

A celebration
of postgraduate
research at
Bristol



**Research without
Borders 2019**

7-15 May
Festival programme

Welcome to
Research without
Borders 2019,
our annual festival
of postgraduate
research.

Today's challenges are not confined by borders - geographical, disciplinary or otherwise. Globally, we face a range of complex issues: diverse health needs, how to tackle climate change, confronting social injustice, the implications of technological growth and innovation. At the University of Bristol, we seek creative approaches to such global problems through working together in the name of frontier-expanding research.

Research without Borders 2019 brings together postgraduate researchers from across disciplines to showcase some of the latest research that is taking place here in Bristol. It aims to put this research into conversation with the wider community around us.

Together, we can explore what possibilities exist when we ask questions rather than settle for quick fix answers; when we challenge ourselves to step out of the ordinary framework of day-to-day life and approach the world from new perspectives.

I invite you to explore the pioneering advancements into sustainability, technology, education, culture and identity, engineering, and health, underway at our University – and to contribute your own insights.

Through meeting with our researchers, asking questions and sharing your own ideas, we hope to strengthen the research underway, and build connections which serve both local and international communities.

I hope you enjoy the diverse programme of events on offer.

**Professor Nishan Canagarajah
Pro Vice-Chancellor for Research
and Enterprise, University of Bristol**

Programme of events

Collaborative events, 7 to 9 May

University & City locations

Three afternoon and evening exploratory events led by the University Research Institutes reflect on how different perspectives offer new approaches to 21st century challenges.

Showcase exhibition, 15 May

Colston Hall

From robots to prehistoric life, Roman cooking to the latest innovations in sustainable energy, this public exhibition features more than 50 interactive research exhibits for you to explore.

Tuesday 7 May

12:30 to 4:30pm

Exploratory workshop: What does Research without Borders look like?

PGR Hub, Senate House,
Tyndall Ave BS8 1TH

With the Brigstow Institute.

Open to research students only.

Wednesday 8 May

6pm to 8pm

Bristol's One City Plan: an interdisciplinary dialogue on a sustainable future city

Watershed, 1 Canon's Road
Bristol BS1 5TX

With the Cabot Institute

Thursday 9 May

6pm to 8pm

Measurable humans: how good does our digital health look?

Watershed, 1 Canon's Road
Bristol BS1 5TX

*With the Elizabeth Blackwell Institute
and Digital Health and Care CDT*

Wednesday 15 May

11am to 6pm

Showcase exhibition

11am to 4:30pm*

Interactive research displays

RwB Visualise: Public art commission

Featuring exhibits from Creative Reactions

4:30pm to 5pm

Three Minute Thesis final

5pm to 6pm

Drinks reception and prize-giving

Colston Hall, Colston Street
Bristol BS1 5AR

**You can drop-in anytime between these times. We suggest allowing at least one hour to explore the exhibition.*

Accessibility information

All events are free and open to all. We strive to ensure that people have equal access to public events. All the festival venues are accessible for wheelchair users. For full access guides please visit www.disabledgo.com and search by the venues, as outlined above.

If you require additional information or have specific requests, please contact us by emailing research-without-borders@bristol.ac.uk. We will make reasonable arrangements, where possible, to make the events accessible to all.

Collaborative Events 7 - 9 May

We present a series of provocative and exploratory afternoon and evening events for both the research community within the University of Bristol and the wider city community to enjoy. These events encourage you to reflect on how interdisciplinary perspectives can offer new approaches to 21st century challenges.

An afternoon creative workshop for research students invites the academic community to explore new ways of working together across disciplines. Two evening discussions, led by a panel of postgraduate researchers, present lively and thoughtful exchanges on themes of sustainable cities and healthcare innovation.

These events are brought to you in collaboration with three of the University's interdisciplinary research institutes, which connect researchers from different disciplines around key research themes.

The Brigstow Institute brings researchers together with a range of partners across the city and beyond to experiment in new ways of living and being. Research is focused around four initial themes: living well with technologies, living well with difference, living well with uncertainty and just plain old living well. Our research is underpinned by a commitment to a distinctive way of working that focuses on inter-disciplinarity, co-produced research with – and not just for – external partners, and an emphasis on ‘critical making’ as a research methodology.

The Cabot Institute conducts world-leading research on the challenges arising from how we live with, depend on and affect our planet. Launched in 2010, the Cabot Institute carries out fundamental and responsive research on risks and uncertainties in a changing environment. Its interests include natural hazards, food and energy security, water, city futures, and global environmental change.

