

# DATA DRIVEN...

THE OFFICIAL NEWSLETTER OF THE SFI CENTRE FOR RESEARCH TRAINING IN FOUNDATIONS OF DATA SCIENCE

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### *A message from the Directors*

We are drawing to the end of semester one of the very first year of our Centre for Research Training programme. Much has happened in these first 4 months. We welcomed 27 promising young PhD candidates into the CRT. We completed 2 full weeks of intensive lectures in the Foundations of Data Science. We hosted a one-day advanced masterclass with Professor Muriel Médard from MIT in beautiful Maynooth University. We held two Enterprise Alliance and student networking events. We re-branded. We trained, learned and worked together, to create a synergy between our students and your organisations.

2020 and beyond promises more of the same!

As always we would like to take this opportunity to thank you, our Enterprise Alliance members, as without your support this first of its kind Centre for Research Training in Foundations of Data Science would not be possible.

Wishing you, and yours, a Merry Christmas and a Happy New Year

*Prof. James Gleeson (UL)*  
*Associate Prof. Claire Gormley (UCD)*  
*Prof. Ken Duffy (MU)*





# TRAINING & EVENTS- SPRING SEMESTER

Foundations of Data Science II was delivered in UL in early December with Enterprise Alliance employees training alongside our PhD students. Top academics from MU, UCD & UL ran hands-on sessions with our attendees and delivered top-class presentations which were well received by our students and industry partners. We were also lucky enough to have John Dunne from Enterprise Alliance member CSO present for a full afternoon to our audience. Thank you John for an engaging afternoon.

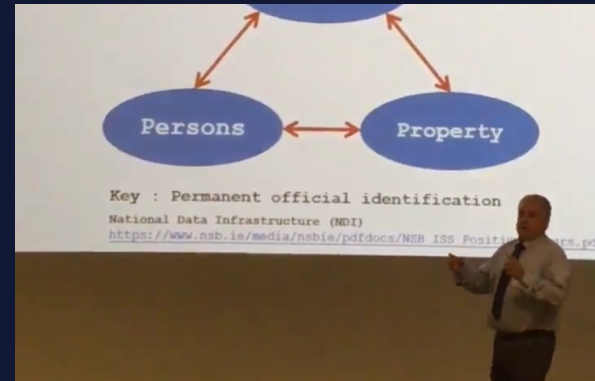
## The Masterclass Series

In October we welcomed Prof. Muriel Médard, Cecil H. Green Professor of Electrical Engineering & Computer Science, to Maynooth to deliver the first of our Masterclass series. Her discussion was titled "A compressed introduction to compression". We were honoured to have Prof. Médard in our presence, an award winning engineer from MIT.

The next in our Masterclass series is another renowned academic Prof. Regina Barzilay, a Delta Electronics professor from MIT and Chair of the CRT's external advisory board.



Did you know all our up and coming training dates can be found here on our [website](#)?



John Dunne, CSO

## Dates for your diary for 2020

- 16th & 17th of January: Winter Symposium, UCD
- 19th of February: Masterclass by Prof. Regina Barzilay (MIT) MU.
- 10th to 13th February inclusive: Maths Knowledge Exchange modules (2 days), Research Impact (1 day) and Entrepreneurial, Creative & Innovative Thinking (1 day), UL
- 4th & 5th March: Research Impact (1 day) and Entrepreneurial, Creative & Innovative Thinking (1 day), UL
- 8th & 9th April: Research Impact (1 day) and Entrepreneurial, Creative & Innovative Thinking (1 day), UL

*"In the PhD masterclass, the concepts were delivered to the highest standards" - EA member*



# 2020 RECRUITMENT..



Our recruitment drive for 2020 kick starts on the 13th of January, when our newly designed applicant portal will open to domestic and international applications. In this, our second round of recruitment, we aim to enrol 30+ high calibre students who will begin their exciting PhD journey with in September 2020.

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As Enterprise Alliance partners of the Centre, please share this wonderful opportunity with your networks and spread the word about our unique training opportunity. Details of our eligibility criteria and how to apply will be released on our website in early January. If you require information before then, please contact [Janet.Clifford@ul.ie](mailto:Janet.Clifford@ul.ie)

## We have re-branded



Our website is currently undergoing a face-lift and we have rebranded. Our newly designed website will launch in early January 2020. You will be able to register for any up and coming training events through the website, read testimonials & blogs from our student body and check out our student video which will give you a flavour of what our students have been up to these past few months.

## AI Award Winner, Ciarán O' Mara

The second year of the AI Awards was held in the Gibson Hotel, 20th November 2019, where CRT student Ciarán O' Mara took home the gold and won Best Application of AI in a Student Project for his work on Machine Learning-Based Traffic Network Analysis Tool, using AI for traffic management. His project took a different approach to attempt to improve road network efficiency by presenting data that can be analysed and interpreted to in turn make improvements to road infrastructure, traffic planning, route planning and event planning.

Ciarán was one of 200 hopeful applicants in his category who applied to the 2019 AI Awards. He was invited to make a presentation on his project to the panel of judges before being shortlisted with 3 other outstanding students. He is pictured here with Cathriona Hallahan, MD of Microsoft Ireland receiving his award.

