The change projects

Connect

www.rlp.manchester.ac.uk/



Research Lifecycle Programme / The change projects

What is the Research Lifecycle Programme (RLP)?

Here are a few ways in which the programme aims to improve support through the different phases of your research lifecycle:

1. "I have an idea but I need to find people who can help me with an area that is not my strength."

The Research Lifecycle Programme (RLP) is working on enabling better internal networking and discovery of potential partners. Researchers will have access to tools that make collaboration easier from editing manuscripts to meeting and exchanging ideas. Innovation communities are also being formed, around technologies and research interests, where researchers can draw on experience from others across different disciplines.

2. "I need to think about what computational resources and other tools I need so I know what costs I need to include in my grant."

The RLP has put high performance computing in place and is looking to get more. Every year, the team is speaking to researchers and increasing compute capacity and resources and also will be providing a service to help researchers locally set up edge computing where that is a proven requirement. The programme has even set up agreements to purchase cloud compute capacity using finance codes, allowing researchers to buy cloud cheaper through bulk discounting through the University.

3. "I need to write a grant, but it's so difficult getting costs for research staff, equipment and infrastructure."

Researchers will have access to a costing tool to plan and cost research more efficiently, and will not need to use so many different systems. Researchers will also benefit from having good information and intelligence about funders and partners.

"I can't proceed with my grant application without an ethics and data management plan."

The RLP is working on improving the end-to-end processes for research support so researchers can have more timely support in progressing virtual paperwork. The programme also will establish a service to manage restricted data so researchers do not have to do it from scratch.

"Yes! I got my research grant. Now I have the pain of keeping tabs on my spending and resources and continuously provide my manager with updates."

The **costing tool** will give researchers up to date information about the finances of their project. The RLP will also integrate the costing tool into a single **research support interface**, so information from various systems will be more accessible.

6. "Life is good. I am finishing my project but I still need to write the project report and report to my funders."

With a few clicks, the **costing tool** will provide researchers with final financial reports. It will also be a lot easier to report to funders on the output data, as the RLP will be setting in place a repository to **improve access**, **export and preservation of data**.

words in bold are the names of RLP projects

From costing the initial grant to writing the final report and everything in between



The University of Manchester

Members from:

FBMH - Admin

FBMH - Cancer FBMH - Dentistry

FBMH - Evolution & Genomics

FBMH - Health Sciences

FBMH - Human Communication

FBMH - Infection, Immunity & Respiratory Medicine

FBMH - Informatics, Imaging & Data Science

FBMH - Medical Sciences

FBMH - Medicine & Health

FBMH - Molecular & Cellular Function

FBMH - Musculoskeletal & Dermatological Sciences

FBMH - Neuroscience & Experimental Psychology

FBMH - Nursing

FBMH - Pharmacy & Optometry

FBMH - Population Health

FBMH - Psychology & Mental Health

FBMH - Teaching & Learning students

FHUM - AMBS

FHUM - Cathie Marsh Institute

FHUM - Classics

FHUM - Economics

FHUM - Religions & Theology

FHUM - SALC - English

FHUM - SEED

FHUM - Social Sciences

FSE - CEAS

FSE - Chemistry

FSE - Computer Science

FSE - EEE

FSE - EES

FSE - Graphene

FSE - Grapher FSE - MACE

FSE - Marketing & Communications

FSE - Marketing & Recruitment

FSE - Materials

FSE - Mathematics

FSE - MIBiotechnology

TOE - MIDIOLECTITOLOGY

FSE - Photon Science Institute

FSE - Physics & Astronomy

SERVICES

S - Business Relations

S - Compliance & Risk

S - IT Services

S - RDM Strategic Lead

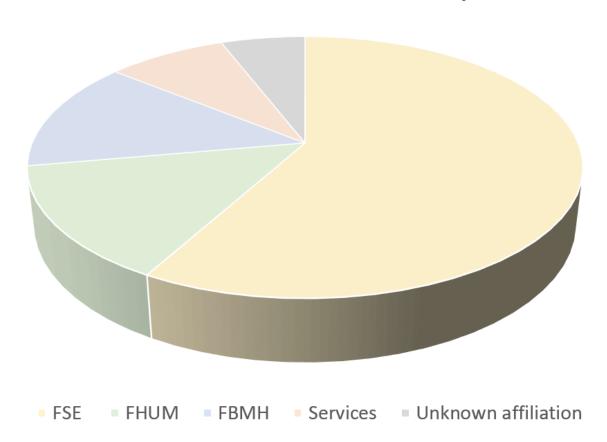
S - Research & Business Engagement

S - Research IT

S - Research Office

Six Innovation Communities, over 530 members 210 in Robotics and AI

Robotics & Al Community



https://www.rlp.manchester.ac.uk/projects/design-a-research-it-innovation-community-q/robotics-and-ai/