The Elizabeth Blackwell Institute for Health Research nurtures health and biomedical research at Bristol and beyond. We identify and support excellent, world-leading research to deliver novel and ground-breaking results of benefit to health. The Institute supports research that brings together fields as well as researchers, clinicians, industry and members of the public.

Tuesday, 7 May

12:30-4:30pm

PGR Hub, Senate House, Tyndall Ave BS8 1TH

Exploratory workshop: What does 'Research without Borders' look like?

We start this year's festival by asking our participants what they think Research without Borders looks like in practice.

Workshop facilitated by:

**Dr. Tim Cole and
Ms. Lizzie Harrison**

A student-only hands-on workshop facilitated by the Brigstow Institute offers Bristol's postgraduate researcher community the opportunity to learn about, practice and reflect on the value and practicalities of interdisciplinary and co-produced research approaches and methodology. Students participating in this workshop will develop and design instruments and tools that will facilitate interdisciplinary dialogues between researchers.

These tools will be displayed at the Showcase Exhibition on Wednesday, May 15.

This event is organised with the Brigstow Institute

 University of
BRISTOL
Brigstow Institute



Wednesday, 8 May

6pm to 7:30pm, followed by a drinks reception
Watershed, 1 Canon's Road, Bristol BS1 5TX

Bristol's One City Plan: an interdisciplinary dialogue on a sustainable future city

Bristol has launched an ambitious plan which aims to make Bristol fair, healthy and sustainable with reduced inequality, by 2050.

But how will we get there?

Taking perspectives from research in education, history, science and anthropology we ask: what can we learn from our different disciplines that could help Bristol achieve its aims? What opportunities can we see for innovation and change? And who is, or should be, included in decisions about how we build our future?

Panel members:

Laurene Cheilan

2nd year PhD in Education,
School of Education

Matthew Tarnowski

2nd year PhD in Synthetic Biology,
School of Biological Sciences

Steph Gillett

1st year PhD in History,
School of Humanities

Tammy Gladwin

1st year PhD in Archaeology and
Anthropology, School of Arts

Chaired by:

Professor Dale Southerton

Acting Director of the Cabot Institute

This event is organised with the Cabot Institute



**Cabot Institute for
the Environment**



Thursday, 9 May

6pm to 7:30pm, followed by a drinks reception
Watershed, 1 Canon's Road, Bristol BS1 5TX

Measurable humans: how good does our digital health look?

Fitbits, headspace apps, glucose monitors, wearable sensors - these are but a few of the ways we are currently measuring humans.

Current developments in our personal technological devices and the technology we can implement in the home are hugely affecting our self-management in health and care.

But how good does a future of 'digital' health really look? And does it look good for everyone? This interdisciplinary panel responds to the challenges and implications of current and future innovations in the digital health sector. From how we currently measure humans, to the potential limit-pushing developments of our future, four emerging researchers offer insights into the digital health sector as it stands, and where we might go next.

Will everyone be able to access new technologies, such as wearables and apps, and be able to benefit from them? How is public health and our current healthcare system affected by the advent of new technologies in the home? Are these new developments responding to real-time problems, or is the technology being progressed for progress' sake? Finally, who owns these technologies – and then controls the data they gather and how that data is managed?

This event is organised with the Elizabeth Blackwell Institute and EPSRC Centre for Doctoral Training in Digital Health and Care

Panel members:

Alexis Bedolla Velazquez

3rd year PhD in Sociology,
School of Sociology,
Politics and International Studies

Michal Kozlowski

4th year PhD in Electrical and
Electronic Engineering, School of
Computer Science, Electrical
and Electronic Engineering,
and Engineering Mathematics

Sophie Turnbull

Recently completed PhD in
Population Health Sciences, Bristol
Medical School

Steph Suddell

2nd year PhD in Psychology,
School of Psychological Science

Chaired by Dr. Paul Marshall

EPSRC Centre for Doctoral Training
in Digital Health and Care



University of
BRISTOL

Elizabeth Blackwell Institute
for Health Research

Panel members

Bristol's One City Plan: an interdisciplinary dialogue on a sustainable future city



Laurene Cheilan



Matt Tarnowski



Steph Gillett



Tammy Gladwin

Measurable humans: how good does our digital health look?



