

# NEWSLETTER

07/20

Water Engineering and Development Centre



**New!** One-year distance learning option for our  
MSc in Water Management

# Learning and Teaching

## Extended Options for our MSc Programmes

In these unprecedented times, **WEDC** staff are working hard to ensure that our current and future students are able to continue their studies with minimal disruption. The following programmes will be running in the forthcoming academic year, offering maximum flexibility in light of the current global pandemic:

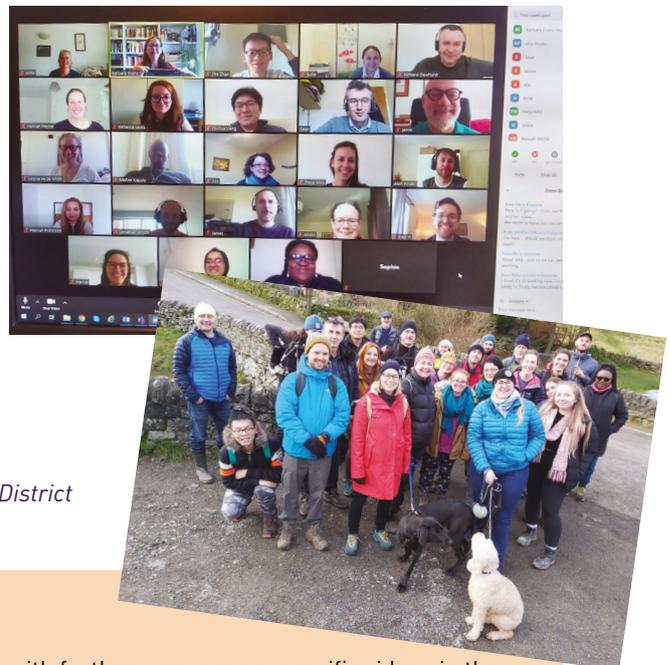
- *MSc Water Management for Development* – full time 1 year Loughborough-based\*
- *MSc Water Engineering for Development* – full time 1 year Loughborough-based\*
- *MSc Water Management for Development* – full time 1 year Distance Learning
- *MSc Water Management for Development* – part time Distance Learning
- *MSc Water Engineering for Development* – part time Distance Learning

\*Please note that our full time Loughborough-based courses are being delivered online as well as on campus during Semester 1, enabling students to join us in person when able to do so in the event that attendance is impacted by the global pandemic. This will allow students to engage remotely with lecturers/ others in class and interact with the Loughborough community virtually before travelling to continue studies face to face when able to do so. If you have concerns, restrictions or other issues with travelling to the UK at the moment, note that our distance learning options are delivered *entirely* online.

## Water WISER CDT News

The first year of the *EPSRC Centre for Doctoral Training in Water and Waste Infrastructure Systems engineered for Resilience* is progressing well. Our first cohort of students in Loughborough, Leeds and Cranfield have been developing skills at their host Universities as well as participating in cohort based activities. Recent cohort activities included a challenge week in the Peak District in January and an online research skills training week in April. We look forwards to welcoming our second cohort to begin their PhD journey with us later in the year.

*Pictured: participants on the challenge week in the Peak District and the online research skills training*



## Promotional School Video

A new promotional video for **ABCE** has been created, with further programme-specific videos in the pipeline to follow once the lockdown has been lifted. The video premièred at the June *University Open Day* – which was held virtually and was an exciting and enjoyable event for our prospective students and their guests, as well as our colleagues who worked hard to make this happen. The new video will be available online in due course.

# Learning and Teaching

## University Open Days 2020

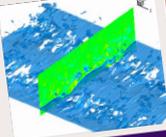
As a consequence of the covid-19 related restrictions, the University Open Days in June were moved online and spread over four days to relieve web traffic. The School's open day for prospective undergraduate applicants took place on Thursday 25th June. The format followed that for the recent online visit day for high school students who had chosen to come to Loughborough University (<https://www.lboro.ac.uk/study/virtual-visit-day/subjects/abce/>). The structure for the day was for interactive content regarding the University in general taking place in the morning, with content focused on our specific degree programmes taking place in the afternoon, using a mixture of academic staff and existing students to deliver interactive web-chats and programme presentations.

*Dr Tim Marjoribanks* represented WEDC during this event.

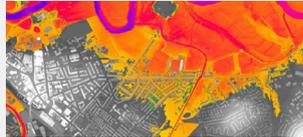


**At Loughborough, Civil Engineering is...**

... formulating new computational models of physical processes



**At Loughborough, Civil Engineering is...**



... predicting urban flood risk in real-time

**At Loughborough, Civil Engineering is...**



... providing safe and clean water for people around the world

**At Loughborough, Civil Engineering is...**



... designing dams in a safe and sustainable manner  
... ensuring the concrete has an appropriate specification for the loads

## University Rankings

Loughborough University continues its success story, moving up two spaces from last year and is now ranked 6th position in the UK's *2021 Good University Guide*, with an overall score of 90%.