Research Lifecycle Programme / The change projects / Design a research IT innovation community (Q) / Robotics and Al Innovation Community

Research Lifecycle Programme

⟨ Research Lifecycle Programme

The change projects

Robotics and Artificial Intelligence (AI) Innovation Community

11 February, 2020

- Community membership structure
- Competitions/Funding
- Digital Futures Data Science & Al
- Lectures
- Meetings
- Question for community
- Open Forum

Past Events

Robotics and Al innovation community meeting at The University of Manchester - Wednesday 30 October

About this Event

We invited current users and interested researchers to a meeting to discuss the use of Robotics and Artificial Intelligence (AI) in research across the University. The meeting followed on from a Robotics@Manchester workshop in September 2018, organised by Digital Futures with Professors Angelo Cangelosi and Barry Lennox, at which University researchers presented ongoing research projects in this area and identified proposals and opportunities for a proposed University of Manchester (UOM) robotics entity/centre/institute. If you are interested in hearing about future activity with this community, please contact digitalfutures@manchester.ac.uk.

Over 50 people from across the University expressed an interest in the meeting representing all three faculties, which resulted in a broad spectrum of research being presented and discussed. This resulted in participants making new connections with colleagues whom they were unlikely to encounter in their day-to-day activities. The meeting began with a brief introduction to the Research Lifecycle Programme by Emma Finch, followed by presentations and discussion. There was a break halfway through the presentations for networking and further discussion over lunch where researchers compared similarities and differences between the methodologies and requirements of using Robotics and Al in their research.

We had a number of talks at the event, some of which can be found on our Podcast if you want to catch up (presentations available to listen to have the times in brackets).

 Introduction to Research Lifecycle Programme and Innovation Communities (0:00 - 09:49)

Emma Finch, Innovation Lead

- Electric actuators for robot joints (09:50 19:24)
 Judith Apsley, School of Engineering
- Deep Learning and Machine Vision (19:25 45:44)
 Hujun Yin, School of Engineering
- Predicting the human in HRI and other things (45:45 1:02:11)
 Guido Herrmann, School of Engineering
- Small-molecule robotics
 David Leigh, School of Natural Science





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Research Lifecycle Programme / The change projects / Design a research IT innovation community (Q)

Innovation Community Research Fund

The Innovation Community (IC) are holding an innovation competition to give researchers the opportunity to kick-start their research ideas.

Do you have a collaborative research idea that uses technology? Do you need some funding to start it? Apply to the Innovation Community's (IC) Research Fund competition to win some seed funding. The funding prize pot is £10,000, to be shared between two to four projects.

To apply, applicants will need to submit an application form which will be peer reviewed by a cross-faculty panel. The shortlisted projects will then be invited to a showcase event on 23 April, which will be open to all researchers and staff around the University to attend. The panel will then select the successful projects to receive funding at this event.

To qualify to enter the competition:

- Your research idea should relate to one of the Innovation Community themes: Virtual and/or Augmented Reality, Additive Manufacturing,
 Mapping & Geographic Information Systems (GIS), Robotics & AI, Imaging & Visualisation or Drones.
- Applications with cross-department component(s) will be favoured.
- You will need to be available on 23 April to present your idea at the showcase event, if shortlisted

Have an interesting idea but haven't been to an IC meeting yet? It's not too late. You can find collaborators at the IC meetings in February and March. The Innovation Communities meet on a monthly basis. If you would like to find potential research collaborators from other disciplines that you feel may compliment your research, you can find more information on the Innovation Community webpages below.

Applications are open until Monday 16 March. For further information, please see below:

- Innovation Community Research Fund Application Form
- Innovation@manchester.ac.uk



The University of Manchester

Innovation Community Competition Application

Competition Rules

Your research idea should relate to at least one of the Innovation Community themes:

- · Additive Manufacturing
- Drones
- · Imaging & Visualization
- · Mapping & Geographic Information Systems (GIS)
- · Robotics & Artificial Intelligence (AI)
- Virtual and Augmented Reality (VR/AR)

An inter-department application will be looked on favourably as will the innovative nature of the proposal. The total prize fund is £10k to be shared by 2-4 applications, so a maximum application of £5k is expected.

