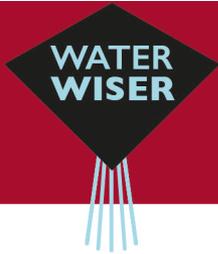


EPSRC Centre for Doctoral Training (CDT)

**Water and Waste Infrastructure and
Services Engineered for Resilience**

Water-WISER

An Introduction for Prospective Applicants



Who are we?



Paul Hutchings
University of Leeds

p.hutchings@leeds.ac.uk



Alison Parker
Cranfield University

a.parker@cranfield.ac.uk

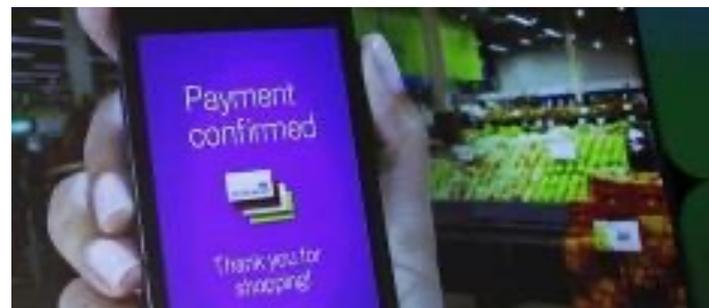


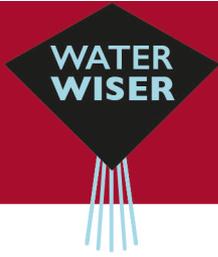
Qiu Hua Liang
WEDC
Loughborough University

q.liang@lboro.ac.uk

What is special - Water WISER?

- Integrated PhD programme of transdisciplinary training will develop requisite skills to solve complex problems in global south;
- Studentship funding includes provision for up to 6 months in-country fieldwork or placement opportunity;
- Research will be co-designed with and supported by partners to ensure relevance and impact;
- Hosted by three world leading water, sanitation and waste management UK research centres, coordinated with water@leeds, one of the biggest interdisciplinary research initiatives in the world.

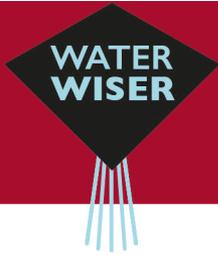




Water WISER Topic

- Water and Waste
- Infrastructure and Services
- Engineered for Resilience

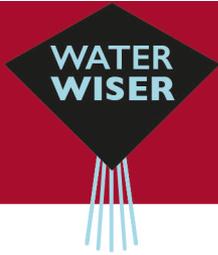




Water WISER Topics (examples)

- Regulation of onsite sanitation emptying services
- Climate finance and sustainable sanitation
- Role of use of shared sanitation in promoting spread of airborne infections (Covid and TB)
- Use of nature-based infrastructure on sustainable drainage and measuring impacts on health and wellbeing
- Sustainable use of sand dams to enhance water services
- Optimisation of wastewater treatment
- Practical implementation of Gender equity guidelines





Water WISER Methods

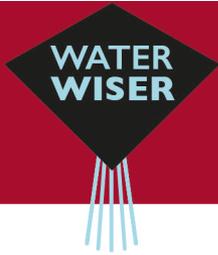
- Physical modelling
 - Mathematical rainfall and flood modelling
 - Computational fluid dynamics
 - Laboratory based studies
 - Pilot scale studies
 - In field observational/ empirical work
 - In field social science research
 - Political economy analysis
 - Economic modelling and analysis
-
- Multiple methods, transcending disciplines!



Humanure: utilising a problematic waste/source of nutrients





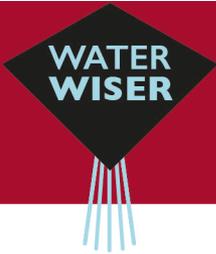


The Centres

Three world leading
water, sanitation and
waste management
UK research centres

University of Leeds
WEDC at Loughborough University
Cranfield University





The Centres: Leeds

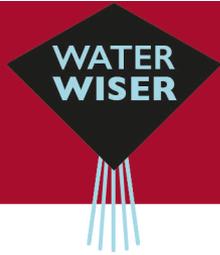


The Centres: Leeds

- Established in 1904, Leeds is a member of the prestigious Russell Group of universities and one of the largest higher education institutions in the UK
- School of Civil Engineering has a forty-year track record in public health engineering and WASH
- water@leeds is one of the largest trans-disciplinary research groups working on water in Europe
- Staff have a wide range of academic and practical experience across multiple disciplines
- Current research in
 - Economics, costing and corruption in sanitation
 - Green house gas impacts of sanitation
 - Flood resilience, health and climate in rapidly growing cities
- Leeds is a vibrant 'northern powerhouse' city (Channel 4 relocated here) with a great nightlife, within easy reach of the beautiful Yorkshire countryside
- Headingley (International Cricket!), Leeds (Premiership football!)