Read more about our success and courses online:

<https://www.thecompleteuniversityguide.co.uk/league-tables/rankings>

## New WEDC Leader

In August 2020, *Professor Lee Boshier* will be taking over as the *WEDC Leader* from *Professor Graham Sander*. Lee has been based in Loughborough since 2005, arriving as a postdoctoral researcher.



He has been a member of the **WEDC** team since 2009 with duties that included teaching modules related to emergency water and sanitation engineering, emergency management and disaster risk reduction.

For the last 10 years he has also been course director for the *'Water, hygiene and sanitation for health'* training courses that have been developed with **Médecins Sans Frontières**. Lee's previous administration role in the School was as *Director of Doctoral Programmes*.

He is *Professor of Disaster Risk Management* and has extensive international research experience working on the social and human consequences of disasters, as well as on formulating policy recommendations to ameliorate risk.

**We wish Lee every success – and extend our thanks to Graham, who has been the group leader since May 2018.**

# Research News

## Inaugural Lecture

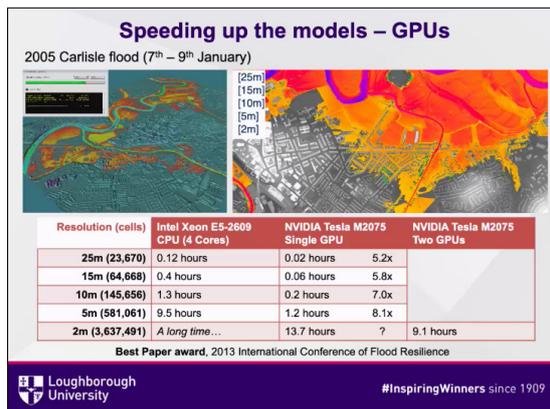
Professor Qihua Liang presented his inaugural lecture on the 26th February 2020 with 56 people in attendance – well ahead of the lockdown and social distancing. The lecture, *High-performance computational hydraulics for natural hazard risk and resilience research* showcased computational hydraulics, which involves the development of computer-based methods and techniques for simulation of water flow and transport processes in natural or man-made systems. This is a multi-disciplinary field involving hydrology and hydraulics, computing science, applied mathematics, data analytics and other relevant engineering subjects. With the recent advances in modern computing and data acquisition and analysis technologies, computational hydraulics has undergone rapid development in the last two decades and the resulting methods and models have been widely applied to tackle many real-world problems and challenges.

Qihua reviewed the research development in computational hydraulics spanning the last two

decades, seeking how the latest computing and data technologies are harnessed to develop high-performance modelling tools to predict the dynamic processes of different types of natural hazards including flooding, tsunami, storm surge and landslide and their impact.

The lecture also discussed and explored future prospects in relevant research, including multi-disciplinary collaboration in developing coupled human and natural systems (CHANS) for dynamic risk assessment, emergency decision-making and enhancing the resilience of societies/communities to natural hazards.

If you missed the lecture it is available online at: <https://lboro.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=4382f413-7fa3-4ef4-b3b8-ab6d010c910e>



Professor Qihua Liang

## Collaborative Funding

Professor Chris Keylock returned from a month working in Professor Susumu Goto's group at **Osaka University**, this work was funded by the *Japan Society for the Promotion of Science*. The collaboration involved the detailed physics of energy transfers near boundaries. Chris gave the '*Japan Society of Fluid Mechanics Lecture*,' at **Nagoya University** on the structure of the velocity gradient tensor in turbulence; a research seminar in the civil engineering department at **Kyoto University**; and a lecture to first year civil engineering undergraduates in Kyoto on the *Utility of the Concept of Entropy in Civil Engineering*.

# Research News

## Royal Academy of Engineering Fellowship

Dr Oluwasola (Sola) Afolabi has been awarded an *Engineering for Development Research Fellowship* from the **Royal Academy of Engineering** for his work into helping developing countries. Sola will research into processes that turn waste into energy, in a bid to manage agri-food chain waste and to understand clean renewable biofuels. This will see an integrated engineering approach to address long-standing challenges of poor waste management practices and lack of access to clean energy in developing countries. The research fellowship is timely and aligns with clean energy generation policy priorities in sub-Saharan Africa. Sola will receive five years' of funding and mentoring from an experienced academy fellow to advance his research career.



