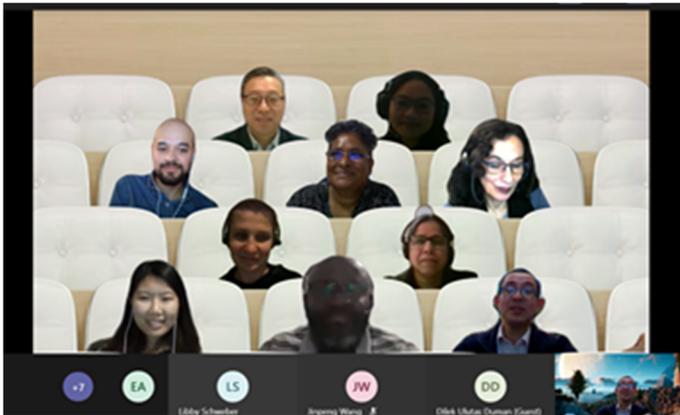
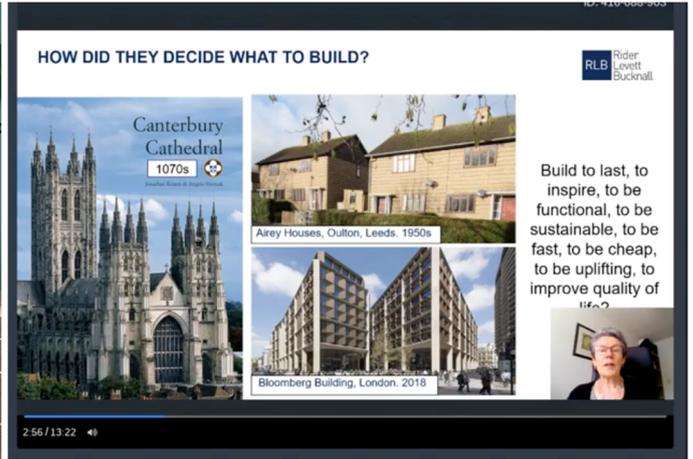
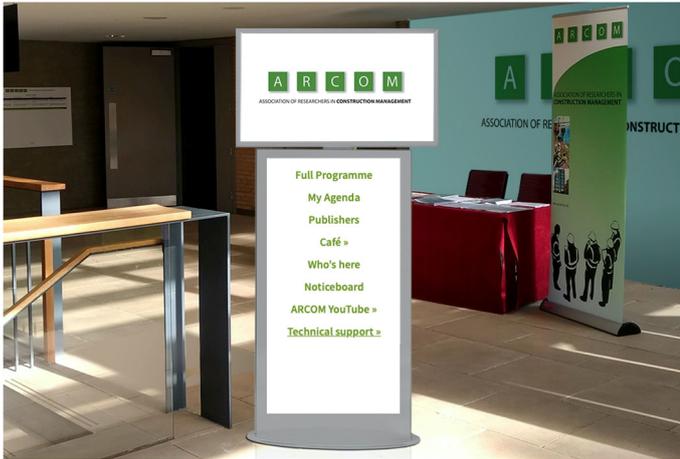


# ARCOM

ASSOCIATION OF RESEARCHERS IN **CONSTRUCTION MANAGEMENT**

Volume 38 Issue 1

September 2021



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## Welcome to the 37<sup>th</sup> Annual ARCOM Conference “RECOVER, REBUILD and RENEW: Shifting mindsets and practices to change the future”



While the ARCOM conference committee had planned to return to Glasgow in both 2020 and 2021, the fall-out and the continued disruption from the COVID-19 pandemic impacted heavily on our community resulting in the need to hold a virtual conference again this year. While we are delighted to hold the 37<sup>th</sup> Annual Conference in 2021 totally virtually, it is our aspiration to return to the traditional face to face ARCOM conference in 2022 where it will take place in Glasgow, Scotland. A huge thank you to Glasgow Caledonian University for sticking with us and making that possible.

The ARCOM conference committee extends a warm welcome to the construction management research community and invites all to enjoy the great line up of sessions for this year’s conference. Shifting the mindsets and practices of the built environment to change the future based on the challenges faced by society today is the underlying scope of this year’s conference. We will learn from those that shape the world and build knowledge in the ‘here and now’ as we focus on transformation and a new era that will require vigilance around our approach to COVID-19. While the immediate global priority remains to tackle this public health emergency, society’s long-term response must also address the underlying causes of such a pandemic and certainly the ARCOM community can make a strong contribution to this. I am humbled to welcome you to the second virtual ARCOM conference.

*“The Technological University Dublin extends a very special welcome to the delegates of the 2021 ARCOM conference.”*

This year’s conference attracted 267 submissions in January 2021. Following three rounds of double-blind peer-review, a total of 106 papers were eventually accepted for presentation at the conference. Once again, in a field that is now saturated with so many international conferences, this success rate demonstrates the rigour applied to the ARCOM peer-review process. Of course, this cannot be achieved without the support of the 90 reviewers drawn from across the world, including 21 ARCOM Committee members and 69 members of the extended Scientific Committee. A big thank you to all involved in the peer-review process.

