

LGBTQ+ 2021 STEMinar



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<https://gather.town/app/vnPXBowuxy8w3ntB/LGBTQ+STEMinar2021>

Extended Programme

10:00 - Plenary Talk: *My LGBTQ+ journey in STEM*

Dr Tana Joseph

Dr. Tana Joseph is a South African astronomer, science communicator, decolonisation and transformation advocate and entrepreneur. Her research focuses on binary star systems containing black holes located outside of our Milky Way Galaxy. Using telescopes in space and on the ground, Dr. Joseph studies how these objects form, grow and change the environment around them.

She obtained her undergraduate and master's degrees in astronomy from the University of Cape Town. In 2013, she completed her PhD in physics at the University of Southampton. Dr. Joseph was awarded a Fulbright Fellowship in 2017, followed by a Royal Society Newton International Fellowship in 2018.

Dr. Joseph is passionate about science communication and firmly believes that science is for everyone. She uses her platform as a Black female scientist to raise awareness of science research and work opportunities for Africans, works to make science more accessible to people from underserved communities and endeavours to dispel Afro-pessimism. Recently, Dr. Joseph has become an outspoken advocate for transformation and decolonisation of astronomy and science around the world. Her EDI and decolonisation work includes advocating for LGBT+ people in STEM.

Dr. Joseph is not out in her home country, but has been lucky enough to find her work environments in Europe and US to be open and accepting of her sexuality.

10:30 - *Electric Vehicles - Won't Somebody Please, Think of the Electricity Network!*

Esther Dudek (EA technology)

Esther is a Senior Consultant in the Electric Vehicle Infrastructure team at power engineering company, EA Technology. She has a decade of experience in the electricity industry, working on energy storage, demand management and EV charging. From 2016 to 2019 she was the technical lead on Electric Nation, the UK's largest domestic smart charging trial. Esther is a Chartered Engineer and graduated from Lancaster University with an MEng in Mechanical Engineering in 2008. Outside of work she is a volunteer with Diversity Role Models and a member of Ukulele Club Liverpool.

10:45 - *Finding Snowball Earth: field observation and microbiology of modern pre-Cambrian analogues*

Jaz Millar (Cardiff University)

Jaz Millar is a molecular- and microbiologist in the 4th year of their PhD program in Cardiff University Earth and Environmental Science and The Natural History Museum London. With a background in extremophiles and stress, they are currently interested in how life survived the coldest periods in Earth's history. Outside their PhD they work as a freelance LGBT and accessibility advocate, delivering workshops on topics such as making accessible events, LGBT awareness, and feminist political history.

11:00 - *Modelling the effects of site constancy in bumble bees*

Dr Sarah MacQueen (University College Dublin)

Sarah is a postdoctoral researcher at University College Dublin. Sarah's research focuses on modelling the effects of climate change and pesticide use on bee pollination of crops.

11:10 - *Short talk on the Royal Society of Chemistries LGBT+ Toolkits*

Laura Reyes (Royal Society of Chemistry)

Laura is the Programme Manager of Inclusion and Diversity at the Royal Society of Chemistry. Laura has an extensive background in nanomaterials surface chemistry from her PhD at the University of Toronto, Canada.

BREAK

11:30 - *Conservation risks for amazonian animal species*

Dr Cedric Tan (Wildlife Conservation Research Unit)

Cedric has a particular interest in carnivore ecology and conservation as well as environmental education. My passion for effective evidence-based applied ecology and education drives me to pursue both disciplines in innovative ways, in turn contributing to raising awareness about conservation issues and nurturing our future leaders in conservation.

