

ARC BRIC Newsletter Apr 2024



News and updates from the ARC Training Centre for Biofilm Research and Innovation (ARC BRIC)

Directors Message

Hi everyone,

Welcome to our quarterly newsletter.

2023 was a remarkable year for the ARC BRIC!. As I reflect on last year, I would like to share some of our key achievements and milestones:

Commencement of Operations (22 June 2023): On June 22, 2023, we met our first major milestone with the execution of the Participant Agreement with our Partner Organisations and Collaborators, officially launching ARC BRIC's operations.

Website: ARC BRIC successfully established its official website, biofilminnovation.org, serving as a vital platform for disseminating information, supporting recruitment, and engaging with our stakeholders. BRIC has also established a social media presence across LinkedIn, Instagram, YouTube, and X.

Research Projects: In 2023, ARC BRIC initiated seven out of a total of twelve research projects. Another project commenced in February 2024 with an additional project due to start soon.

Recruitment of New Early Career Researchers and HDR Students: Our commitment to nurturing the next generation of biofilm researchers is evident with the recruitment of four postdoctoral researchers and three higher degree by research (HDR) students, who will collaborate with our industry partners. To meet these talented individuals, we've produced introductory videos available on our YouTube channel (<https://www.youtube.com/@ARCBRIC>).

Official Launch (22 November 2023): The ARC BRIC held its Official Launch at Flinders University on November 22, 2023. This significant event was attended by esteemed guests, including Dr. Richard Johnson (Deputy CEO, ARC) and Ms. Louise Miller-Frost (Member for Boothby, MP). Dr. Johnson and Ms. Miller-Frost, representing the Minister for Education, and the Hon Jason Clare, undertook official duties such as ribbon-cutting at the Centre's formal launch. The presence of 100 guests from across Australia and our international partners added to the grandeur of the occasion. For more details, please refer to the [ARC Media Release](#) (22 November 2023) and [Flinders University Media Release](#) (22 November 2023). Attached are some memorable photos from the event.

First Annual ARC BRIC Symposium (22-24 November 2023): Following the Official Launch, we organized the inaugural ARC BRIC Symposium from November 22 to 24, 2023. The symposium served as a platform to foster

industry collaboration, provide Early Career Researchers (ECRs) with valuable training, and offer networking opportunities.

Our ARC BRIC Symposium Team has recently started working on developing the ARC BRIC Seminar Series and the 2024 Symposium – make sure you save the dates for this next BRIC Research Showcase to be held in Tasmania this year – Monday, 25 November to Wednesday, 27 November 2024.

Strategic Planning: On November 23, 2023, we conducted a strategic planning session that laid the foundation for the ARC BRIC Strategic Plan. The plan is progressing well and is scheduled for finalisation in the next few months. Subsequently, it will be submitted to the ARC for consideration.

ARC BRIC's achievements in 2023 were only possible through the collaborative spirit of our team, industry partners, and international collaborators. We look forward to a busy 2024, building upon these accomplishments as we continue our mission to advance biofilm research and innovation and train young researchers to solve industry problems.

Best regards,

Professor Sophie Leterme

Director, ARC Training Centre for Biofilm Research and Innovation

ARC BRIC Official Launch - 22 November 2023



to R: Professor Sophie Leterme, A/Prof Harriet Whiley, Boothby MP Louise-Miller-Frost (representing the Hon. Minister for Education, Jason Clare) and Deputy Vice-Chancellor Professor Robert Saint.



Guests taking part in the Smoking Ceremony to commemorate the centre's beginning.

2023 Annual Symposium

The symposium was a wonderful networking opportunity for ARC BRIC researchers, students and industry partners. The program included keynote presentations, industry partner/project meetings, strategic planning, launch party, lab tours, speakers from existing ARC Training Centre's, a tour of the Adelaide Desalination Plant, and student/early career researcher training.

Congratulations!

Over the past year, we have celebrated the achievements of our industry partners, PhD researchers and our Chief Investigators.

Appointments, Promotions, Achievements

Two of our Chief Investigators from Swinburne University were promoted to Professor - congratulations Professor Scott Wade and Professor Justin Leontini!



PhD Milestones

Confirmation of Enrolment



Sam Butterworth



Umair Waqas



Sawkat Pinki

In the News

AI inspires new approach to adaptive control systems

A/Professor Paulo Santos (College of Science and Engineering) and Dr Thomas Chaffre (ARC Centre for Biofilm Research and Innovation), Flinders University

<https://techxplore.com/news/2023-11-ai-approach.html>

Best Paper Award

Institute of Healthcare Engineering Australia Best Paper Award 'A novel approach to monitoring Legionella and water quality in hospital and healthcare water distribution systems' – Sept 2023 – A/Prof Harriet Whiley.