*I am honoured and very grateful to have received this fellowship from the Royal Academy of Engineering. The fellowships recognise the importance of advanced engineering in developing countries and it represents my long-term vision to develop innovative engineering solutions that will stimulate economic development and improve social welfare in the Global South. This fellowship presents that platform and the rare opportunity to contribute to the UN Sustainable Development Goals.*

Professor Philip Nelson CBE FEng, Chair of the Royal Academy of Engineering Research Fellowships Steering Group, said:

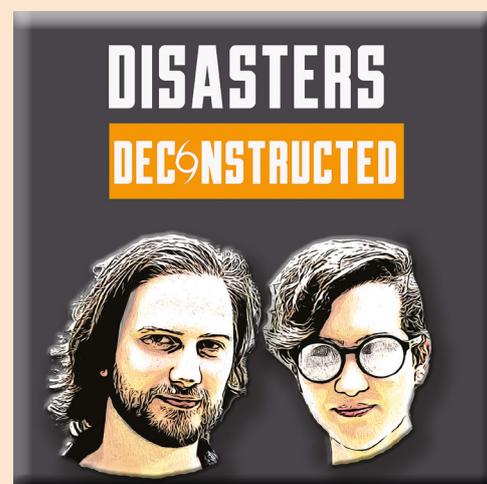
*I am delighted to announce these five-year Research Fellowships to 18 of the most promising engineering academics working in the UK today. Engineering research plays a vital role in addressing societal and industrial challenges, both today and in the future, and the variety and impact of the research being done by these awardees demonstrates the depth and breadth of world-leading engineering expertise we have within our universities. We have been able to appoint a record number of new engineering Research Fellowships this year, thanks to the government's Investment in Research Talent initiative, which has provided the Academy with a significant increase in funding over the next few years to attract and retain the best research talent in the UK and support their work.*

## Podcast Launched

In June 2019, Dr Ksenia Chmutina and Jason von Meding, **University of Florida**, launched a podcast, *'Disasters: Deconstructed'* (available on any podcast app). The podcast reflects on human society from diverse disciplinary and ideological perspectives to understand the root causes of disasters.

In Season One, Ksenia and Jason spoke with many influential academics in order to unpack the contested terminology used in disaster studies and discussed why the 'natural disasters' misnomer is problematic.

Season 2 was released during January 2020. In this season, Ksenia and Jason discuss how narratives shape our perception of disasters and the importance of storytelling in disasters. Season 2 guests included an independent investigative journalist, *Antony Loewenstein*, the Mayor of San Luis Obispo City in California, *Heidi Harmon*, Principal Advisor Urban Resilience and School Safety at **Save The Children**, *Dr Marla Petal* and many other wonderful guests. You can download the podcast from any podcast app.



# Research News

## BBC News Live Appearance

During recent months, the UK and in particular the East Midlands, has been affected by extensive flooding. On the 18th December the School's Disaster Risk Management expert, *Professor Lee Boshier*, was invited to speak on a live edition of *BBC East Midlands News*. During the interview with *Navtej Johal*, Lee explained that the flooding events that we have experienced are exacerbated by climate change, but also the way we develop our urban areas in England has just as much of an influence on creating even more flood risks. He explained that over the last three decades nearly 1 in 10 new homes in England have been built in high flood risk areas; this equates to over 300,000 new homes that are exposed to flooding, which is largely due

to the government's focus on making land – low cost, flood prone land – available for development. The East Midlands has a significant area of land at risk of flooding: 20% of the region is within Flood Zone 2, with over 200,000 properties and over 400,000 people living in high flood risk areas. The picture across the region is variable, with some areas such as Boston and South Holland having 80-90% of their housing in high flood risk areas. The East Midlands is highly vulnerable to coastal flooding, due to large areas of low-lying land along the Lincolnshire coastline, river flooding and surface water flooding. A 10% increase in peak flow in the East Midland's rivers would potentially double the number of residential properties at 'significant risk' of flooding from around 30,000 to 60,000 properties.