Email address: cedrickwtan@gmail.com. Twitter handle: CedrickWTan

11:40 - *Darwin's Closet*

Ross Brooks (Oxford Brookes University)

Ross Brooks is a PhD history student at Oxford Brookes University. His project is titled 'Evolution's Closet: Queer Science in Britain, 1871-1957' and is funded by the Wellcome Trust. In 2008, as an undergraduate, Ross won the William T. Stearn Prize, awarded by the Society for the History of Natural History. His winning essay, on the discovery in the nineteenth century of same-sex copulation among male cockchafers, was subsequently published in *Archives of Natural History*. Ross has subsequently published and lectured widely on changing theories of sex differences, sexualities, and sexual behaviours derived from the biological sciences since the time of Darwin. In spring 2019 he acted as contributing editor to a queer-themed edition of *Viewpoint: Magazine of the British Society for the History of Science*. In February 2020 he gave the first queer-themed public talk at the *Oxford University Museum of Natural History*.

E-mail: ross.brooks-2017@brookes.ac.uk. Follow Ross on Twitter @rossb_oxford.

11:50 - *The Need for Generality*

Yousra Idichchou

Yousra Idichchou, she/her, is a final year Mathematics undergraduate at the University of Greenwich. She is a Pure Mathematician with a growing research portfolio in Logic, Set Theory, and Topology.

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12:00 - *Transitions and Shocks in Space Physics*
Dr Imogen Gingell (University of Southampton)

Imogen Gingell is a trans woman and space plasma physicist. She is based at the University of Southampton as a Royal Society University Research Fellow. Her work focuses on the ways plasma flowing out from the Sun can interact with Earth's magnetic field – especially when it generates a shock wave! She uses NASA satellite observations and high performance computer simulations to unpack how these complex space environments transfer energy across the solar system.

12:15 - *Poster Flash Talks*
Various

LUNCH AND POSTERS

13:30 - *Address*
Layla Moran MP

Layla Moran is the Liberal Democrat MP for Oxford West and Abingdon, and has been an MP continuously since 8 June 2017. She currently undertakes the roles of Liberal Democrat Spokesperson (Foreign and Commonwealth Affairs), and Liberal Democrat Spokesperson (International Development). Layla identifies as pansexual and is believed to be the first UK parliamentarian to come out as pansexual (which she did in 2020). Layla is the first MP of Palestinian descent.

13:45 - *Developing an Inclusive Department Culture: Experiences from a pilot anti-racism workshop at Portland State University*
Nicole Javali (Portland State University)

Nicole Javali (she/her) is a second year graduate student in Chemistry at Portland State University, where she researches the chemistry of cannabis vaping. Currently, in addition to leading anti-racism workshops, she works on her department's Diversity, Equity, and Inclusion committee, her local ACS section's scholarship committee, and on the steering committee of her university's Women in STEM group. Prior to graduate school, she completed training related to issues of diversity, equity, and inclusion formally as part of her undergraduate education, and informally through working with a wide variety of students as a program manager with the Youth LEAD project in Cairo, Egypt or as a farm educator at Sprout Creek Farm in Poughkeepsie, NY. She also has formal training in teaching and curriculum development, and engages in activism related to racial, social, and environmental justice issues regularly. She can be found on twitter @njavchem and reached via email at njavaly@pdx.edu

14:00 - *Temporal Determinants: How time itself affects the health of ageing LGBTQ+ populations*

Simon Fox (Teesside University)

Simon Fox is a doctoral student in public health at Teesside University with a special interest in ageing LGBTQ+ populations. His background is in gerontology and occupational therapy, including dementia care, mobility and palliative care. You can follow Simon on Twitter at @BeardyAcademic, or email him at sjfox1978@gmail.com.

14:15 - *The winner takes it all: why aerosols are key to understanding fog*

Dr Craig Poku (University of Leeds)

Craig Poku is a postdoctoral researcher in Climate Sciences at the University of Leeds, who identifies as a queer Black British cis-male. He completed an undergraduate degree in Mathematics from King's College London, where it obtained a 1st Class Honours. In 2015, he moved to Leeds where he went onto complete a PhD in Atmospheric Sciences which focused on improving UK fog forecasts by understanding how to improve the modelling of fog microphysics. Following his PhD, he now works on similar research, with a focus on fog over Northern India. Over the past few years, Craig has developed an interest in understanding the intersection between race and climate. He's passionate to discuss how representation in Climate Sciences could be improved, leading him to co-lead projects such as Black in Geoscience Week. In his spare time, he likes to get creative which sees him regularly bake and take up activities such as theatre and pottery.