2023 National Conference by the Institute of Healthcare Engineering, Australia



People and changes

Visitors / Investigators (PIs)

- Thomas Brauge and Julia Mougín – Jan 2023
- Christine Bressy – Nov 2023
- Paul Stoodley – Nov 2023

Welcome to new Partner Investigators

- Nishar Hamid
- Clare Grandison
- Denis Wright

Staff Farewells

Ula Alexander - Mar 2024

Vacancies / Opportunities

Please visit our website for further information about current and future [job vacancies](#) and [PhD opportunities](#).

PhD Scholarship Opportunities

PhD Scholarship: Beyond the Surface: A comprehensive exploration of water quality factors and their influence on materials and biofilm formation

Location: Flinders University, Bedford Park Campus

[More information](#)

Closing date: 30 June 2024

PhD Scholarship: Investigating and Developing Risk Mitigation Controls and Fouling Control Strategies

Location: University of Tasmania, Launceston Campus

[More information](#)

Closing date: 1 June 2024

PhD Scholarship: Assessment of Vessel Performance under Fouling

Location: University of Tasmania, Launceston Campus

[More information](#)

Closing date: 1 June 2024

Postdoctoral Opportunities

Research Associate in Water Quality

Location: Flinders University, Bedford Park Campus

More information - Position listed on [Jobs@Flinders](#), [LinkedIn](#) and [Seek](#)

Closing date: 5 May 2024

For further information about this position and future postdoctoral opportunities, please visit our website

<https://biofilminnovation.org/job-vacancies/>

Professional Opportunities

Business and Operations Manager

Location: Flinders University, Bedford Park Campus

More information - Position listed on [Jobs@Flinders](#), [LinkedIn](#) and [Seek](#)

Closing date: 5 May 2024

2023 Conferences, Events and Visits

IndoPacific 2023

International Visits

- Professor Sophie Leterme was in the UK in December 2023 to represent the ARC BRIC, present her research and develop collaborative opportunities with Plymouth University, Manchester University and the University of Southampton. Sophie's trip to New Caledonia in December

2023 Visits to ARC BRIC at Flinders University

- Nuwc
- Task Force – Submarine Institute (July)
- ONR – Clint Novotny
- Rhode Island

Conference Presentations

- 2023 IndoPacific International Maritime Exposition – Professor Sophie Leterme
- Aust Soc for Microbiology (ASM) – Biofilm Group Sydney 2023 – A/Prof Harriet Whiley and Professor Paul Stoodley (The Ohio State University)
- Backflow Prevention Association National conference - A/Prof Harriet Whiley
- The Institute of Healthcare Engineering, Australia (IHEA) National conference - A/Prof Harriet Whiley
- International Water Association Conference on Water and Wastewater Management – Professor Howard Fallowfield
- International Symposium on Nanobiology: Integrating Nanotechnology and Microbiology for Sustainable Future
- Australasian Corrosion Association 2023 annual conference – Professor Scott Wade (Technical Co-Chair)

2024 Conferences, Events and Visits

- Special guest speaker at International Womens Day Event – A/Prof Harriet Whiley
- Invited presentation at AMPP annual conference - Professor Scott Wade

Upcoming Events and Visits

8 April – 26 April 2024 – Professor Sophie Leterme visiting Singapore, UK (Manchester), France and USA (Rhode Island)

Publications

- Shakallis, A.G., Fallowfield, H, Ross, K.E., & Whiley, H. (2024). [Laboratory Analysis of Passive Samplers Used for Wastewater-Based Epidemiology Using F-RNA Bacteriophage MS2 as a Model Organism](#). *ACS EST Water*, 4, pp500-508.
- Mougín, J., Midelet, G., Leterme, S., Best, G., Ells, T., Joyce, A., Whiley, H., & Brauge, T. (2024). [Benzalkonium chloride disinfectant residues stimulate biofilm formation and increase survival of Vibrio bacterial pathogens](#). *Frontiers in Microbiology*, 14, 1309032.
- Chaffre, T., Santos, P.E., Le Chenadec, G., Chauveau, E., Sammut, K. & Clement, B. (2023) [Learning Adaptive Control of a UUV Using a Bio-Inspired Experience Replay Mechanism](#). *IEEE Access*, Vol. 11. pp. 123505-123518.
- Nisar, M.A., Ross, K.E., Brown, M.H., Bentham, R., Xi, J., Hinds, J., Jamieson, T., Leterme, S.C. and Whiley, H., 2023. [The composition of planktonic prokaryotic communities in a hospital building water system depends on both incoming water and flow dynamics](#). *Water Research*, 243, p.120363.
- Nisar, M.A., Ros, K.E., Brown, M.H., Bentham, R., Best, G., Xi, J., Hinds, J. and Whiley, H., 2023. [Stagnation arising through intermittent usage is associated with increased viable but non culturable Legionella and amoeba hosts in a hospital water system](#). *Frontiers in Cellular and Infection Microbiology*, 13, p.1190631.
- Tuuri, E., & Leterme, S.C., 2023. [How plastic debris and associated chemicals impact the marine food web: A review](#). *Environmental Pollution*, Vol. 321, 121156