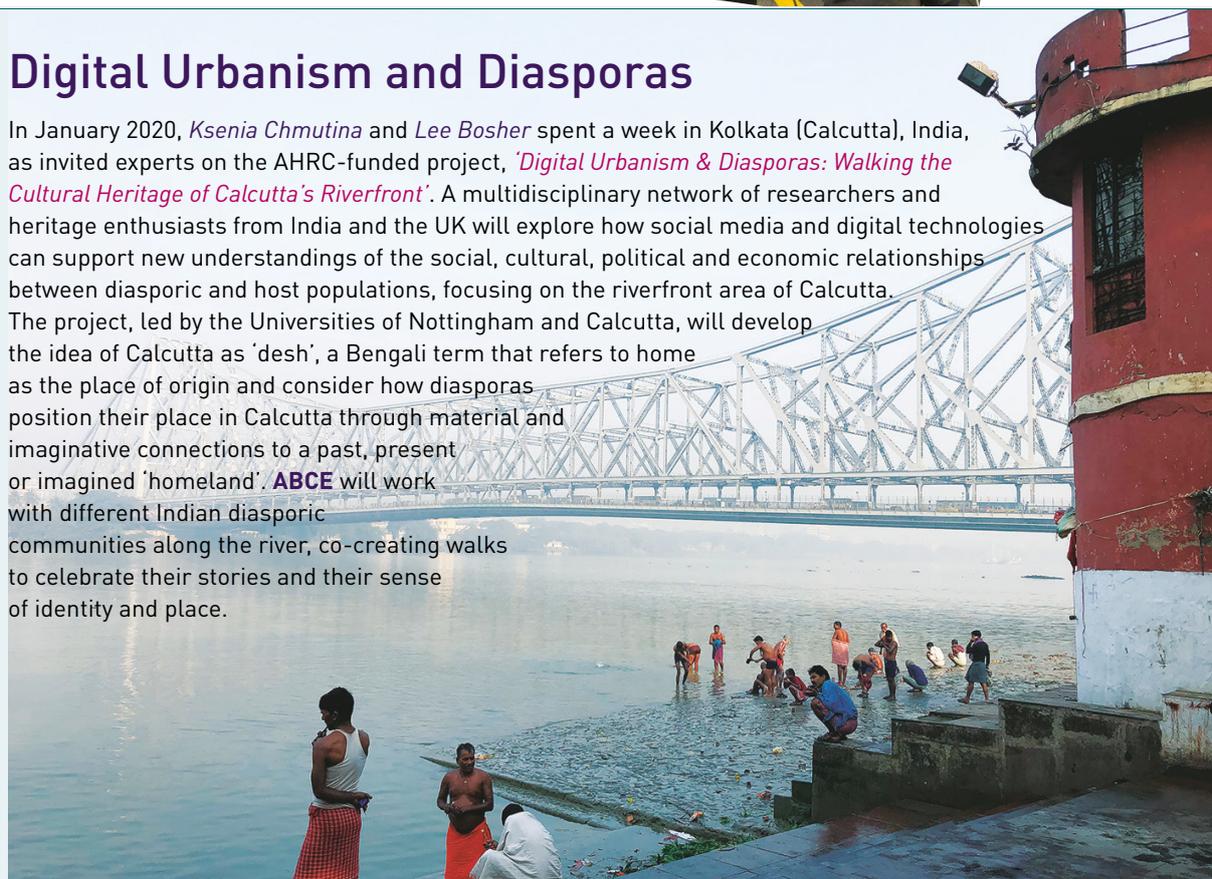


Photos above: the Heritage Walk Calcutta team start the riverfront walk from the Chitpur lock gates and explain the role of hidden temples in local cultural practices

Photo right: the Rabindra Setu Bridge towers over the bustling Hooghly River, connecting the cities of Kolkata and Howrah in West Bengal

## Digital Urbanism and Diasporas

In January 2020, *Ksenia Chmutina* and *Lee Boshier* spent a week in Kolkata (Calcutta), India, as invited experts on the AHRC-funded project, *'Digital Urbanism & Diasporas: Walking the Cultural Heritage of Calcutta's Riverfront'*. A multidisciplinary network of researchers and heritage enthusiasts from India and the UK will explore how social media and digital technologies can support new understandings of the social, cultural, political and economic relationships between diasporic and host populations, focusing on the riverfront area of Calcutta. The project, led by the Universities of Nottingham and Calcutta, will develop the idea of Calcutta as 'desh', a Bengali term that refers to home as the place of origin and consider how diasporas position their place in Calcutta through material and imaginative connections to a past, present or imagined 'homeland'. **ABCE** will work with different Indian diasporic communities along the river, co-creating walks to celebrate their stories and their sense of identity and place.



# Research News

## Research via Webinars

The **Energy Research Accelerator (ERA)** Midlands research hub organised a series of online webinars. *Dr Tanja Radu* was invited to give a presentation on her latest research within the **ERA Big Ideas series: Alternative Fuels - Liquids**, held on the 8th June 2020. The seminar brought together experts in energy research, aiming to explore the potential of alternative liquid and gaseous fuels for the transport industry, and build wider awareness of expertise in the area.