14:30 - *The Zombie Stars that Merged into a Magnetic Monster*

Dr Tanmoy Laskar (University of Bath)

Tanmoy's research addresses the question: "How are the most luminous explosions in the Universe powered?". To answer this question, he leads observational programmes using space- and ground-based telescopes, combining data from across the electromagnetic spectrum from gamma-rays to radio wavelengths. He then develops and applies theoretical models and statistical techniques to these data, probing physics at extremely high energies that are impossible to attain with experiments on Earth. His current work ties together our understanding of the final stages of the life cycle of stars with the co-evolution of stars and galaxies over cosmic time. Tanmoy is also a passionate advocate for diversity, equity, and social justice in STEM and STEM education. He has spoken on, authored in, and continues to work to improve STEM education for marginalised communities globally.

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BREAK

15:00 - *First report and ecological correlates analysis of UV-fluorescence in phyllostomid bats*

Esteban Mosquera-Izquierdo (Pontificia Universidad Javeriana-Cali)

Esteban is a Biology student at the Pontificia Universidad Javeriana Cali. His thesis on the ecology and evolution of ultraviolet fluorescence in phyllostomid bats has been nominated for Honorable Mention. He is passionate about bats and interested in wildlife management and photography.

15:15 - *Impacts of parrotfish predation on an endangered Caribbean coral: quantifying healing rates and thresholds of coral recovery*

Hannah S. Rempel (California Polytechnic State University)

Hannah Rempel (she/her/hers) is a doctoral student at the University of Texas at Austin Marine Science Institute. She recently graduated with her M.S. in Biology from California Polytechnic State University, San Luis Obispo and previously worked as an Assistant Biologist for the Bonaire National Parks Foundation in the Southern Caribbean. Her research interests are in evaluating impacts of human-related stressors on coral reef ecosystems to inform marine resource management and sustainable coastal livelihoods. Her email is hannah.rempel@gmail.com and her Twitter is @queenparrotfish.

15:30 - *Advances in Aero-Propulsion & Micromechanics using Ceramic-Matrix Composites*

Robin De Meyere (University of Oxford)

Robin graduated with a Masters of Engineering in Aerospace Materials at Imperial College London where he worked with the CASC and Reaction Engines on carbon-based Ceramic-Matrix Composites (CMC's) for the leading edges of the Skylon spacecraft. Having received an IROP scholarship at MIT during his undergraduate studies to work on car bodies and micromechanical testing, Robin is now heavily involved in both the ceramics and the aerospace industry, and is currently finishing a DPhil in Materials for Aero-Propulsion at St Edmund Hall, University of Oxford sponsored by Rolls-Royce plc. His DPhil focuses on characterising the BN interphase in SiC/SiC composites for next-generation jet engines using a multitude of micro mechanical techniques including in-situ fibre pushouts and high-temperature indentation. In his (sparse) spare time, Robin is also a professional pole dancer and pole sports judge, as well as an

advocate for LGBTQIA+ communities in STEM (and vice versa). email:
robin.demeyere@seh.ox.ac.uk

15:40 - *Measuring decay: Forensic techniques for scoring decomposition*

Paige Tynan (Wrexham Glyndŵr University)

Paige Tynan works as a Sessional Lecturer in Forensic Science at Wrexham Glyndŵr University. They are also currently working toward a PhD in Forensic Taphonomy, which is the study of what happens between death and recovery. Through their research, they hope to develop and review a new framework for measuring cadaver decomposition in the UK. Paige's work within the subject area has been recognised with awards both nationally and internationally.

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@PaigeTynan_

POSTERS (LAST CHANCE TO VOTE)

16:00 - *A beginner's guide to Complex Dynamics*

Thomas Richards (University of Warwick)

Thomas Richards is a doctoral student within the mathematics institute at the University of Warwick with an interest in dynamical systems and in particular complex dynamics.

