



ONDRS

LIVERPOOL

8 JULY 2024

Conference for  
WOMEN AND  
NON-BINARY  
DOCTORAL  
RESEARCHERS  
IN STEM

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@WoNDRS\_Conf




@WoNDRS\_Conf

# Agenda

All activities except the networking event will take place in the Central Teaching Hub of the University of Liverpool, L69 7BX.

The networking event (16:30 - 18:00) will be held at the Oliver Lodge Building, L69 7ZE.

Time	Activity
10:15	<b>Welcome and Introduction</b>
10:30	<b>The Quest for New Physics at Hadron Colliders (and Beyond)</b> Prof Monica D'Onofrio - Physics (UoL) 35+5 min
11:20	<b>Better Chemistry Through Living Systems (and Flow Synthesis)</b> Prof Anna Slater - Chemistry (UoL) 35+5 min
12:00	<b>Combining Physics and Data for Accelerated Discovery</b> Dr Malgorzata Zimon - IBM 18+2 min
12:20	<b>Lunch</b>
13:30	<b>Rising to the Stars: My Path to Becoming a Planetary Defender</b> Dr Stefania Soldini - Space Engineering (UoL) 18+2 min
13:50	<b>Should I Stay (<i>in academia</i>) or Should I Go (<i>to industry</i>)</b> Dr Savannah Cassin - Rolls-Royce 18+2 min
14:10	<b>Becoming a Mathematician</b> Prof Corina Constantinescu - Actuarial Maths (UoL) 18+2 min
14:30	<b>Coffee</b>
15:00	<b>Panel Session</b>
16:30	<b>IOP Sponsored Networking Event</b> <i>Drinks and Ice Cream</i>



# MEET THE SPEAKERS

# Speakers

## Prof Monica D'Onofrio

Department of Physics,  
University of Liverpool **she/her**



Monica is a Professor at the University of Liverpool since 2017 (STFC Advanced Fellow until 2014). She is Head of Research and Deputy Head of Department since end of 2020, and an elected member of Senate since 2022. Her research activities include searches for new physics at the ATLAS and FASER experiments at CERN, focusing on supersymmetry, dark matter, leptoquarks, hidden sectors and long-lived particles (dark photons, axion-like particles). She led or directly contributed to more than forty publications in the past decade and has been appointed for several international roles. Among others, she is the incoming national coordinator (PI) of

the ATLAS UK community (deputy until 2025, 15 institutes) and is the FASER UK PI (4 institutes).

Monica is exceptionally talented at looking forward to the future of particle physics and how the field can be the most impactful. She collaborates with experimentalists and theorists, nationally and internationally, for future facilities' plans and medium and long-term projects in high-energy physics. Most recently, she has been appointed as member of a STFC Science Board PPLAN which focuses on advising the funding science programme across particle physics, astronomy and nuclear physics. Monica's breadth of roles throughout her career inspires excitement to hear more about this journey and her research, along with having this opportunity to gain valuable insights and advice about fulfilling these types of influential roles.

# Speakers

## Prof Anna Slater

Department of Chemistry,  
University of Liverpool **she/her**

In her post-doc years, Professor Anna Slater gained an interest in flow chemistry and built on that interest to research how flow chemistry and automation can be used to build process-structure-function relationships and discover new supramolecular materials.

She became a Senior Lecturer in the Department of Chemistry at the University of Liverpool in 2021 and a Personal Chair in October 2022. She works with the Materials Innovation Factory and heads her own research group funded by grants from the Royal Society, UKRI/EPSRC, and industry. In 2023, she was awarded the Royal Society of Chemistry's Harrison Meldola Memorial Award.

Anna is not only a former WISC (Women in Supramolecular Chemistry) Vice Chair and former WISC Board Member but she helped set the group up. She is very passionate about inclusion in higher education and very enthusiastic about spreading knowledge and interest in chemistry.



# Speakers

## Dr Malgorzata Zimon

Senior Research Scientist,  
IBM

**she/her**



Malgorzata completed her PhD study in the Department of Mechanical & Aerospace Engineering at the University of Strathclyde in Scotland, jointly with STFC Daresbury Laboratory in England. Soon after obtaining her degree, she received an award allowing her to continue independent research at the School of Mechanical, Aerospace and Civil Engineering in Manchester. After a year of working at the University of Manchester, she joined the newly established IBM Research group at Daresbury Laboratory. Malgorzata is now a Senior Research Scientist at IBM Research Europe and an Honorary Lecturer at the University of Manchester, School of Mathematics. Her interests involve numerical analysis, performing uncertainty quantification, deep learning in the framework of computational multi-scale/multi-physics modelling.