The funding secured from this competition can be used to seed fund a specific piece of research through, for example, the purchase of equipment or equipment time, research software engineer time etc.

The shortlist will be chosen after the deadline date, which will be reviewed by peers from the three faculties. Applicants will be notified whether their application has been successful by Wednesday, 25 March.

A member from the shortlisted applications must be available to present at a showcase event on Thursday 23 April to secure the funding. Unsuccessful applicants and any members of the University are welcome to attend by signing up through Eventbrite nearer the time.

The winning projects will be expected to provide a report outlining the outcomes of their project by 1 October 2020.

Competition Timeline

To help with planning, please email an expression of interest to innovation@manchester.ac.uk by Monday 2 March, 2020 and please email your application to this address by the deadline.

Activity	Date(s)
Competition closes	Monday 16 March
Submission review and shortlisting: Cross-faculty panel reviews application submissions	Tuesday 17 March – Monday 23 March
Applicants informed whether proposal has been shortlisted: Projects which have been shortlisted are informed and invited to present at the IC Showcase event	Tuesday 24 March – Wednesday 25 March
Projects presentation prep: Shortlisted projects prepare their presentation for the panel	Wednesday 25 March – Wednesday 22 April
IC Showcase Event: Shortlisted projects present at the IC Showcase event in front of panel and event attendees.	Thursday 23 April

The deadline for applications is 9am, Monday 16th March

Contact the Innovation Community Team (<u>innovation@manchester.ac.uk</u>) if you have any questions about this call or the Innovation Community Project

1. Project title: 2. List of applicants and UoM Faculty/Department 3. Provide a brief description of your proposed research study including appropriate background, theoretical motivation, methods and objectives (<2 pages of A4, including figures).

Innovation Community Competition Application

https://www.alliancembs.manchester.ac.uk/news/get-your-ideas-off-to-a-flying-start-in-2020/



The University of Manchester

Applications assessed monthly





Get your business ideas off to a 'Flying Start' in 2020

Contracts Ethics and integrity PGR and Researcher Development Research strategy

10 Jan 2020

A new year brings new inspiration and at the Masood Enterprise Centre (MEC), based within the Alliance Manchester Business School, you have the opportunity to get your

innovative business ideas off to a Flying Start



Open to all staff at The Universty of Manchester contact enterprise@manchester.ac.uk using the subject line:

Are you a member of staff with an innovative business idea? Then apply today for a 'Flying Starter' award of up to £2,000 to test its feasibility.

Awards are available every month until the end of the current academic year.

Funding from £500 - £2,000 is available for you to test your idea, find out if it is viable, learn more about what is needed to progress the idea and even create a prototype product.

Support can be provided to assist you with your application form.

For successful award winners, informative workshops are available to hone your business cases together with a range of mentoring opportunities to ensure your enterprises continue to flourish.

Please note: this funding opportunity is open to University of Manchester staff only.

For more information or to obtain an application form, please email enterprise@manchester.ac.uk using the subject line: Flying Starter Award







Venture Further

Annual business start-up competition

Here's your chance to win £12,000 and make it a reality!

Visit: manchester.ac.uk/venturefurther

Deadline: Sunday, 8 March 2020









DIGITAL FUTURES



The University of Manchester

2018



http://www.digitalfutures.manchester.ac.uk/





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DATA SCIENCE & AI



Theme Lead: Professor Magnus Rattray

Data Science or Data Analytics is about the processes involved in extracting meaning from the abundance of data that are now available. It is a cross-disciplinary field that offers many opportunities for researchers across the university.

INSTITUTE FOR DATA SCIENCE & ARTIFICIAL INTELLIGENCE

Website: www.datascience.manchester.ac.uk

The University of Manchester's Institute for Data Science & Artificial Intelligence was created to act as an access point to the University's expertise in data science and artificial intelligence, facilitates interactions between researchers and problem holders, owns the University's data science strategy, and will deliver sustainable support for the community.

Manchester has an engaged data science and artificial intelligence community of over 600 investigators, with methodologists embedded in Schools across the University addressing problems in extracting meaning from data, managing data volume, the variety of data used in analyses, the velocity with which it is produced and the veracity of those data.

