes from CoSec's Energy Efficient Computing workshop

In September 2025, the Computational Science Centre for Research Communities (CoSeC) ran a workshop. The sessions revolved around four key themes: Qualitative Algorithms, Community, Hardware, and Quantitative Practice and was designed to share knowledge and start conversations around making energy-efficient choices.

CoSeC enables and supports collaborative computational research communities that are funded across UKRI. It has a mission to deliver *research software as an infrastructure* in order to enable world-class UK research and innovation.

About DAFNI

The DAFNI platform supports research that aims to provide the UK with a world-leading infrastructure system that is more integrated, efficient, powerful, reliable, resilient and affordable. It is enabling the community to conduct research that is able to generate new insights at a higher level of detail and accuracy than ever before.

DAFNI was originally funded by an £8 million EPSRC investment in the UK Collaboratorium for Research in Infrastructure and Cities (UKCRIC) and a £1.2m grant under EPSRC's Resource Only Strategic Equipment. Its aim has been to become the national platform to satisfy the computational needs in support of data analysis, infrastructure modelling and visualisation, and encourage whole-system thinking for the UK's infrastructure research needs.

In March 2023 UKRI awarded £4m to STFC Scientific Computing to establish a national Centre of Excellence for Resilient Infrastructure Analysis, and move the Data & Analytics Facility for National Infrastructure (DAFNI) into its new phase.

To find out more about DAFNI, visit: www.dafni.ac.uk



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