# Speakers

## Dr Stefania Soldini

School of Engineering,  
University of Liverpool **she/her**

Dr Stefania Soldini is an Associate Professor (Senior Lecturer) in Space Engineering and UKRI Future Leaders Fellow in the University of Liverpool's Department of Mechanical, and Aerospace Engineering.

Dr Stefania can provide us with a perspective gained from a very international career. Alongside her research and teaching, Dr Stefania is PI of the UKRI-funded REMORA (REndezvous Mission for Orbital Reconstruction of Asteroids: A fleet of Self-driven CubeSats for Tracking and Characterising Asteroids) Project. She is also science team member as astrodynamist Co-I for three asteroid missions: ESA's Hera, NASA's DART and JAXA's Hayabusa2. In 2018 served as the PI of the superior solar conjunction phase of the Hayabusa2 mission. Stefania spent 3 years at JAXA and completed her research postdoc there, following the completion of her PhD from the University of Southampton and BEng and MSc degrees from the Politecnico di Milano in Italy.

A very accomplished researcher within astrodynamics and related fields, Dr Stefania has amassed many awards throughout her degree including the Hayabusa 2 Honor Award from JAXA in 2021, the Aurora Women In Leadership Programme Sponsorship in 2022 and the Alan Beeston Early Career Research of the year from the Uni of Liverpool in 2023.





# Speakers

## Dr Savannah Cassin

Process Chemist,  
Rolls-Royce

**she/her**



Savannah Cassin left the University of Liverpool in 2022 after achieving a First Class Masters degree in Chemistry and a PhD after that. During her PhD, she worked with the Rannard Group, whom she'd previously completed an EPSRC funded summer project with, and built upon the work of the summer project. She researched the synthesis and characterisation of novel hyperbranched polymer structures and how the reaction synthesis and method could be used commercially.

Savannah now works as a Process Chemist for Rolls-Royce after finishing her PhD at the University of Liverpool and has 3 patents on branched polymers.

# Speakers

## Prof Corina Constantinescu

Department of Mathematical Sciences,  
University of Liverpool

Corina is a Professor of Mathematics and the Director of the Institute for Financial and Actuarial Mathematics at the University of Liverpool. Prior to being an academic, Corina worked as an actuary and led the life insurance department of one of the first private Romanian insurance companies.

She serves as associate editor for several actuarial journals and is part of the publicity team of Bernoulli Society for Mathematical Statistics and Probability. Her expertise is in analytical methods for deriving exact or asymptotic results for ruin probabilities, with light or heavy-tailed assumptions in complex insurance risk models. Some of her more recent research interests are around fair insurance pricing when gender is not considered a factor, as well as financial inclusion, specifically fair pricing, and regulation of microfinance and microinsurance practices.

In 2020, Corina was one of the two academics named on the 100 Women to Watch list of the Cranfield University's School of Management, as ideally suited to board positions on FTSE 350 companies. More recently, during her sabbatical year, 2022-23, she was a visiting scholar within the Social Finance Programme within the International Labour Organization of the United Nations.



# Panel Session



## Dr Hannah Brown

Trainee Clinical Scientist,  
Clatterbridge Cancer Centre  
**she/her**

## Dr Clare Jenner

Deputy Director,  
DIRAC

## Saba Khan

Co-Founder,  
NorthWest Women in STEM  
**she/her**

## Dr Gabriella Pizzuto

Department of Computer Science,  
University of Liverpool

## Dr Kajal Singh

Department of Mathematical Sciences,  
University of Liverpool  
**she/her**

## Kate Thornton

Lead Research Scientist  
Croda

A decorative graphic consisting of a purple line that starts at the top left, goes down, then up, then down, and finally up to the top right. Five yellow, multi-pointed starburst shapes are placed at various points along this line. The text 'MEET THE ORGANISERS' is overlaid on this graphic.