Data science has a home in all three of the University's faculties (Science and Engineering; Humanities; Biology, Medicine & Health Sciences). Our expertise covers the complete data science life-cycle: from information management, through analytics, to practical applications. A key feature of our approach is very close coupling between methodologists and translational scientists, drawing on strength-in-depth in real-world applications of data science. This creates a virtuous circle, where challenging real-world problems drive the methodology research agenda, whilst providing a natural route to exploiting new algorithms and methods. We believe this deeply multidisciplinary approach is one of the distinctive features of data science at Manchester.

Scope of Theme

Data Science and AI are becoming increasingly successful in unlocking new knowledge and powering smart applications of digital technology. The theme brings together methodologists from across the University, sharing expertise organising, interpreting, discovering patterns in, and making predictions from complex data. A key feature of the University's approach is very close coupling between methodologists and translational scientists, drawing on strength-in-depth in real-world applications of data science. The theme includes:

- Machine learning and statistics
- Information management
- Text analytics
- Image analytics
- Numerical algorithms
- Privacy and anonymisation
- Advanced processor technologies

http://www.digitalfutures.manchester.ac.uk/what-we-do/cross-cutting-capabilities/data-science-ai/

http://www.datascience.manchester.ac.uk/about/what-we-do/advances-in-data-science-seminars/



http://www.datascience.manchester.ac.uk/events-1/events/defining-theresearch-agenda-in-machine-learning-interpretability-explainability-andtrustability/

DEFINING THE RESEARCH AGENDA IN MACHINE LEARNING INTERPRETABILITY, **EXPLAINABILITY AND TRUSTABILITY**

11 FEBRUARY 2020

Time: 14:00 - 15:00

Venue: Room 3.009 Alliance Manchester Business school, Booth Street West, Manchester, M5 6PB

Speaker: Mihaela van der Schaar (University of Cambridge & Alan Turing Institute)

Title: Defining the research agenda in Machine Learning interpretability, explainability and trustability

modeled. In many application domains, such as the medical, insurance and criminal justice domains, model interpretability and explainability can be a crucia requirement for the deployment of machine learning, since a model's predictions would inform critical decision-making, Unfortunately, most state-of-the-ar hard to be interpreted. In this talk, I will define the research agenda in achieving machine learning model interpretability, explainability and trustability. I wil

Professor van der Schaar is John Humphrey Plummer Professor of Machine Learning, Artificial Intelligence and Medicine at the University of Cambridge and a Turing Fellow at The Alan Turing Institute in London, where she leads the effort on data science and machine learning for personalised medicine. She is an IEEE Fellow (2009). She has received the Oon Prize on Preventative Medicine from the University of Cambridge (2018). She has also been the recipient of an NSF Careet Award, 3 IBM Faculty Awards, the IBM Exploratory Stream Analytics Innovation Award, the Phillips Make a Difference Award and several best paper awards, including the IEEE Darlington Award. She holds 35 granted USA patents.



AROUT

EVENTS

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Home > About > What We Do > Advances in Data Science Seminar Series

ADVANCES IN DATA SCIENCE SEMINAR **SERIES**

Leading researchers present their recent advances in Machine Learning and Computational Statistics. The Advances in Data Science Seminar Series takes place in Room 3.009 at the Alliance Manchester Business School between 14:00 - 15:00 on the given date (unless otherwise stated). This will be followed by a tea, coffee & refreshments

We will be video recording all of the talks in this year's Advances in Data Science seminar series. If you have registered for any of the seminars and oppose to us doing so, please notify us immediately.

UPCOMING SEMINARS

11TH FEBRUARY 2020

Speaker: Mihaela van der Schaar (University of Cambridge & The Alan Turing Institute)

Title: Defining the research agenda in Machine Learning interpretability, explainability and trustability

10TH MARCH 2020

Speaker: Anna Scaife (University of Manchester)

Title: AI & Bias in Astronomy

24TH MARCH 2020

Speaker: Isabella Pereira (IPOS)

Title: Telling it like it is - The power of qualitative methods

7TH APRIL 2020

Speaker: Marlous Hall (University of Leeds)

Title: TBA

21ST APRIL 2020

Speaker: Marta Soares (University of York)

Title: TBA

5TH MAY 2020

Speaker: Iryna Gurevych (Technische Universität Darmstadt)

Title: TBA

30TH JUNE 2020

Speaker: Barbara McGillivray (University of Cambridge & The Alan Turing Institute)

Title: Data science and historical texts: modelling meaning change from Ancient Greek to web archives

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https://www.theiet.org/membership/member-news/membernews-2020/turing-talk-2020-digital-twins-the-next-phase-ofthe-ai-revolution/

Membership & Registration > Member News > Member News 2020 > Turing Talk 2020, Digital Twins: The Next Phase of the Al Revolution?

