DCE Community Update February 2024

DCE Programme <dceprogramme@turing.ac.uk>

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To:Alice Budden <abudden@turing.ac.uk>

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If you're a Turing Slack user follow #data-centric-eng for information and reminders about DCE activity between these monthly updates. To submit any items in future updates please contact Alice Budden.

News



UK Intelligence Community Postdoctoral Research Fellowships 2024Royal Academy of Engineering

The Government Office for Science offers UK Intelligence Community (IC) Postdoctoral Research Fellowships to outstanding early career science or engineering researchers. These Research Fellowships are designed to promote unclassified basic research in areas of interest to the intelligence, security, and defence communities.

The proposed research project must address one of the research topics outlined in the Applicant Guidance notes. Topics include 'Simulation of emerging sensor technologies' and 'The influence of air quality on cognitive performance and behaviour in secure environment', plus many more! If this sounds of interest to you, follow the links for further information on the Fellowships and how to apply.

Application deadline 23 April 2024

Women in Shipbuilding Exhibition

This exhibition brings together photographs of women in shipbuilding and marine engineering in North East England in the First World War.

This showcase is a partnership led by Historic England and supported by Lloyd's Register Foundation as a part of a wider transformative endeavour of the Rewriting Women into Maritime History initiative. This aims to change perceptions of the historic role of women in shipping, showcase their involvement in the maritime industry, with the hope to encourage women's careers in marine engineering.

This exhibition is currently on display at The Common Room in Newcastle until 6 March 2024. For those not in the area, you can also check out the Digital Exhibition here.



Events



AI UK 2024

19-20 March 2024

With less than 3 weeks to go, the countdown to AI UK 2024 has officially begun! If you're coming along on the day, be sure to come and say hello to the team at the DCE Programme stand, or perhaps get involved in our workshop 'Driving Decarbonisation with AI'.

Make sure to check out the programme for the full list of exciting talks, workshops, and demonstrations at this years AI UK. Not forgetting the exciting list of Fringe Events happening across the month of March, covering topics from Generative AI, to Sustainability, and AI Ethics.

We hope to see you there!



IEEE Conference on Artificial Intelligence 2024

25-27 June 2024, Singapore

The Data-Centric Engineering programme are excited to announce we are organising a workshop as a part of this prestigious conference. The workshop entitled 'Crafting Data-Centric Engineering' will bring together engineering and machine learning communities to define Data-Centric Engineering through keynote talks and contributed sessions, panel discussions, poster presentations and networking.

The 2024 IEEE Conference on Artificial Intelligence (IEEE CAI 2024) is the 2nd edition of the new conference and exhibition with an emphasis on the applications of AI and key AI verticals that impact industrial technology applications and innovations.

Keep your eye on the event website for further details on the workshop, announcement of the conference programme, and how to register.



ECR Connect

18 March. QEII Centre London

Ahead of Al UK 2024, The Alan Turing Institute has organised Early Career Researchers Connect (ECR Connect), an event specifically designed to offer early career researchers in the UK valuable networking and career development opportunities.

This event is part of the Turing Connections Initiative, and is aimed at PhD students, as well as post-docs and those transitionaing to independent research (up to 5 years from PhD submission). During the event, attendees will have the opportunity to network with peers, engage with research showcasing, hear directly from experts and exchange knowledge to foster new collaborations.

Registration deadline is 1 March 2024, so be sure to register now!



The Turing Way Practitioners Hub Showcase Event

Co-adoption of AI and Open Practices for Innovation 6 *March* 2024

Come along to The Turing Way Practitioners Hub special showcase event, where Experts in Residence will discuss the first series of case studies focused on the current state of open source and best practices within their respective organisations. Expert panels will share invaluable insights, recommendations and real-world examples, with a focus on how SMEs can benefit.

Follow the links for the full agenda and how to register.



ADViCE: Data Science Sharing Circles

Al for Decarbonisation's Virtual Centre of Excellence (ADViCE) is launching Data Science Sharing Circles. If you are a hands-on data scientist working in energy, manufacturing or agriculture and want to learn from other data scientists with different perspectives, this is the event for you!

These circles will meet monthly in small groups of up to 8 peers from a range of professional backgrounds, including academia, public sector, private sector, SMEs, ADViCE experts, and more. The circles will be used to share insights on favourite tools, ongoing projects, challenges, or to discuss articles and papers of interest. This is a great opportunity to connect with data scientists from different organisations, fostering collaboration and fresh perspectives.

If this sounds of interest to you, register your interest here.

DCE Community Meetings

The Data-Centric Engineering programme is running monthly community meetings. These meetings are open to all, and we welcome anyone interested in hearing some of the latest updates within DCE and beyond. Last month we had a guest talk by Steven Niederer who gave an overview of all the interesting research and activities of the Turing Research and Innovations Cluster in Digital Twins (TRIC-DT).

In upcoming DCE Community Meetings, expect to hear from an exciting line up of guest speakers including Panagiotis Papadopoulos, Reader in Engineering for Net Zero at the University of Manchester, and Luca Magri, Professor of Scientific Machine Learning in the Aeronautics Department at Imperial College London.