Industry articles

- Nisar, M.A., Ros, K.E., Brown, M.H., Bentham, R., Best, G., Xi, J., Hinds, J. and Whiley, H., 2023. A novel approach to monitoring legionella and water quality in hospital and healthcare water distribution systems, *Institute of Healthcare Engineering Association*, https://issuu.com/adboune/docs/healthcare_facilities_spring_2023
- Nisar, M.A., Ros, K.E., Brown, M.H., Bentham, R., Best, G., Xi, J., Hinds, J. and Whiley, H., 2023. Monitoring water quality in healthcare systems, *International Federation of Healthcare Engineering Digest*, <https://content.yudu.com/web/1u0jl/OA1urts/IFHE-Digest-2024/html/index.html?page=40>

Conferences / Call for papers

- Federation of European Microbiological Societies (FEMS) FEMS2025 – The 11th Congress of European Microbiologists, 15-16 July 2025, Milan, Italy
- European Congress of Clinical Microbiology and Infectious Diseases – 34th ECCMID 2024, 27-30 April 2024, Barcelona, Spain
- Australian Water Association – Ozwater'24 – 30 April – 2 May 2024, Melbourne, VIC
- Centre for Biofilm CBE Engineering, Montana State University, USA – 9th Thesinge Biofilm Meeting on Biomaterial-Associated Infections – 13-14 May 2024
- International Federation of Environmental Health - 17th IFEH World Congress on Environmental Health – 20-24 May 2024, Perth, WA
- International Health Economics Association

- 2024 IHEA National Conference - 3-5 June 2024, Melbourne, VIC
- IHEA 2025 Congress – 19-23 July 2025, University of Calgary, Canada
- American Society for Microbiology - ASM Microbe – 13-17 June 2024, Atlanta, USA
- 20th ICMCF (International Congress on Marine Corrosion and Fouling) – 16-21 June 2024, Guangzhou, China
- International Water Association - 19th IWA Leading Edge Conference on Water & Wastewater Technologies - 24-28 June 2024, Essen, Germany
- International Conference on Biofilm Research – ICBR 2024 – 27-28 June 2024, London, UK
- 8th EUROBIOFILMS 2024 meeting – 26-29 June 2024, Copenhagen, Denmark
- SIMB (Society for Industrial Microbiology and Biotechnology) – 4-7 August 2024, Boston, MA, USA
- International Water Association - IWA World Water Congress & Exhibition - 11-15 August 2024, Toronto, Canada
- ISME19 (19th International Symposium on Microbial Ecology) – 18-23 August 2024, Capetown, South Africa
- IBBS19 (19th International Biodeterioration & Biodegradation Symposium – 9-12 September 2024, Berlin, Germany
- Federation of European Microbiological Societies (FEMS) – IUMS 2024 – 23-25 October 2024, Florence, Italy
- International Water Association – IWA Biofilms 2024 Conference – 24-26 October 2024, Shanghai, China
- Australasian Corrosion Association Inc – Corrosion & Prevention 2024 – 10-14 November 2024, Carins, QLD
- 24th Australasian Fluid Mechanics Conference (AFMC 2024) – 1-5 December 2024, Canberra, ACT

WEBINARS

[Federation of European Microbiological Societies - FEMS Webinar series](#) – see upcoming events and previous webinar recordings

Training

Flinders University internal courses:

- [How to create a Data Management Plan \(DMP\) for your research project – dates available in April – Aug 2024, 1 hr duration](#)
- [Introduction to Statistical Analysis – 7 May 2024, 9.30am-12.30pm \(online course\)](#)

[Intellectual Property for Research – 8 May 2024, 10.00am-11:30am, Noel Stockdale Room, Library](#)

Symposium Series

Dr Ben Van Den Akker, Enterprise Fellow in Environmental Chemistry, The University of South Australia

'The Role of Biofilms in Wastewater Treatment: A Journey from Past to Future'

Date: Wednesday, 24 April 2024, 12pm - 1pm

Venue: Phys_005_Lecture Theatre, Flinders University, Bedford Park Campus



Associate Professor Ben Binder, Mathematical Sciences, The University of Adelaide

'Quantifying and modelling pattern formation in yeast colonies'

Date: Monday, 20 May 2024, 3pm - 4pm

Venue: Flinders University, Tonsley Campus, 1284 South Road, Tonsley, South Australia, 5042

The presentation will be streamed online to our nodes at our Bedford Park Campus, Swinburne University and University of Tasmania

Contribute material to the newsletter

Please email items to: biofilmnews@flinders.edu.au

The ARC BRIC acknowledges and pays respect to Aboriginal and Torres Strait Islander Elders past, present, and future as the Traditional Custodians and Elders of this nation. We acknowledge the continuation of the cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander peoples on this land and commit to building a brighter future together.

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