**MEET THE  
ORGANISERS**

# Organising Team



**Katie Ferraby**  
she/her Physics

Katie graduated from the University of Liverpool with an MPhys in Physics in 2022 and continued with the University as a particle physics PhD student on the MUonE and g-2 experiments, investigating the properties of muons and the Standard Model (SM). She is also part of the doctoral training school (CDT), LIV.INNO and is now a 2nd year student.

She is also head of the "Women and Non-binary people in Physics" group and she aims to make a community for people facing the same struggles at similar research stages. She hopes the community will boost people's confidence and minimise some of their anxieties.

**Beth Slater**  
she/her Physics



Beth graduated from Lancaster University with an MPhys in Physics with Particle Physics and Cosmology in 2021. She is currently in the 3rd year of her PhD where she has specialised in neutrino physics, specifically engaging in the search for sterile neutrinos, a hypothesised fourth type of neutrino that could explain several experimental anomalies. Her work is based at the Short Baseline Near Detector at Fermilab, USA. Beth is actively involved in the board of this experiment, representing all the early career collaborators to ensure a fair, inclusive environment where all members can excel.

She is also the student chair of the Physics PGR SSLC where she is focused on improving the quality of life for everyone in the department. Beth is eager to be a part of the organising committee for WoNDRS and hopes the event will be valuable for all in attendance.

# Organising Team



**Lauryn Eley**  
she/her Physics

Lauryn is a 2nd year PhD student in the Department of Physics. A member of the QUASAR group and LIV.INNO CDT, her research focuses on developing a novel, low-dose, low-cost 3D x-ray scanner in partnership with Oxford-based company Adaptix. In 2022, she completed her MPhys Physics with Astrophysics degree from the University of York.

Lauryn is passionate about improving diversity and equality in physics and other STEM fields. Through active involvement in events like CUWiP and WoNDRS, she hopes to aid in ensuring that STEM is a place for everyone.

**Rebecca Hill**  
she/her Mechanical Engineering

Rebecca graduated from the University of Liverpool with an MMath in Mathematics in 2021, before continuing with the University as a PhD student in the School of Engineering. Her research includes the theoretical investigation of hydrodynamic instabilities and their effects on non-Newtonian fluid models, as well as the interaction of various applied flow fields with solid particles.



She is committed to improving equality, diversity and inclusion across STEM through her involvement with events like WoNDRS and wider outreach events across the faculty.

# Organising Team



**Sophie Ashley**  
she/her Chemistry

Sophie graduated from the University of Liverpool with an MChem Chemistry with Research in Industry in 2023; she is currently in the first year of her PhD and is based in the Materials Innovation Factory on campus. Here, she is looking at making novel co-polymers using transfer-dominated branching radical telomerisation which was recently developed within the Rannard group at Liverpool.

Outside of her work, Sophie is passionate about equal opportunities within the field of STEM, especially improving inclusivity and promoting networking within the PhD community. She is also a PhD Wellbeing Ambassador, organising monthly wellbeing initiatives for PhD students within the School of Physical Sciences at the University.

**Ana Pereira**  
she/her Theoretical Physics

Ana graduated from the University of Coimbra with a master's in nuclear and particle physics. After working as a research assistant, she is now in her 1st year of a PhD in theoretical physics at the Maths Department at the University of Liverpool.

Her research focuses on phenomenology, specifically the development of 4-dimensional regularization schemes as well as the development of computational tools to optimize the computation of higher-order Feynman diagrams.

She aims to raise awareness about gender issues in science and work to promote equity between people.



# Organising Team



**Cara Hawkins**  
she/her Chemistry

Cara is a PhD student in the Department of Chemistry at the University of Liverpool, studying under the supervision of Prof. Matthew Rosseinsky FRS in the Materials Innovation Factory. Cara obtained her Master's degree in Physics from the University of Liverpool in 2021, before moving into Chemistry as a postgraduate. Her current research focuses on the discovery of new inorganic materials for use in energy technologies. She is particularly interested in the synthesis of novel mixed anion compounds for solar absorbing applications, with the aim of engineering improved properties beyond single anion compositions.

Cara is also an enthusiastic supporter of science communication and outreach and hosts the award-winning podcast, 'The Liverpool Scientific', which meets the people behind the pioneering Science, Engineering, Technology & Maths (STEM) research happening at the University of Liverpool. Drawing on her experiences of working in both Physics and Chemistry, Cara hopes that the podcast will enable greater inclusivity within STEM by showcasing the inspiring and diverse role models working in scientific disciplines at Liverpool.