The Centres: Loughborough



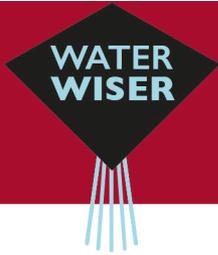


The Centres: Loughborough

- WEDC – founded in 1971, WASH focus in low and middle-income country contexts teaching, research and international conference;
- 2 MSc programmes are available both in Loughborough and by Distance Learning – Water Management for Development, and Water Engineering for Development – bespoke programme and modules, conversion programme, family of more than 1200 alumni worldwide;
- Staff are practitioner scholars with in-country experience, dedicated building, teaching room, outdoor space and laboratories;
- Loughborough market town pop. 60,000, 1hour 17mins by train to London, University 2nd largest campus in Europe, fantastic facilities;
- Ranked 1st Globally for sport; a top 5 UK University; consistently 1st for student experience, TEF Gold award;
- Ongoing research – sustainable rural WASH service delivery in PBR context, gender and lighting in humanitarian settings, real time flood forecasting using big data.

The Centres: Cranfield





The Centres: Cranfield

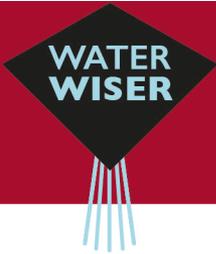
- Active team of resilient infrastructure researchers currently managing large research projects in India, Kenya, Malawi, Ethiopia etc
- Research facilities including borehole drilling site and capability to collect and process real human waste
- 30 year history of WASH teaching and research
- Ongoing research includes:
 - Sanitation technology innovation
 - Sand dams for water supply in semi-arid regions
 - Sanitation at the rural-urban transition
 - Circular economy for sanitation
 - Impact of domestic animals on infant hygiene
- 40 mins on train to London
- Postgraduate only university
- World class laboratory and pilot-scale water infrastructure facilities

Activities so far...

CDT Induction Events each September

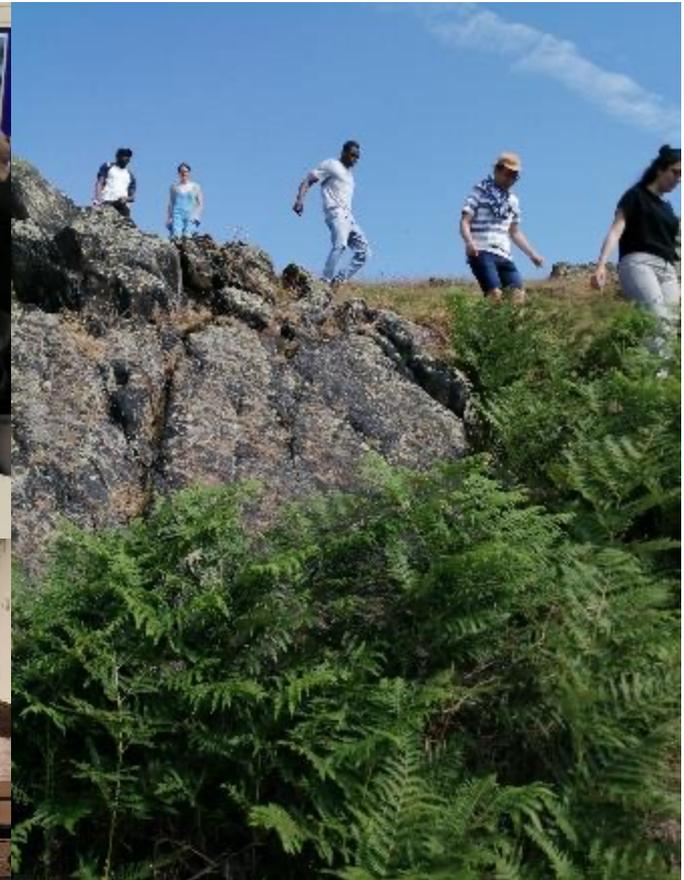
Challenge Weeks: Peak District National Park, University campuses, river walks

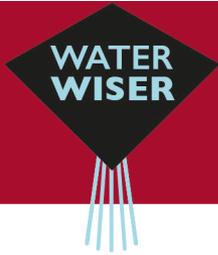




Activities so far...

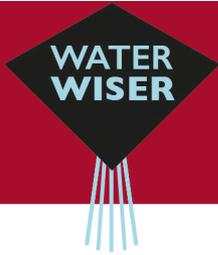
Early Career Research Conference – organised and led by the CDT students June 2022





The Application Process

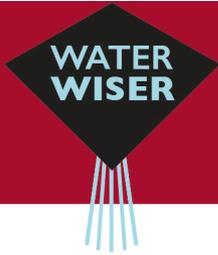
- Applications through Leeds initially by 22nd January 2023
- Invitations to interviews and assessments will be made in late February;
- Interviews online in early March;
- Provisional offers made within one week;
- Start – an induction event in mid-September 2023



What you need to do next?

- Applications include: academic transcripts; references; statement of motivation which corresponds to the Water WISER scope.
- Visits or questions: please contact CDT manager James Mckay j.mckay@leeds.ac.uk
- Apply in good time!

www.waterwisercdt.ac.uk



Equity, Diversity & Inclusion

- We aspire to be a beacon of excellence in Equity, Diversity and Inclusivity, and we've been commended by EPSRC for our diversity.
- It is recognised that the postgraduate research sector is inherently biased against applicants from: minority backgrounds; non-traditional backgrounds; disabilities.
- These researchers are under-represented in the postgraduate research community, and we would therefore particularly encourage applications from these candidates. All scholarships will be awarded on the basis of merit.
- We are implementing a range of measures to ensure our recruitment processes are fair and unbiased, and we consider applicants in a holistic way, not just based on their first degree qualification.