This is the fifth year in which the ARCOM Conference has been themed. These thematic topics now form an important part of shaping the papers received and accepted and, we hope, of steering the discourse at the conference. Another significant area in this year’s conference is the focus on sustainability in the built environment (25 papers), where authors address questions around low energy and low carbon construction along with governance and the changing of mindsets in construction. The construction management community of researchers can be seen to mature and expand their research activity within the fast-changing environment in which society finds itself and particularly the emerging aspects/ impacts of COVID-19.

My opening plenary session this year appropriately addresses a consideration of understanding where Construction Management research is as we advance into the 21<sup>st</sup> Century. My reasoning behind this choice of topic is that it is timely that some discourse take place to prepare us for the future and ensure

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*Continued – Reflection...*

that Construction Management research can build on the past. The first talk is by Dr Tara Brooks from Queen's University, Belfast who offers her personal perspective as a young researcher in the field of Construction Management. The second from our own, Professor Chris Gorse will aim to provoke us to think about the role of the community in Construction Management research.

The second plenary session this year will be chaired once again by Dr Craig Thomson with keynote addresses by Professor Tina Karrbom Gustavsson and Professor Andrew Karvonen, both of KTH Royal Institute of Technology, Stockholm. Our invited speakers will address the grand challenges facing our cities, but with the added flavour of how and where construction management research interacts with the urban field where a reflection on environmental, economic and societal issues seeks to facilitate a conversation and a sharing research between scholars is facilitated.

It gives me great pleasure to introduce this year's Langford Spotlight where the topic of "Collaborative Projects" is explored by Anna af Hällström, chaired by Dr Vivien Chow. It promises to offer some different perspective on collaboration in the sector and one that David Langford would have been interested to hear about. It is wonderful to showcase the depth of quality research taking place in our community.

ARCOM continues to attract an international audience, and we have delegates joining us this year from, inter alia, Europe (with colleagues from the Netherlands and across Scandinavia), the

United States of America, South Africa, Sri Lanka, India, China, Malaysia, Australia and New Zealand. It is good to welcome colleagues from both developed and emerging economies alike. Following the successful 'Meet the Publishers' session at ARCOM 2020, we will run this session again at the virtual ARCOM 2021 Conference. The Publishers associated with the CM discipline have teamed up and have planned a very interactive session on day one. They will discuss what post COVID-19 in the field of construction management research may look like.

Lastly, but not least, I also wish to express my sincere appreciation to a number of key individuals for their support and help over this past year; the ARCOM Committee, Cath O'Connell, and of course, this conference would not have been possible without the relentless and unwavering efforts of our conference secretary, Chris Neilson. Chris Neilson is an exceptional person and I can only say a big thank you to him for the major input he has made on this important annual event.

I would like to finally thank ARCOM past chairman, Professor Chris Gorse who been a rock of support to me in navigating my new experience and life circumstances.

Welcome to ARCOM 2021 and to the virtual experience. Enjoy!

*Professor Lloyd Scott  
ARCOM Chair and  
Conference Chair, ARCOM 2021*

*Editor letter....*

Welcome to this issue of ARCOM Newsletter!

The last 18 months have been extraordinary times for most people. ARCOM is not immune from the impacts of COVID-19, but we have adapted our activities to virtual/online mode. The content of this issue very much reflects this changing mode. Moving on, we should be able to learn a lot from all the positives and negatives from the pandemic. This issue starts with a welcome piece from the ARCOM conference chair, Professor Lloyd Scott. It is followed by participation data from ARCOM 2020 conference sessions; for the first time, we were able to obtain this sort of data. This issue also features discussion sessions from the 2020 conference on social value and Industry 4.0, ARCOM 2020 prizes, doctoral workshops on qualitative research and survey and interview methods. Further articles are PhD abstracts, Virtual 5k run, ARCOM membership update, and a new committee member. This issue concludes with a description and call for paper for ARCOM 2022 conference. I am grateful to numerous contributors to this issue. Thank you for your support!

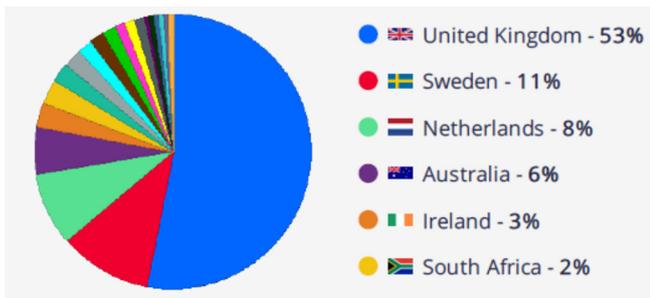
I would welcome any comments, and wish to invite your contributions to the newsletter. Please get in touch, by sending e-mail to R.Soetanto@lboro.ac.uk.

*Robby Soetanto  
Loughborough University*

# Participation in ARCOM 2020 Sessions

iVent system, used in the ARCOM 2020 conference, can capture data on participation in each session. Some data are presented below, for readers' benefits (and possible use for the organisation of future conferences).