# Organising Team



**Prof Brianna Heazlewood**  
she/her Physics

Brianna is a Professor of Chemical Physics at the University of Liverpool. Her research uses low temperatures to explore chemical reactivity. Techniques including laser cooling and the application of external electric and magnetic fields allow Brianna and members of her research group to control the properties of ions and radicals, providing information on how reactive collisions occur. She is Deputy Director of EDI in Physics and has a 6-year-old daughter. Brianna was a member of the 2023 CUWiP committee and is excited to be part of the team organising the inaugural WoNDRS Conference in 2024!

**Dr Jorge Romero**  
he/him Physics

Jorge is a Postdoctoral Research Associate in Nuclear Physics at the University of Liverpool. His research is based around the development of the MARA-LEB Facility at the Accelerator Laboratory of the University of Jyväskylä, in Finland. This facility serves to produce pure beams of radioactive nuclei, to explore the most exotic nuclear species via laser, mass and decay spectroscopy.



Jorge is also passionate about the divulgation of science to a wider audience. He has been involved in outreach events such as Pint of Science, Binding Blocks and STFC Open Days. He is also a member of the Physics EDI Committee and is excited to be part of the organisation of WoNDRS!



**WORDS OF  
ADVICE**

# Words of Advice

*Add your own advice to our shared document by [clicking here!](#)*

Don't be afraid of asking questions.

Do what you want to do, not what other people think you should do.

A to B is not a linear curve.

Don't compare yourself to others, everyone is on their own journey.

It can be hard to be what you can't see, so try to be that role model for someone else.

Make the most of every opportunity that comes your way.

Set boundaries that allow for a work life balance and stick to them.



# STATEMENTS

# Statements

## Environment and Sustainability

WoNDRS commits to promoting sustainable practices throughout the conference as well as its planning. We recognize the importance of operating in a way that minimizes the impact of our operations on the environment and future generations.

In order to fulfill the previous declaration, we commit to implementing the following means:

- ★ Reduce carbon footprints by encouraging our participants to undertake public transportation.
- ★ Minimize the waste of water by providing refilling stations to reduce single-use plastic bottles.
- ★ Reduce our environmental impact by providing plant based catering.
- ★ Promote waste reduction and recycling by providing our best reusable or compostable materials and making available recycling stations through the conference venue.
- ★ Prioritize the use of sustainable and ethically produced materials and merchandise, supporting local suppliers whenever possible.

# Statements



## Environment and Sustainability

By making sustainability a priority in our event, we aim to set an example for our participants and cultivate awareness for the importance of choosing sustainable products and environmentally friendly practices.

We encourage all our participants to uphold the previous practices so that we can all positively inspire each other and contribute to a more sustainable planet.

# Statements



## Diversity and Inclusivity

WoNDRS strives to create an environment and an equitable culture that is welcoming to anyone and that makes all participants feel respected and empowered. We believe that embracing inclusivity and inter-sectionalism will enrich our experiences with greater creativity, groundbreaking ideas, and success, as well as a broadening of our perspectives.

We recognize the importance of amplifying the voices of women and gender minorities in STEM of any background, as well as any race or ethnicity, sexual orientation, gender identity or gender expression, religion, disability, and socio-economic status. We strongly encourage the participation of any underrepresented group, as one of the main goals of our event is to create a safe and comfortable event that promotes an open conversation for participants to share their experiences and thrive.

# Statements

## Diversity and Inclusivity

Throughout the conference as well as the process of organisation, we commit to implementing the previous declaration by the following means:

- ★ Cultivating an environment where inclusive language is implemented in order to respect all gender identities; Pronoun stickers will be provided for anyone who wishes.
- ★ Run the event in facilities with accessibility conditions so that any individual with disabilities may fully attend with comfort and safety.
- ★ Cultivate an inclusive environment where anyone can safely share their experience and be celebrated for all their characteristics.

We actively encourage all participants to uphold these principles so that we can all create an environment where we can all strive, create networks, and share knowledge and experiences in an inclusive and welcoming environment.



# Statements

## Data Privacy and Protection

In order to process your application and registration for WoNDRS 2024, we collect some personal information, including information on your experience and on characteristics protected by law. This statement details the basis for collecting this information, and what we do with it.