16:10 - *Factors influencing rural women's disclosure of intimate partner violence: a qualitative study*

Cara A Davidson (Western University)

Cara is currently completing a MSc in Health and Rehabilitation Sciences at Western University where she earned a BHSc in 2020 and developed an unfortunate dependency on coffee. Her research interests revolve around women's health, especially intimate partner violence and breastfeeding. Her thesis examines the influences of income on Canadian women's experiences of intimate partner violence during the COVID-19 pandemic. She is also working on side projects that explore maternal attitudes towards a COVID-19 vaccine for infants, potential impacts of intimate partner violence on key breastfeeding outcomes, and health-related challenges faced by women with disabilities who experience violence during the COVID-19 pandemic. In 2021, Cara will be pursuing a PhD that examines how experiences of intimate partner violence may affect breast

cancer progression. Cara is supported by the Ontario Graduate Scholarship and again, copious amounts of coffee.

You can find her on Twitter @CaraADavidson or reach her via email at cdavid53@uwo.ca.

16:20 - *More losers than winners in a century of future Southern Ocean seafloor warming*

Dr Huw Griffiths (British Antarctic Survey)

Huw Griffiths is a marine biogeographer with a special interest in the Polar Regions. He has worked for the British Antarctic Survey since the year 2000 and has participated in several expeditions to the Antarctic and Arctic investigating seafloor biodiversity and biogeography. His studies focus on large-scale ecological patterns in space and time, using selected groups of animals to investigate trends. He also looks at the effects of climate change, plastic pollution, and other human impacts on polar ecosystems. He has a passion for science communication and making science more accessible to the public, policymakers, and governments. He is one of the co-founding members of Pride in Polar Research.

hjg@bas.ac.uk @griffiths_huw on Twitter @PridePolar also on Twitter

16:30 - *An introduction to chirality and why crystallisation reminds me of cake*

Nisha Pokar (University of Leeds)

Nisha is a young queer Indian scientist who is studying for her PhD in chemistry. Her project aims to improve upon the sustainability and cost effectiveness in the synthesis of chiral amines. Nisha is driven and excited by making change through scientific innovation and aims to use her platform to be an inspiration to other queer scientists, especially those of colour.

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16:40 - *What have flaming Scottish castles and rain(bows) got to do with nuclear waste disposal?*

James Mansfield (University of Sheffield)

James is currently in the final year of his PhD at The University of Sheffield's Immobilisation Science Laboratory. With a background in Earth Sciences, James currently uses geological and archaeological glasses - alongside laboratory experiments - to investigate the potential longevity of the glasses currently being used to store radioactive waste in the UK. Outside of this, James loves to volunteer at AgeUK Sheffield and enjoys interacting with children and their families at science outreach events. In

2018 he presented preliminary results from this work at an 'Out Thinkers' event in Sheffield.

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16:50 - LGBTQ+ STEMinar 2022 announcement

Dr Alex Bond (Natural History Museum)

Dr Alex Bond is an ecologist and conservation biologist, with a focus on marine birds and oceanic islands, using a mix of lab, field, and analytical techniques to better understand natural and human-caused changes to the natural world.

16:55 - POSTER PRIZE WINNERS

Dr Izzy Jayasinghe (University of Leeds)

16:56 - CLOSING REMARKS

Dr Andrew Princep and Dr Clara Barker (Marketcast and University of Oxford)

17:00 - SOCIAL IN GATHERTOWN (until late)

17:30 - DISCO AND SOCIAL - GATHERTOWN - *Indie Classics*

Dr Clara Barker (University of Oxford)