Alexis Bedolla
Velazquez



Michal Kozlowski



Sophie Turnbull



Steph Suddell

“Any knowledge
that doesn't lead
to new questions
quickly dies out: it
fails to maintain the
temperature required
for sustaining life”

Wisława Szymborska,
Polish poet

Showcase exhibition 15 May

Explore some of the latest research emerging at the University of Bristol on this day of interactive exhibits, talks, and artwork.

Colston Hall,
Colston Street
Bristol
BS1 5AR

Drop-in exhibition

11am to 4:30pm

Across all five floors of Colston Hall foyer

Get inspired by the 50 interactive activities, exhibits and demonstrations on display.

From robots to nanoparticles, from cooking cultures to railway history, from sustainable energy to brain surgery, there's something of interest for everyone. Wander through the five floors of research exhibits and ask questions to the researchers taking part.

This year's showcase also features unique artworks inspired by doctoral researchers as part of Rwb Visualise and Creative Reactions (see overleaf).

Three Minute Thesis final

4:30pm to 5pm

Lower ground floor

An 80,000 word thesis would take 9 hours to present. Their time limit: 3 minutes.

Eight researchers compete in this internationally-recognised communications competition. With just three minutes to present their doctoral research, who will best explain their work and its impact?



Drinks reception and prize-giving

5pm to 6pm

Third floor terrace bar

Join us for drinks and canapes while we announce the winner of the Three Minute Thesis (3MT®) competition and which exhibitors have been awarded festival prizes.

Access and directions to Colston Hall

Colston Hall is on Colston Street in Bristol city centre. It is around a ten minute walk from the University of Bristol.

By bus – Most city centre buses stop at the central promenade where you should alight for Colston Hall.

By train – Bristol Temple Meads, the nearest station, is about a mile from Colston Hall. Buses 8 and 9 run directly to the city centre promenade, or it takes approximately 20 minutes to walk.

By car – we recommend parking in Trenchard Street Car Park, which is behind Colston Hall.

For more information on getting to Colston Hall please visit colstonhall.org/visit-us

Research Without Borders Visualise Programme

This year Research without Borders is excited to pilot a new programme which invited a select group of postgraduate researchers from across a range of disciplines and subjects to work with acclaimed Bristol-based artist Zoë Cameron. Together they have developed a public installation to feature as the centre of this year's Showcase Exhibition.

"This has been an exciting challenge and eye-opening experience for me, learning about 7 fascinating and very different areas of research and working on ways of visually representing them as a whole.

Together we've made a playful modular sculpture, part mobile, that aims to represent the invisible growth structures and research that bind and animate a city and beyond.

Simple materials such as wood, clay and paper have been chosen to encourage interaction and observation. Different elements will respond to changing inputs and move between spheres such as biology and culture, the individual and the state. Variations in scale also represent the mass of data needed to study recurring themes of patterns and anomalies, with the ultimate goal of improving the individual's lived experience.

It has been a rewarding collaboration and hopefully the artwork will inspire more interesting conversations about research with the general public!"

Zoë Cameron

is a Bristol-based artist who specialises in clay, drawing, collage and found materials.

She runs art workshops and community events and enjoys working with people, encouraging wider participation in the visual and tactile arts. She has been practicing since 2008.

Students Involved:

Amber Roguski - School of Physiology, Pharmacology and Neuroscience

Anouk Spelt
Department of Aerospace Engineering

David Dewar
Department of Music

Debbie Daniels
School of Biochemistry

Matthew Lee
Bristol Medical School

Melanie Iddon
Bristol Law School

Vijay Kumar
Department of Civil Engineering

Featuring works from Creative Reactions

Creative Reactions is a collaboration between artists and researchers to produce unique visual artworks.

Originally founded as part of the Pint of Science festival, the project has now spread to a number of cities across the UK. Each event has a different format. Creative Reactions Bristol explores the relationships between science and art. With 50 artists and 50 scientists collaborating on works from sculptures and wood carvings to canvas, digital and performance art, this year's exhibition

runs across two local venues throughout various dates in May: Northstreet Gallery and The Island.

This year Creative Reactions has loaned 7 artworks responding to postgraduate research students to feature as part of the Research without Borders showcase exhibition.