The processing of your data is necessary for the purposes of the legitimate interests of the University of Liverpool. This privacy statement outlines what this means in practice and explains how the University of Liverpool collects, stores, manages and protects your data.

### **Who will own my data once I submit it?**

The University of Liverpool

### **Why do you need my information?**

We need names and email addresses to be able to communicate with you about the WoNDRS 2024 conference. We need information on degree title, year of study and demographic information to allocate places at the conference and inform the programme.

In addition, your information will be anonymised and used to compile statistical data on the demographics of applicants and eventual participants at WoNDRS 2024. This will be used to inform planning of future conferences and gain further sponsorship.

# Statements

## Data Privacy and Protection

### **What allows you to use my information?**

By completing the application form or registration form for WoNDRS 2024, you consent to us using this information.

You also have the right to the rectification of the data we hold about you, to do so, please [contact us](#).

You also have the right to the erasure of the data we hold about you, to do so, please [contact us](#).

### **Who will my information be shared with?**

Your full data will be shared with WoNDRS 2024 Organising Team as listed on [the conference website](#).

In addition, your information will be anonymised and be used to compile statistical data on the demographics of applicants and eventual participants at WoNDRS 2024.

We will never publish information that could identify an individual and we will never share information outside of the WoNDRS 2024 committee, except as outlined above.

# Statements

## Data Privacy and Protection

### **Do I have to provide this information and what will happen if I don't?**

Yes. Without the information we will be unable to contact you about the conference nor make informed decisions about allocating you a place at the conference.

### **How long will you keep this data for and why?**

All individual responses will be deleted within one year of collection.

### **How will my information be stored?**

The information will be stored on the University of Liverpool's Managed Windows System and SharePoint.

### **Will this information be used to make automated decisions about me?**

The information provided will be used to allocate places and inform the programme at the WoNDRS 2024. This will be done by the WoNDRS 2024 Organising Team. They will use details of home institution, degree title, year of study and demographic information.

### **Will my data be transferred abroad and why?**

No.

# Statements

## Data Privacy and Protection

### What rights do I have when it comes to my data?

Under the UK General Data Protection Regulation, you may have the following rights with regards to your personal data:

- ★ **The Right to subject access** – you have the right to see a copy of the personal data that the University holds about you and find out what it is used for.
- ★ **The Right to rectification** – you have the right to ask the University to correct or remove any inaccurate data that we hold about you.
- ★ **The Right to erasure (right to be forgotten)** – you have the right to ask the University to remove data that we hold about you.
- ★ **The Right to restriction** – you have the right to ask for your information to be restricted (locked down) on University systems.
- ★ **The Right to data portability** – you have the right to ask for your data to be transferred back to you or to a new provider at your request.

# Statements

## Data Privacy and Protection

★ **The Right to object** – you have the right to ask the University to stop using your personal data or to stop sending you marketing information, or complain about how your data is used.

★ **The Right to prevent automated decision making** – you have the right to ask the University to stop using your data to make automated decisions about you or to stop profiling your behaviour (where applicable).

Please note that not all rights apply in all situations. To find out more about your rights under the UK GDPR, please visit the Information Commissioner's website.

To request a copy of your data or ask questions about how it is used, contact:

**Dan Howarth, Data Protection Officer**

[legal@liverpool.ac.uk](mailto:legal@liverpool.ac.uk)

Legal & Governance,  
University of Liverpool,  
Foundation Building,  
765 Brownlow Hill,  
Liverpool  
L69 7ZX

# Statements

## Data Privacy and Protection

**Who can I complain to if I am unhappy about how my data is used?**

You can complain directly to the University's Data Protection Team by writing to:

**Dan Howarth, Data Protection Officer**

legal@liverpool.ac.uk    Legal & Governance,  
University of Liverpool,  
Foundation Building,  
765 Brownlow Hill,  
Liverpool  
L69 7ZX

You also have the right to complain to the Information Commissioner's Office using the following details:

**The Information Commissioner's Office**

www.ico.co.uk                      Wycliffe House,  
08456 30 60 60                      Water Lane,  
01625 54 57 45                      Wilmslow,  
    Cheshire,  
    SK9 5AF

**To contact the WoNDRS Organising Committee:**

Website: <https://www.liverpool.ac.uk/science-and-engineering/outreach/WoNDRS/>

Email: [WoNDRS\\_conference@proton.me](mailto:WoNDRS_conference@proton.me)

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