Tanja presented her latest research results under the title "**Algae and CCS routes to production: Integrated biomethane production and carbon sequestration**". During the last year she has been leading research on a project sponsored by the **Supergen Bioenergy Hub/EPSCRC** and the **Department for Transport**, studying alternative ways of biomethane generation and carbon capture. Tanja presented this proof-of-concept research, which explores the possibility of the generation of high quality biomethane as a green fuel for transportation sector. Whilst generation of biogas using the technology of anaerobic digestion (AD) is a widely applied by industries, purification of biogas to high percentage methane gas is still a challenge due to the high cost of this process. In addition,

the residues from AD, and the CO<sub>2</sub> remaining after gas purification are of environmental concern. Tanja's project proposes a new concept for not only biogas purification but use of residual material for biomass growth (algae), capturing the remaining CO<sub>2</sub> and converting it into useful by-product. The calculated overall carbon balance indicates very high efficiency of carbon capture, making the integrated process an attractive alternative to the classical approach of dealing with each product of the AD separately. Tanja stressed the importance of the good communication established with the Department for Transport, and the support of the Supergen Bioenergy Hub throughout the project.

Having completed the concept phase, the team are now seeking avenues to bring this concept closer to industrial applications and end users. In addition, their expectations are for this research to be further publicised soon as it has been selected for oral presentations at two international conferences, with several journal publications pending.

Further details of the research are available online: <https://www.era.ac.uk/Events/era-big-ideas-series-alternative-fuels-liquids-8th-june-2020/10084?Oclid=14400>



## Guest Speaker

On the 17th January 2020, *Chris Keylock* gave an invited presentation at **Pembroke College, Cambridge** at the **UK Special Interest Group** on "**Data-driven methods, machine learning and optimization in fluid mechanics**". Chris' talk was on the use of surrogate data for asking research questions about nonlinear processes and was in a session with an assortment of mathematicians from **Cambridge University, Imperial College** and **Leeds University**.



*Pictured: Chris presenting at the Old Library at Pembroke College*

# Research News

## New Grants

### GCRF Living Deltas Hub

Investigator: Qihua Liang  
 Sponsor: NERC  
 Project Value: £392,413  
 Period of Award: 13/02/2019 - 12/02/2024

### Impact scenario modelling for risk-based flood warning in India

Investigator(s): Xilin Xia, Qihua Liang  
 Sponsor: UK Met Office via CEH  
 Project Value: £184,010  
 Period of Award: 01/09/2019 - 31/03/2021

### Supergen Bioenergy Hub Researcher Mobility Award for the Nordic Biofuels Conference in Gothenburg from 2-4 November 2019

Investigator(s): Uttam Roy, Tanja Radu  
 Sponsor: EPSRC via Aston University  
 Project Value: £600  
 Period of Award: 04/11/2019 - 30/11/2019

### Managing Agric-food chain waste using a synergy of conversion technologies

Investigator: Oluwasola Afolabi  
 Sponsor: Royal Academy of Engineering  
 Project Value: £604,359  
 Period of Award: 30/09/2019 - 29/09/2024

### UK Fluids Network: Special Interest Group on Nonequilibrium Turbulence

Investigator: Chris Keylock  
 Sponsor: University of Cambridge  
 Project Value: £3,826  
 Period of Award: 02/12/2019 - 04/12/2019

### VPACH - Virgin Park and Charge

Investigator(s): Craig Morton, Falli Palaiologou, Andrew Timmis  
 Sponsor: Innovate UK  
 Project Value: £199,798  
 Period of Award: 01/09/2019 - 28/02/2021

## July 2019 PhD New Starters

Name	Supervisor(s)	Project Title
Paraskevi (Evi) Koliou	Professor Mohammed Quddus / Dr Craig Morton	Assessing the Impact of Intelligent Mobility (IM) on Traffic Performance

## October 2019 PhD New Starters

Name	Supervisor(s)	Project Title
Abdelkawy Abdou	Water-WISER CDT	To be selected next year
Richard Dewhurst	Water-WISER CDT	To be selected next year
Kate Hiseman	Dr Tim Marjoribanks / Dr Antony Glass (SBE) / Dr Ian Pattison (ext)	Natural capital and its role in improving rural land planning and management at different spatial scales
Kristine Jarsve	Dr Xilin Xia / Dr Tom Dijkstra	Landscape evolution modelling for enhanced geohazard risk management along the Bailong River Corridor, Gansu, China
Rebecca Lewis	Water-WISER CDT	To be selected next year
Alun Pinder	Water-WISER CDT	To be selected next year

## January 2020 PhD New Starters

Name	Supervisor(s)	Project Title
Tobi Kassim	Dr Sola Afolabi / Professor M. Sohail	Integrated waste to energy technologies for multiple biofuel recovery
Haoyang Qin	Professor Qihua Liang / Dr Xilin Xia	Hyper-resolution urban flood modelling based on modern high-performance computing, machine-learning, and real-time data calibrating technologies