Researcher / artist pairings:

- Ailsa Naismith & Emily Ketteringham
- Charlie Hatcher & Amy Hutchings
- Emily Crowe & Michael Blow
- Laura Tinner & Mary Rouncefield
- Matthew Lee & Phil Young
- Nancy McBride & Sophie Galliers
- Tom Battram & Beckie Upton

Find more Creative Reactions:

50+ artworks featured in Northstreet Gallery from Thursday 2nd May to Sunday 19th May

50+ artworks featured in The Island from Monday 20th May to Saturday 1st June

Drinks reception and celebration event on Thursday 2nd May, 7-10pm, Northstreet Gallery

Drinks reception and celebration event on Monday 20th May, 7-10pm, The Island

 [@creativereactionsbristol](https://www.facebook.com/creativereactionsbristol)

Creative Reactions Bristol

 [@CreatReactBris](https://twitter.com/CreatReactBris)

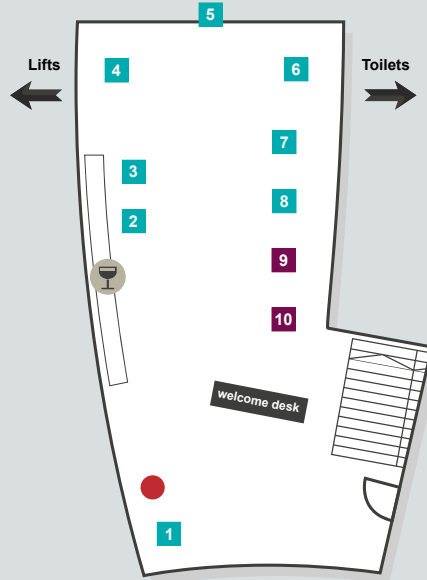
 [@creativereactionsbristol](https://www.instagram.com/creativereactionsbristol)