Posters and Flash talks

Title	Name	Affiliation	GT Table No.
Music to Their Ears? Sensory Enrichment for Captive Canids	Carys Williams	Dogs Trust	23
Social and nesting experience induces neuroplasticity in solitary bees	Mallory A. Hagadom	Utah State University	29
Listen but don't touch: Investigating bat habitat preference in southwestern Ontario using a non-invasive smartphone acoustic device	Dr Chloe Robinson	University of Guelph	20
Flexing our Mussels: Understanding Mussel Bed Decline and Recovery Potential in Kenepuru Sound, New Zealand	Trevyn Toone	University of Auckland	27
Meaning and context in bonobo (<i>Pan paniscus</i>) gestures	Dr Kirsty Graham	University of St Andrews	24
Factors influencing inter-colony multi-dimensional niche metrics of an Arctic seabird.	Reyd A. Smith	University of Windsor	25
Outdoor Atmospheric Microbial Diversity is Associated with Three-Dimensional Urban Landscape Structure and Differs from Indoor-Transit Systems	Justin D Stewart	Vrije Universiteit Amsterdam	15
How Can We Better Count Birds? Harnessing the Collective Knowledge of Multiple Disciplines to Answer a Biological Question	Logan R. Kline	University of Maine	28
A Longitudinal Analysis of Mouse Vocal Responses to Social Cues	Nicole Pranic	Cornell University	22
A Heterologous Expression Platform for the Production and Diversification of Lantipeptides	Abigail Alford	John Innes Centre	16
Diversifying light-control of DNA function	Denis Hartmann	University of Oxford	17

What is an exoplanet and how do I find one: a journey through the history of exoplanet research to today's discoveries	Ares Osborn	University of Warwick	30
The International Astronomical Youth Camp: Diversity and inclusion in the context of astronomy education	Nikki Miller	Keele University	26
Sign Language Interpreters as Science Communicators	Dr Shaun O'Boyle	Dublin City University	21
Strategies in tissue regeneration: promising biomaterials for skin/ligament engineering	Christopher Y. Leon-Valdivieso	University of Montpellier	11
Noise excitation: A promising medical tool for detecting hypernasality, or a load of buzz about nothing?	Dr Kat Young	University of York	18

Posters

Title	Name	Affiliation	GT Table No.
Determining the optimal conditions for the use of thermal imaging to locate remains in aquatic based search and recovery scenarios.	Kali Georgiou MSc	Keele University	31
Performance consequences of thermal adaptation in geothermal sticklebacks	Bethany Smith	University of Glasgow	2
Self-esteem, Acceptance, Relational Status and Academic Performance among LGBTQIA+ High School STEM Students	Chonilo S. Saldon	Zamboanga del Norte National High School, Philippines	8
A novel action-grammar analysis of wild chimpanzee stone tool use.	Elliot Howard-Spink	University of Oxford	12

What makes paint stick? A computer study of epoxy binding on iron oxide surfaces	Charlie Wand	University of Manchester	3
The energetics of cholesterol transport through Patched1	Bertie Ansell	University of Oxford	14
Evaluating the <i>Chenopodium</i> microbiome: How do rhizosphere microbial interactions affect plant growth and stress tolerance?	Haley Nolen,	University of New Hampshire	4
Expression, Purification, and Applications of the Antifungal Protein Efe-AfpA	Patrick Fardella	Rutgers University	5
Elaboration of mechanisms by which distinct apelin receptor bioactivity is elicited by endogenous peptide ligand processing	Tam Pham	Dalhousie University	10
Exploring the long-term effects of extreme climatic events on the behavioural activity of Indo-Pacific bottlenose dolphins	Natalie Klepacova	University of Bristol	6
Small Molecule Reactions Using Earth Abundant Metal Complex Photoredox Catalysts	Bryony Hockin	University of St Andrews	1
Adaptation and speciation in South African mole-rats	Hana N. Merchant	Royal Holloway University of London	7
Scientific illustrations and animations: A promotional tool for public engagement in Forensic Science	Madeleine Thomson and Paige Tynan		13
Structural, energetic and spectroscopic properties of MoS ₃ polymorphs	Amit Sahu	IFP Energy Nouvelle	9
A probabilistic internal model of earth gravity to predict object motion in our environment	Björn Jörges	York University	19