# Research News

## New Visiting Students

Name	Supervisor(s)	Project Title	Home University	Start Date	Finish Date
Xue Tong	Professor Qiuhua Liang	Modelling of Non-Point Source Pollution in Watershed Areas Using Particle Tracking Method	Hohai University, China	14-Aug-19	14-Nov-19
Yunsong Cui	Professor Qiuhua Liang	Developing a robust numerical approach to directly simulate the effects of hydraulic structures in 2D high-resolution urban flood model	Hohai University, China	14-Aug-19	14-Nov-19
Wei Shen	Professor Qiuhua Liang	Numerical assessment on the prevention effect of multiply mitigation measures on debris flow using adaptive meshes	University of Bologna, Italy	15-Feb-20	15-Jun-20
Wenyuan Dong	Professor Qiuhua Liang	Real-time flood forecasting based on data-driven models and data pre-processing techniques	Dalian University of Technology, China	01-Sep-20	31-Aug-21
Nilüfer Kizilkaya-Öksüz	Dr Kirti Ruikar / Dr Lee Boshier	Developing a predictive fire resilience risk assessment methodology	Middle East Technical University, Turkey	21-Sep-20	20-Mar-21

## PhD Completions

Name	Supervisor(s)	Project Title
Aliya Al-Alawi	Professor M. Sohail / Dr Sam Kayaga / Ian Smout (now retired)	Water Demand Management in Mosques in Oman
Abdullah Saibu	Professor M. Sohail / Dr Julie Fisher / Dr Sola Afolabi	The role of Islamic financial instruments Zakah, Sadaqah and Waqf in providing social services in Nigeria
IJ Ikpeh	Dr Robby Soetanto / Dr Aaron Anvuur / Mr Ian Smout	Determinants of regulatory compliance in households using non-utility water supply systems: the case of Uyo, Nigeria
Oluremi Olaleye	Mr Mike Smith / Dr Lee Boshier	Providing Water of Safer Microbiological Quality to Slum Dwellers: Makoko Slum as Case Study
Liz Marlow (viva 28/04)	Dr Ksenia Chmutina / Professor Andy Dainty	The realpolitik of sustainability and resilience in the city: critical analysis