Showcase exhibition map

Lower Ground Floor

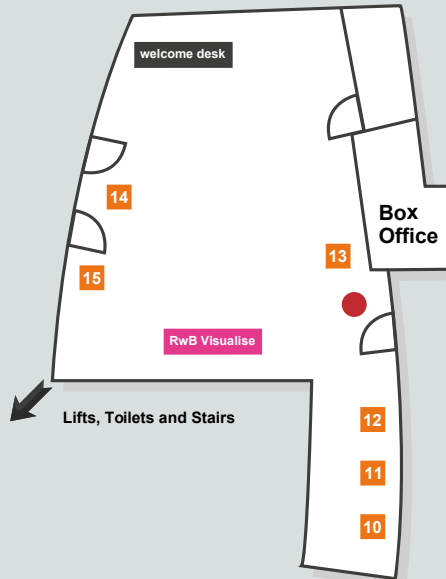
Culture and community
Stalls 1 to 8

Small stuff
Stalls 9 to 10



Ground Floor

Small stuff
Stalls 11 to 15



First Floor

Health: living well and living long

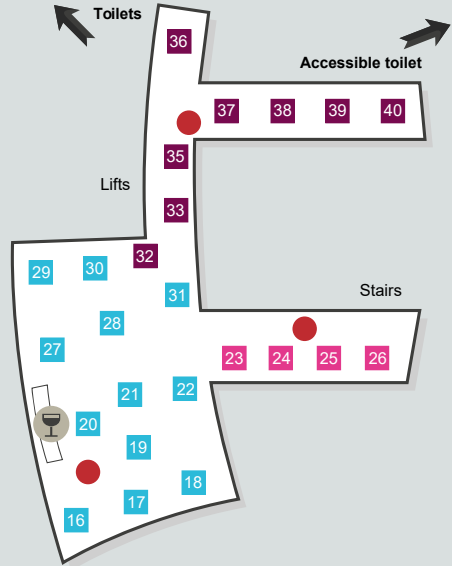
Stalls 16 to 22 and 27 to 30

Media portrayals

Stalls 23 to 26

New technologies

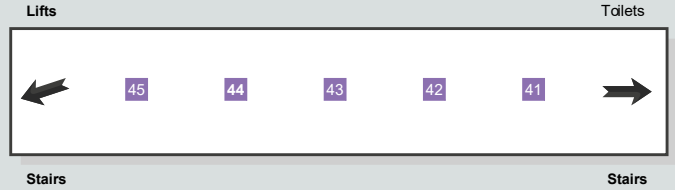
Stalls 31 to 40



Second Floor

Who we are and who we were

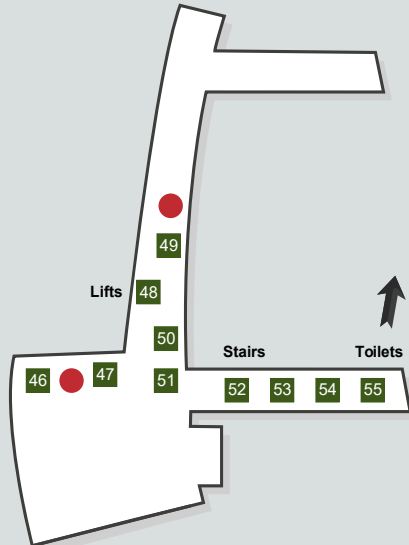
Stalls 41 to 45



Third Floor

How we learn and how we behave

Stalls 46 to 55



● Creative Reactions exhibitors (all floors)

Exhibitors

The researchers participating in the showcase exhibition on Wednesday 15 May are listed below under the exhibition themes. Refer to the floorplans on the previous page to locate each researcher.

Culture and community

Lower ground floor, Colston Hall

Caitlin Greenwood / Stall 1

What's cooking in Roman Britain?

Angela Neves / Stall 2

Aroma and enzymes! How are they connected?

Seerat Kaur / Stall 3

Exploring new ways of belonging for refugees and asylum seekers in Bristol

Will Awad / Stall 4

Race and the Media in 1980s Britain: South Asian businessmen and their representation

Tammy Gladwin / Stall 5

On board the Inter-Planetary Space Station: A two-dimensional story of human difference

Anca Dobrescu & Yeliz Vural Karakas / Stall 6

Meat alternatives and portion-size in toddlers

Yunyan Li / Stall 7

How Is Women's Everyday Life Shaped in Contemporary China?

Martina Delucchi / Stall 8

Word and Art: telling a story from Ancient times

Small stuff

Lower ground floor, Colston Hall

Laura J. Fox / Stall 9

Nano: Nice or Nuisance?

Joanne Boden / Stall 10

What lived on Earth before the dinosaurs?

Small stuff

Ground floor, Colston Hall

Georgia Oakley / Stall 11

How to design a protein

Claire Noble & Harry Thompson
/ **Stall 12**

Protein DIY - Redesigning Biological Machinery from Scratch

Katie Wojcik / Stall 13

Become a scientist for the day: algae and pollution!

Kirsty Lewis / Stall 14

Exosomes – cell junk or mini messengers?

Carla Greco / Stall 15

Life in the extreme

Health: living well and living long (1)

First floor, Colston Hall

Helena Davies / Stall 16

Using genetic data in healthcare:
We need public opinion

**Demi Ng, Mayuree Rodrat and
Bartholomew Harvey / Stall 17**

Cystic Fibrosis: From Top to Bottom

Emily Hotton / Stall 18

A new medical device to assist the birth of babies

Carlos Munoz Neira / Stall 19

Neural correlates of lack of insight in frontotemporal dementia

Edna Keeney / Stall 20

Should the NHS fund prostate cancer screening

Fernando Ponce Garcia / Stall 21

Neutrophil: friend or foe?

**Valeria Vincenza Alvino & William
Cathery / Stall 22**

How can you heal a broken heart?

Media portrayals

First floor, Colston Hall

Yilka Hysaj / Stall 23

Mobility of talented employees in FinTech industry

Hugo Hammond / Stall 24

Real-time measurements of engagement in film and TV programme

Chris Moreno-Stokoe / Stall 25

Games for Science

Agata Staniewicz / Stall 26

Conservation: can crocodile calls count?

Health: living well and living long (2)

First floor, Colston Hall

Rosaria Bianco / Stall 27

A research tool to aid the development of treatments for aneurysms

Liz Maciags / Stall 28

Look what the cat dragged in...

Jelena Taylor / Stall 29

Could gum disease be a risk factor for Alzheimer's and Parkinson's Disease?

**Esther Saunders-Jennings, Alfie Wearn
& Emma Hadley / Stall 30**

Brain changes in early Alzheimer's Disease

New Technologies

First floor, Colston Hall

Qian Liu & Maria Ferreira / Stall 31

Using deep-sea corals to understand past climate change

Sana Algharaibeh, Hongbo Wan & Eric Ho / Stall 32

New Restorative Dental Material

Matthew Skeats / Stall 33

New materials for preventing infection; do you know why we need alternatives to antibiotics?