Intelligence & Research

Turing Talk 2020, Digital Twins: The Next Phase of the AI Revolution?

Published: Thu 6 Feb 2020

This year's Turing Talk speaker will be Mark Girolami, with the EngTalk being held at three locations across the UK.

Events

The Turing Talk will be taking place in London, Manchester and Belfast:

- London Savoy Place on Monday 17 February
- · The University of Manchester on Wednesday 19 February
- · Assembly Building, Belfast on Thursday 20 February

Our Turing Talk speaker this year is Mark Girolami, an academic statistician who worked with IBM for ten years as a Chartered Engineer. Mark is currently the Programme Director of Data-Centric Engineering at The Alan Turing Institute, the UK's national institute for data science and artificial intelligence.

His research lies at the intersection of Statistical, Mathematical and Computing Sciences, where he has made major contributions to the development of Machine Learning and applications in the Engineering and Natural Sciences. In 2019 he was elected to the Sir Kirby Laing Chair of Civil Engineering at the University of Cambridge.

During this EngTalk, Mark Girolami will discuss Digital Twins and chart their history to present-day technological capability. This will involve looking at some of the advances being made and the opportunities along with the open challenges faced to realise the potential of Digital Twins.

All of the events are free to attend and will take place from 6 pm until 8.30 pm approx.

Register to attend

Unable to attend?

If you are unable to attend any of the events, the London Turing EngTalk will be streamed live as a webcast at 6.30 pm UK time on 17 February. This can be accessed via the event website or on tv.theiet.org/

More information on EngTalks

EngTalks shine a light on the big engineering and technology topics of today. They are delivered by inspirational individuals passionate about influencing and informing their peers and the next generation of engineers.



https://www.turing.ac.uk/ai-uk



The University of Manchester



Introduction

The Alan Turing Institute continues to pursue its ambitious goals: by advancing world-class research in data science and artificial intelligence (AI), training and inspiring the leaders of the future, and shaping the public conversation.

For the first time a dynamic, two-day event will see the Turing bring together all three of these goals in an unrivalled showcase featuring the very best of UK academic work in Al and machine learning (ML)

Al UK will convene leading thinkers, innovative businesses and specialist third-sector bodies, to:

- . Connect UK academics working in AI and ML with research users from across industry, commerce and government
- · Facilitate new Al collaborations
- · Showcase the UK's state-of-the-art Al and ML

Programme

Al UK takes place over three main areas:

Connect: Named after the very thing we all want to do as human beings and as data scientists. Head here for sessions that will inspire you to connect both people and ideas to the broader themes of data science and Al.

Collaborate: Named after the one thing our work is nothing without. Head here for sessions that tackle cross-sections of artificial intelligence and data science with more traditional academic and policy concerns.

Innovate: A smaller more intimate space. Head here for moderated TED style talks, academic presentations and interactive content straight from the researchers themselves

Between the sessions, we invite you to explore our exhibition space where you can see live demonstrations from researchers and industry players alike.

Click on a session below to find out more about it and our brilliant speakers. Please be advised sessions may be subject to change.

The algorithm will see you now: Al for health & medical science 09:10 - 10:30 Maxine Mackintosh Mihaela van der Schaar Daniel Rueckert Sethu Vijavakuma Nick Hawes Paul Newman imandra Harkn enneth Cukier Ethics: The real Al challenge Jon Crowcroft Luciano Floridi

Collaborate

Day 1

Mind the (Al skills) gap Wendy Hall Ray Eitel-Porter Ben Murton Maggie Philbin

Indra Joshi Alan Winfield

The Turing Lecture Series: Provably

Mark Birkin Rachel Franklin

Flora Roumpani Alison Heppenstal Nick Malleson Paul Patras

Lukasz Szpruch Artur Garcez Stephen Roberts

Al and the future of defence and security

Mark Briers Weisi Guo Pohert Hercock Rae (Yingrui) Cher

Gavin Shaddick

Day 2

Helen Margetts Cosmina Doroban

Pranay Seshadr Mark Girolami Ruchi Choudhan Theo Damoulas Michael Batty

Innovate

Day 1

Derek Long

David Barber Jonathan Lawry Sebastian Volln

Ruth Ahnert Anna Scaife Nick Wright Biao Cai

Talks (Session 2) Michael Wooldridge

Al for e-infrastructure and e-infrastructure for

16:00 - 17:30 Mark Parsons Day 2

Lilian Edwards

Jonathan Rowe Thomas Hills Christian Arnold Barbara McGillivray Paolo Turrini Lise Jaillant