If this sounds of interest to you, please contact Gabin Kayumbi.

Seminars

Physics-informed Machine Learning (Φ-ML) Meets Engineering Seminar Series: upcoming dates (online)

21 March, 13:00-14:00 - Jan Drgona, Neuromancer - Differentiable Programming Library for Data-driven Modelling and Control

18 April, 13:00-14:00 - Paris Perdikaris, PirateNets: Physics-informed Deep Learning with Residual Adaptive Networks

How to join, talk abstracts, and details on future seminars can be found on the seminar webpage. If you missed a talk that peaked your interest, be sure to check out YouTube where you'll find several recordings of past presentations from this series available to watch back.

Publications

Publication Highlight

Risk sensitivity analysis of AIS cyber security through maritime cyber regulatory frameworks - *January* 2024

Omer Soner, Gizem Kayisoglu, Pelin Bolat, and Kimberly Tam

Given the increasing frequency and sophistication of methods and strategies employed in cyberattacks, cyber resilience has become a basic notion of cyber risk management. To be cyber-resilient against cyber risks, shipping companies must be proactive in establishing and implementing actions, constructing effective strategies, and adopting mitigation methods to strengthen their assets. This study aims to conduct a quantitative human risk assessment based on the SOHRA method, which is integrated with the NIST cybersecurity framework, to provide ships with the ability to be cyber resilient. The results clearly indicate that the most likely error related to AIS (Automatic Identification System) cybersecurity risk occurs in the tasks defined under the 'protect', 'respond', 'detect', 'identify', and 'recover' functions. Accordingly, suitable control and preventative measure have been developed to guarentee high-level cyber security for AIS and to provide cyber resilience and the structure for constructive decision-making by integrating various international standards, including system security requirements and security levels for industrial communication networks.

To read the full open access article follow the link here.

Data-Centric Engineering Journal

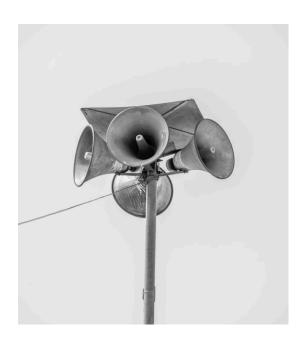
Data-Centric Engineering Blog

Engineering, emulators, digital twins and performance engineering

This blog offers informed opinions and perspectives relating to nascent technologies in data-centric engineering. Professor Ron Kenett discusses his recent DCE webinar, which covers how statistical tolls can be used to build Digital Twins in engineering applications.



Follow the link to read the full blog and to see other entries in the Data-Centric Engineering Blog series.



Call for Papers!

Systems for Energy Efficient Building, Cities, and Transportation (BuildSys 2023). Deadline 1 April 2024

The Data-Centric Engineering journal is delighted to partner with the 10th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation (BuildSys 2023). Authors who took part in the conference are invited to submit their work for inclusion in a special collection dedicated to the event.

Follow the links for more information on this special collection, and for other open calls for papers.

Jobs

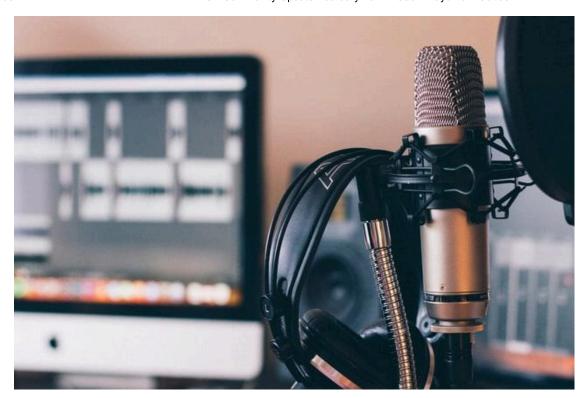
DCE jobs at the Turing

There are currently no vacancies on the DCE programme at the Turing. Please check the Careers website for vacancies on the business team or within other programmes.

DCE jobs elsewhere

Please e-mail Alice Budden with any external opportunities you wish to be circulated in future DCE Newsletters.

Notifications



Communicating about your project

The DCE programme is always looking to communicate the impact of its projects and research activity. If your project is achieving some interesting real-world applications or impact, and you are interested in developing this further, please contact Francisco Gomez Medina, DCE's Research Application Manager.

If you are interested in communicating your research to a wider audience, or would like more information on ways to get involved with the DCE Community, please contact Gabin Kayumbi, DCE's Senior Community Manager.

The Turing hosts a Blog and a Podcast and publishes regular Impact Stories on activity. The Turing Communications team can also help support you on any related media activity.

Attribution in Publications

A reminder that all publications resulting from work on the programme should acknowledge the Lloyd's Register Foundation and The Alan Turing Institute Data-Centric Engineering Programme. More detailed information can be found under 'Acknowledging the Turing in Publications' on the Turing Intranet, or by contacting publications@turing.ac.uk.

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