Vijay Kumar / Stall 35

Keeping your smart home / city working always!

Ben Howchen & Gaël Gobaille-Shaw / Stall 36

Catalysts for the storage of renewable energy

Will Dixon / Stall 37

Quantum Dots as Sources of Linear Cluster States

Alexandra Moylett / Stall 38

The Quantum Wheel of Fortune

Angela Suriyakumaran / Stall 39

How do sound and gels play a part in nuclear dismantling security?

Juntai Liu / Stall 40

Photosynthesis without borders

Who we are and who we were

Second floor bridge, Colston Hall

Victoria Rivera Ugarte / Stall 41

Democracy on the field: discovering bridges between state and indigenous communities

Steph Gillett / Stall 42

Railway Networks: Past, Present, Future

Jim Blackstock / Stall 43

Gran Colombia: education and citizenship in a new nation

Rebecca Shaw / Stall 44

The Story of the Augustan Marriage Legislation

Isabel Wiltshire / Stall 45

How can radiocarbon dating pottery help us understand the transition to farming in Britain?

How we learn and how we behave

Third floor, Colston Hall

Alex Willcox / Stall 47

Practice Makes Perfect

Charlotte Brown / Stall 48

Vesta and Diana: Roman goddesses and popular culture influencers

Mary Phipps / Stall 49

Who am I? Who are You? How can I get to know you using a Culture Box?

Ilaria Scarponi & Sara Contini / Stall 50

Human Freedom and Dignity: Voices from the past, views from the present

Jeongeun Park / Stall 51

Children's Aspirations in an Unequal World: What do you "want" to be when you grow up?

Sandra Moreno / Stall 52

The relationship between genes and behaviour!

Beatriz Gallo Cordoba / Stall 53

Building Blocks of Inequality

Wenjun (Elyse) Ding / Stall 54

Explaining why in a foreign language: which age group can do that, and how?

Jessica Armitage / Stall 55

Resilience to school bullying

What does Research without Borders look like?

Terrace Bar,
Third floor, Colston Hall

Three Minute Thesis final Wednesday 15 May 4:30pm to 5pm

A chance to watch researchers attempt one of the toughest communication challenges in academia: to present their work, clearly and concisely, in just 180 seconds.



Join us in Colston Hall on Wednesday 15 May to witness the fast-paced finale of this year's Three Minute Thesis competition (3MT®). Eight researchers made it through from the semi-final, but which will one will impress the judges the most? The Bristol winner goes on to take part in the UK semi-final. The standard is sure to be high at this event, which takes place as part of our showcase exhibition.

Come along, enjoy some enlightening and entertaining presentations, and vote for the competitor you think should receive the People's Choice award.

Three Minute Thesis is an academic research communication competition developed by the University of Queensland, Australia.

Presenters:

Laurene Cheilan

School of Education

Unravelling Public Engagement in Science

Claire Noble

School of Biochemistry

De novo protein design: rebuilding the machinery of life

Helen Rees

School of Biological Sciences

Getting to the root of the problem: Controlling Armillaria

Ollie Hanton

School of Computer Science, Electrical and Electronic Engineering, and Engineering Mathematics

Spraying Screens

Konstantina Kanari

School of Civil, Aerospace and mechanical Engineering

Nanocomposites – how tiny changes are having the biggest impact

Jennifer Chakravarty

School of Maths

Security over the air for 5G and beyond

Rebecca Shaw

School of Humanities

The Story of the Augustan Marriage Legislation

Joshua Rees

School of Biological Sciences

Understanding Bacterial Genomes to solve Global Crises

“ Research is to see
what everybody
else has seen, and to
think what nobody
else has thought ”

Albert Szent-Gyorgyi,
Hungarian physiologist

.....

**What does research
without borders mean to you?
Join the conversation online
#BristolRWB**

Have you made a new connection with a researcher or organisation at Research without Borders?

Feel free to use this space for noting any contacts that you make at the festival. Why not follow up with an email and keep the discussions going?

The form consists of a horizontal pink line at the top. A vertical teal line descends from a teal circle at the intersection of the pink line. The area between the pink line and the bottom of the page is filled with horizontal dotted lines, providing a guide for writing.

Research without Borders is brought to you by the Bristol Doctoral College.

The Bristol Doctoral College grows, develops and supports our thriving community of postgraduate researchers across all research degree programmes at the University of Bristol.