Conor Houghton Ross King

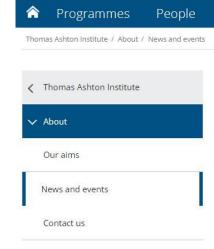
Kenji Takeda Tony Hey





Thomas Ashton Institute

Q Search



https://www.ashtoninstitute.ac.uk/about/ news-and-events/headline-756082en.htm

Integrity and Risk in Additively-Manufactured Components

1 February 2020

Research

Additive manufacturing (AM) is set to revolutionise production chains and reduce costs across several industrial sectors including nuclear, oil and gas, power, petrochemical and medical devices.

About

However there is a pressing need to develop regulatory, inspection and assurance regimes to support this progress.

Education

We invite you to join other professionals from industry, academia and regulatory bodies such as HSE to identify and discuss the key issues around managing risks in AM. Areas for discussion will focus on:

- · challenges in materials integrity
- assessment and assurance methodologies
- · the adequacy of inspection methods
- design code development and use

We aim to identify cross-sectoral issues and plan technical and guidance strategies to define a path by which the AM revolution can be safely navigated through better research and regulation.

Programme details and booking information will be published soon – please email <u>ashton@manchester.ac.uk</u> to register for this event:

Worshop - Integrity and Risk in Additively-Manufactured Components

Monday 18 May, 2020 9:00 am - 16:00pm (including a networking lunch) Barnes Wallis Building The Universty of Manchester

Return to the full list of news stories.





http://www.datascience.manchester.ac.uk/events/advances-in-data-science/advances-in-data-science-2020/

Advances in Data Science, 2020



Getting there Home Posters Programme Registration Submission

Advances in Data Science will take place in Manchester, UK from Monday June, 22 2020 to Tuesday June, 23 2020.

A two-day meeting to present recent developments in data science. Invited speakers include leading data scientists from industry and academia, and there will be the opportunity to submit abstracts for talks and posters. Talks will range from application-focussed to advanced data science methodologies.

Invited speakers will be announced soon

See details of previous meetings here:

- Advances in Data Science 2017
- Advances in Data Science 2018
- Advances in Data Science 2019

Delegates will be able to submit abstracts for consideration as short talk or poster presentations at the meeting. Note that there will only be a small number of contributions selected for talks due to time constraints.

Sponsors

University of Manchester Data Science Institute Alan Turing Institute

Organizers

Magnus Rattray; Mauricio Alvarez; Sophia Ananiadou; Danielle Belgrave



Question to community:

I am trying to find information about the expertise of the UoM in Al applied to early detection of disease, genomics or proteomics.

Please contact:

Dr. Cristina Melero

Business Engagement | Faculty of Biology, Medicine and Health

Email: cristina.melero@manchester.ac.uk



Open workshops: Compute capacity and resources



- Annual open workshops tell us what compute resources you need
- Researchers of any level are welcome to attend
- May be of interest to those doing computationally intensive research (eg modelling, simulation, data processing etc.)
- 24 March / 26 March / 1 April

Register and find out more: www.rlp.manchester.ac.uk/events



Lunch Event: Managing and sharing research data



- Research information projects
- Manchester Digital Collections
 Research Data Management
 Highly Restricted Data Service
 Research networking and collaboration
- Thursday 19 March 12:30pm 2pm

Register and find out more: www.rlp.manchester.ac.uk/events



Business Engagement in AI & Big Data

Theme lead: Hujun Yin

BE support: Kiera Gould





Business Engagement Support

Your first port of call for new interactions with business, we can:

- Organise and facilitate meetings and site visits
- Advise on existing relationships who could collaborate on new projects
- Signpost to relevant funding streams
- Liaise with Contracts or Research Support teams
- Advise on Pricing Policy and assist with cost negotiations

Kiera Gould, ext. 62697, kiera.gould@manchester.ac.uk