# Research News

## Selected Journal Papers

- Chmutina K.**, Von Meding J. (2019) **A Dilemma of Language: “Natural Disasters” in Academic Literature**, International Journal of Disaster Risk Science, Vol. 10, pp. 283-292.  
DOI: [10.1007/s13753-019-00232-2](https://doi.org/10.1007/s13753-019-00232-2)
- Xia X., Liang Q.**, Ming X. (2019) **A full-scale fluvial flood modelling framework based on a high-performance integrated hydrodynamic modelling system (HiPIMS)**, Advances in Water Resources, Vol. 132.  
DOI: [10.1016/j.advwatres.2019.103392](https://doi.org/10.1016/j.advwatres.2019.103392)
- Afolabi O., Sohail M.**, Cheng Y-L. (2019) **Optimisation and characterisation of hydrochar production from spent coffee grounds by hydrothermal carbonisation**, Renewable Energy, Vol. 147, pp. 1380-1391.  
DOI: [10.1016/j.renene.2019.09.098](https://doi.org/10.1016/j.renene.2019.09.098)
- Scott R.**, Scott P., Hawkins P., Blackett I., **Cotton A.**, Lerebours A. (2019) **Integrating basic urban services for better sanitation outcomes**, Sustainability, Vol. 11. DOI: [10.3390/su11236706](https://doi.org/10.3390/su11236706)
- Chmutina K.**, Jigyasu R., Okubo T. (2019) **Editorial for the Special Issue on “Securing future of heritage by reducing risks and building resilience”**, Disaster Prevention and Management, Vol. 29, pp. 1-9.  
DOI: [10.1108/DPM-02-2020-397](https://doi.org/10.1108/DPM-02-2020-397)
- Li Q., **Liang Q.**, **Xia X.** (2020) **A novel 1D-2D coupled model for hydrodynamic simulation of flows in drainage networks**, Advances in Water Resources, Vol. 137, pp. 103519-103519. DOI: [10.1016/j.advwatres.2020.103519](https://doi.org/10.1016/j.advwatres.2020.103519)
- Rose J., **Chmutina K.** (2020) **Developing disaster risk reduction skills among informal construction workers in Nepal**, Disasters. DOI: [10.1111/disa.12435](https://doi.org/10.1111/disa.12435)
- Kayaga S., Fisher J.**, Goodall S, Kanyesigye C, Kaggwa R, Nambiro M, Kitakufe R, Otema JB, Mafunguro R, Ahabwe G (2020) **Enhancing livelihoods of the urban poor through productive uses of utility-supplied water services – Evidence from Kampala, Uganda**, Cities, Vol. 102. DOI: [10.1016/j.cities.2020.102721](https://doi.org/10.1016/j.cities.2020.102721)
- Bowan P.A., **Kayaga S., Fisher J.** (2020) **A baseline scenario of municipal solid waste management**, Int. J. Environment and Waste Management, Vol. 26, No. 4, pp.438-457.
- Codjoe S.N.A., Gough K.V., Wilby R.L., RaymondKasei R., Yankson P.W.K., Amankwaa E.F., Abarike M.A., Atiglo Y., **Kayaga S.**, Mensah P., Nabilse C.K., Griffiths P.L. (2020) **Impact of extreme weather conditions on healthcare provision in urban Ghana**, Social Science & Medicine, DOI: [10.1016/j.socscimed.2020.113072](https://doi.org/10.1016/j.socscimed.2020.113072)
- Keylock C.J.**, Ghisalberti M., Katul G.G., Nepf H.M. 2020. **A joint velocity-intermittency analysis reveals similarity in the vertical structure of atmospheric and hydrospheric canopy turbulence**, Environmental Fluid Mechanics 20, 1, 77-101, DOI: [10.1007/s10652-019-09694-w](https://doi.org/10.1007/s10652-019-09694-w)
- Peal A., Evans B., Ahilan A., Ban R., Blackett I., Hawkins P., Schoebitz L., **Scott R.**, Sleigh A., Strande L., Veses Roda O., 2020, **Estimating safely managed sanitation in urban areas; lessons learned from a global implementation of excreta-flow diagrams**, Frontiers in Environmental Science, 8:31 Jan 2020.  
DOI: [10.3389/fenvs.2020.00001](https://doi.org/10.3389/fenvs.2020.00001)
- Rose J., **Chmutina K.**, 2020. **Learning to Learn: developing disaster risk reduction skills among the informal construction workers**, Disasters. DOI: [10.1111/disa.12435](https://doi.org/10.1111/disa.12435)
- Wang F., Wang Z., Yang H., Di D., Zhao Y., **Liang Q.** 2020. **Utilizing GRACE-based groundwater drought index for drought characterization and teleconnection factors analysis in the North China Plain**, Journal of Hydrology 585, 124849, DOI: [10.1016/j.jhydrol.2020.124849](https://doi.org/10.1016/j.jhydrol.2020.124849)
- Zounemat-Kermani M., Matta E., Cominola A., **Xia X., Zhang Q., Liang Q.**, Hinkelmann R. 2020. **Neurocomputing in Surface Water Hydrology and Hydraulics: A Review of Two Decades Retrospective, Current Status and Future Prospects**, Journal of Hydrology, DOI: [10.1016/j.jhydrol.2020.125085](https://doi.org/10.1016/j.jhydrol.2020.125085)

# Enterprise News

## WHO Sanitary Inspection Forms

Sanitary inspection forms are standardized field checklists that support the assessment and management of risks within drinking-water supply systems. Sanitary inspection forms pose a number of basic observational questions that can help to identify risk factors, and prompt appropriate action to safeguard public health. The approach supports the implementation of key recommendations within the WHO *Guidelines for drinking-water quality*, namely, water safety planning and surveillance.

As part of the revision of the small water supplies guideline (Volume 3), WHO has engaged *Rod Shaw* to design and illustrate a suite of sanitary inspection forms. Sanitary inspection packages are being developed to ensure:

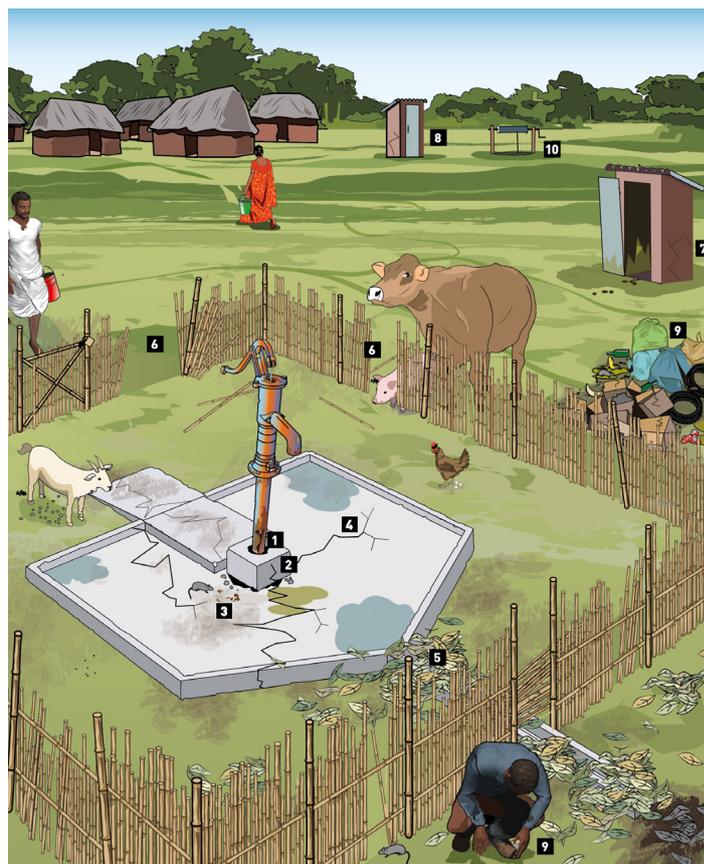
- greater alignment with the water safety plan (WSP) approach
- relevant and scientifically valid risk factors are included
- appropriate technology options are available, alongside best practice technical and management advice.

Sanitary inspection packages are now available to download from the links below for:

- [Dug well with a hand pump](#)
- [Spring source](#)
- [Rainwater collection and storage](#)
- [Household practices: collection, storage, treatment and handling](#)

[Download the zip file for all four packages](#)

Each package includes a sanitary inspection form, alongside corresponding technical guidance and management advice. To support adaptation to the local context, editable versions are also provided. The packages may be used by field-based practitioners representing communities, water suppliers, health authorities, regulators and government representatives, as well as national and international organizations.



*Pictured is a sanitary inspection form for a tube well on a borehole, showing numbered risk factors which are described on the sanitary inspection form.*

WHO encourage feedback on practitioner experiences using the sanitary inspection packages. Feedback on the sanitary inspection packages can be emailed to Rod Shaw, WEDC:

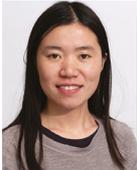
[R.J.Shaw@lboro.ac.uk](mailto:R.J.Shaw@lboro.ac.uk)

Additional sanitary inspection packages are currently in development for a number of other technologies, and will be available on the website in due course.

# Staffing News

## New Appointment, welcome to...

Dr Huili Chen, Lecturer in Water Engineering



Huili has been previously working in **ABCE** as a Research Associate. Much of Huili's work has used remotely sensed data combined with modelling tools to investigate the impact of flooding on crop production and ecology. [H.Chen2@lboro.ac.uk](mailto:H.Chen2@lboro.ac.uk)

## School Safety Officer



*Rebecca Scott* is our new School Safety Officer. She will be working with *Mark Harrod* and *Adam Crawford* to ensure safe and healthy practice across all our buildings and facilities. [R.E.Scott@lboro.ac.uk](mailto:R.E.Scott@lboro.ac.uk)

## Director of Equality, Diversity and Inclusion



*Ksenia Chmutina* is our new School Director of Equality, Diversity and Inclusion. [K.Chmutina@lboro.ac.uk](mailto:K.Chmutina@lboro.ac.uk)

## Promotion, congratulations to...



*Lee Boshier* has been promoted to Professor of Disaster Risk Management. He is also now the WEDC Group Leader (see feature on page 3). [L.Boshier@lboro.ac.uk](mailto:L.Boshier@lboro.ac.uk)

## Staff Departures

It is with sadness that we say farewell to the following staff who have left our School since the last newsletter:

- *Jayshree Bhuptani*
- *Ian Pattison*
- *Mike Smith*

# Other News

## Significant Funding for Capital Laboratory Equipment

*Karishma Joshi*, *Adam Crawford*, *Mark Harrod*, all technicians and a number of academics across the School have worked to create the *National UKCRIC Laboratory for Advanced Infrastructure*. The facility – product of £1.3M **EPSRC** funding secured by *Sergio Cavalaro* – extends our research and enterprise capabilities in this strategic area and elevates Loughborough's status in **UKCRIC**. The laboratory includes several unique kits, such as flexible mould bed, robotic manipulation and jet spraying cell, UAV system for inspection, metrology and visualisation suite and packages for advanced simulation.

The **UK Collaboratorium for research on infrastructure and cities (UKCRIC)** is the primary platform for investment in to research concerning the future built environment in the UK. The research missions underpinning UKCRIC concern the development of infrastructure and urban systems for a changing world. As such the investment in the Advanced Infrastructure Laboratory provides the School with a globally leading capability in this research field.

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