Find out more about the work that we do on our website:

bristol.ac.uk/doctoral-college

Thank you to everyone who has taken part in Research without Borders 2019:

Brigstow Institute

Bristol Festivals

Cabot Institute

Colston Hall

Creative Reactions

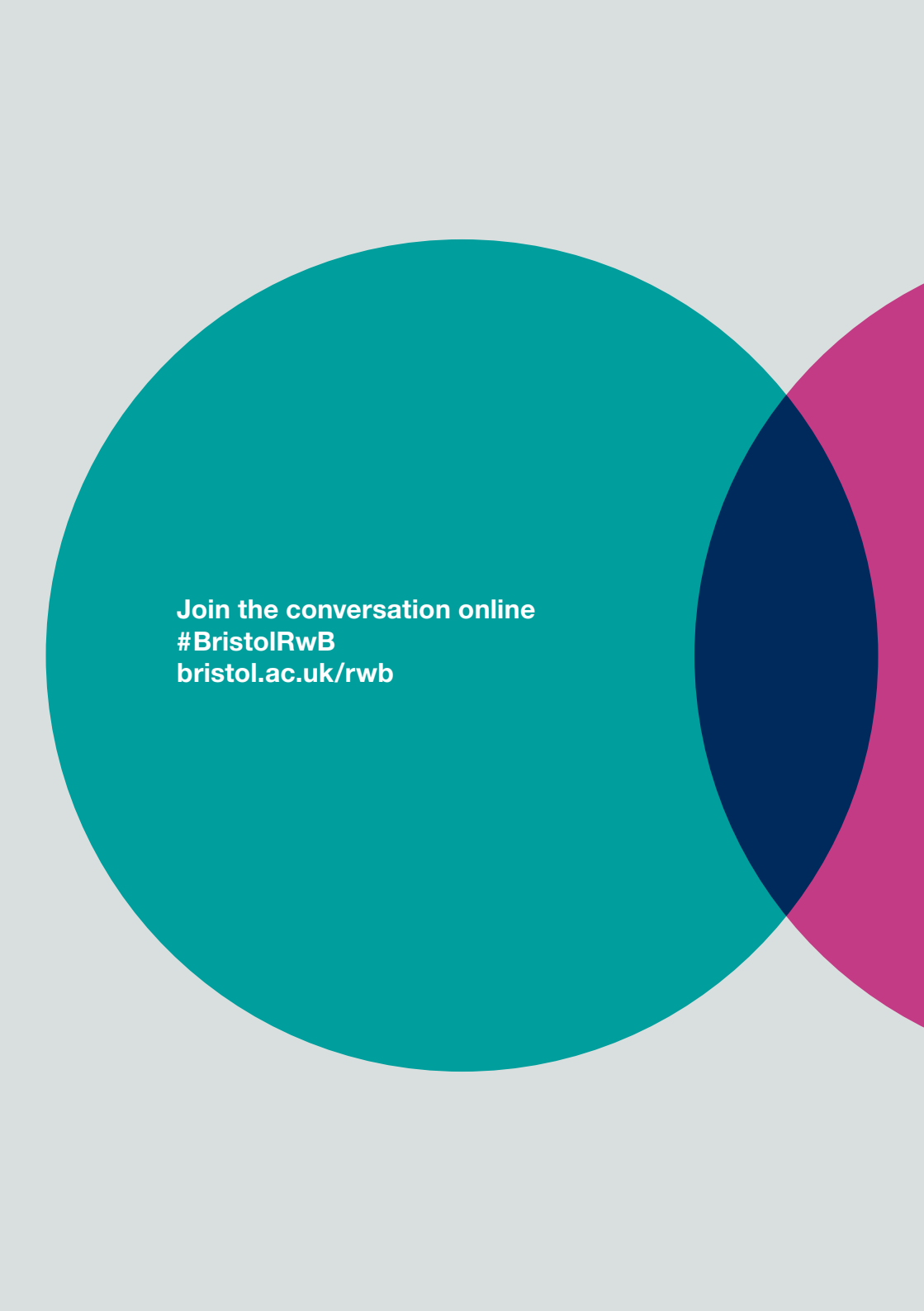
Elizabeth Blackwell Institute

EPSRC Digital Health and Care CDT

M Shed

Watershed

wriggle



Join the conversation online
#BristolRwB
bristol.ac.uk/rwb