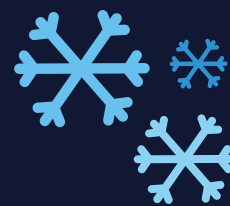
Well done Ciarán.





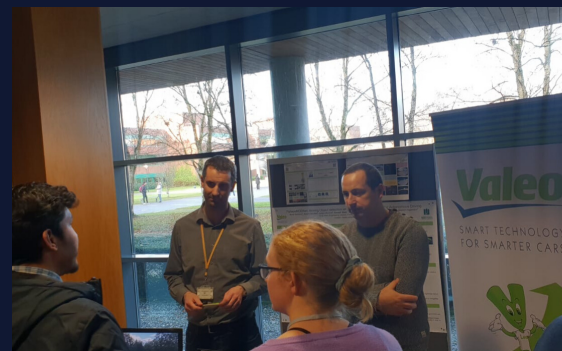


# WINTER SYMPOSIUM 2020



## Last chance to meet our PhD students before work placement!

Our Winter Symposium will be held on the 16th & 17th of January in the Moore Auditorium, Science Centre, University College Dublin. Our students will present their [group projects](#) to an audience of Enterprise Alliance partners & CRT supervisors. The presentations will highlight the research interests of the student body and the work they have completed in teams over the last few months. The 16th of January is the last time that Enterprise Alliance partners will meet our PhD cohort before we ask you to rank the students you feel most closely align with your organisation/project.



On January 16th, join us for our speed-networking event from 16.30 -19.00 in UCD between Enterprise Alliance partners and CRT students.

To register your employees for the group presentations and for your stand at our networking event please click on this [Eventbrite](#).

On the 17th of January, we will host a half day of [Expert Talks in UCD](#) which you are free to attend as members of the CRT group. Prof Madeleine Lowery (UCD), Prof Damien Woods (MU) and Dr Mike Quayle (UL) will deliver lectures from 9.30-13.00. All are welcome to attend.

## What are we listening to? A podcast to listen to while you travel to the Winter Symposium...

Keeping with all things AI this month, [AI in Action Ireland](#), is a podcast that breaks down the hype and explores the impact that Data Science, Machine Learning and Artificial Intelligence are making on our everyday lives. With over 50 short episodes, listen to industry leaders give their views on how AI can help businesses improve performance, AI ethics, the challenges of using AI & the future of AI trends. Our students recommend this podcast as a must listen.





# MEET THE FUTURE OF DATA SCIENCE



## ***Khang EE Pang***

A recent graduate from UCD with a joint honours degree in Pure Mathematics and Applied Computational Mathematics. Khang's thesis is on edge detection algorithms and applications in microbiology and his main horizontal theme interest is in Applied Mathematics. He is drawn to sectors that are driven by high performance computing and numerical algorithms. This includes the fields of computer vision, computer graphics, computational fluid dynamics and many more.



## ***Sarah Murphy***

Sarah graduated from the University of Limerick with a B.Sc in Mathematical Sciences. Her final year thesis focused on moving boundary problems and their industrial applications in the casting of metals. Sarah's horizontal themes are applied mathematics and statistics while the vertical themes of most interest to her are data analytics and smart manufacturing.



## ***Amit Chinwan***

Amit holds a Master's Degree in Data Science and Analytics from Maynooth University and a Bachelor's Degree in Electrical and Electronics Engineering from GGSIPU in India. He has more than two years of experience in industry working as an ETL Developer. Amit has a good understanding of different Machine Learning algorithms and has a keen interest in using these algorithms for modelling real-life challenges. Data has paramount importance in the field of biology and medicine and Amit is very interested in working with these datasets as they can help improve the quality of life.



## ***Anna Konrad***

Anna completed a B.Sc. in Physical Technology in Germany and continued to complete an MSc in Robotics and Automation in Sweden. She is passionate about all different kinds of robots, both for industrial purposes and service robotics in private households. In her PhD, Anna hopes to focus on conducting research with machine learning in robots. In her free time, she loves to explore nature with hiking or climbing trips.



# MEET THE FUTURE OF DATA SCIENCE



## ***Lukasz Kaczmarczyk***

An MSc Mathematics graduate from AGH University of Science and Technology in Krakow, he chose our PhD program to apply the theoretical knowledge he has already gained. Łukasz is interested in everything connected to mathematics but mostly in finding hidden structure in data and mathematical modeling. In his free time, he likes to play video games and go hiking.



## ***Prabhleen Kaur***

Recently graduated with a Masters in Data and Computational Science from University College Dublin, Prabhleen also holds a Masters in Mathematics and has worked as a Mathematics lecturer at University of Delhi, India. She is drawn towards the art of developing data driven mathematical and statistical models that could serve as a concrete base in developing computational algorithms to tackle practical challenges. Her research interests include statistical machine learning, optimization and networks. Outside of academia, Prabhleen enjoys yoga and cooking.



## ***Eoin Walsh***

Eoin recently graduated from the University of Limerick with a B.Sc in Applied Physics. He has developed a keen interest in programming after engaging with his Final Year Project, which involved the development a model of the galaxy. The subject of Machine Learning and its applications is Eoin's focus for his PhD experience. Outside of academia Eoin enjoys playing hurling, reading books and following politics and current affairs.



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