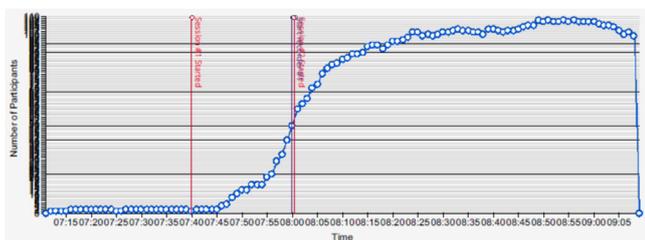
Session	Date, start and finish time (UTC)	Total no. of participants	Max no. of participants	Average attendance time (minutes)
Sunday morning open house	6 Sept 2020; 07.12-09.09	22	16	17
Sunday evening open house	6 Sept 2020; 17.30-18.38	33	24	13
Opening	7 Sept 2020; 07.12-09.09	119	108	37
Langford lecture	7 Sept 2020; 14.50-16.21	61	56	42
Industry 4.0	7 Sept 2020; 11.36-13.50	45	36	33
Mental health	7 Sept 2020; 11.40-13.52	27	16	24
Research methods	7 Sept 2020; 11.38-13.41	49	31	20
Monday lunchtime	7 Sept 2020; 11.30-12.57	64	20	9
Tuesday lunchtime	8 Sept 2020; 11.32-14.38	51	20	14
Social value workshop	8 Sept 2020; 07.45-09.07	100	94	39
AGM	8 Sept 2020; 09.31-12.38	48	32	28
Meet the Publishers	8 Sept 2020; 11.12-12.39	24	18	30
Closing	8 Sept 2020; 15.47-17.02	87	84	30



Participants of Opening Session



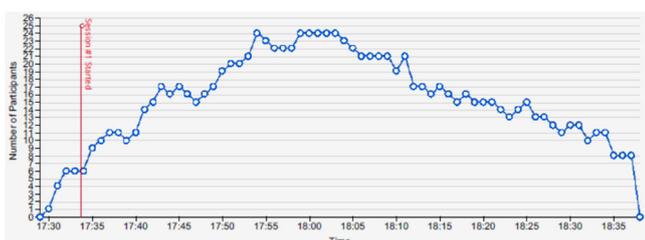
Participants of AGM



Event timeline - participants of Meet the Publishers



Event timeline - participants of Meet the Publishers



Event timeline - participants of Sunday Evening Openhouse



Participant's devices during Social value workshop

# The Rise of Social Value within the Construction Industry: Challenges and Opportunities presented by COVID-19

**Session Chair:** Dr Craig Thomson (Glasgow Caledonian University).

## Keynote presentations

Dr Ani Raiden (Senior Lecturer in Human Resource Management, Nottingham Business School, Nottingham Trent University)

Professor Martin Loosemore (Professor of Construction Management, University of Technology Sydney)

## Discussant

Dave Higgon (Employee Relations Manager with Multiplex Australasia)

Responding to the growing prominence of the Social Value agenda and its rise as a focus within the CM research community a key note session was identified as overdue for the ARCOM 2020 conference. Aligning with the Common Good conference theme, Social Value reflects a growing awareness that construction organisations and projects have a wider contribution on society than purely economic value and that this needs to be reflected in decision making. In line with other nations, the UK has formalised this in legislation through the Social Value Act in 2013, and this is shaping construction projects through both public procurement and also as a consideration for urban planning. Hosting a key note session around Social Value was deemed especially important for ARCOM 2020 given the global COVID19 pandemic and the significant challenge this presents for society and the construction industry.

Two keynote presentations were provided by Dr Ani Raiden (Senior Lecturer in Human Resource Management, Nottingham Business School, Nottingham Trent University) and Professor Martin Loosemore (Professor of Construction Management, University of Technology Sydney) drawing on their experience as authors for the 2018 book 'Social Value in Construction'. Their engaging presentations provided an overview of the conceptual roots of Social Value, highlighted the key themes which shape it and how it aligns with other agendas relating to human resources, health and safety, equality, wellbeing and community engagement. Examples were provided of construction organisations and projects which have benefited from an increased focus and delivery on Social Value, but also highlighting that there is a contrasting interpretation and application of it internationally. Between their presentations they were able to present key research questions which can help shape the future of social value research in

construction management.

Dave Higgon (Employee Relations Manager with Multiplex Australia) joined the presenters for the discussion and reflected that over the last decade the Social Value agenda can be demonstrated to be actively changing the way that construction organisations assign value to their own workforce and the impacts of the delivery of their projects on wider society. He felt we had come a long way in recent times but that there was still a long way to go and that the research community play a key role in shaping the debate and focusing the right questions.

An engaging audience discussion explored the potential for Social Value to slip down the agenda as conditions become more challenging for clients but also for contractors and supply chain. Questions emerged around whether the rise of social value within the construction industry is potentially being threatened by COVID19 and the economic implications of a downturn, or whether it is going to present an opportunity for progress? It was agreed that there is a real danger in practice as market pressures restrict progress but that COVID19 has highlighted the need to progress social issues and to increasingly recognise its value.

ARCOM would like to thank the contributions of both Ani Raiden and Martin Loosemore for helping the community reflect on the importance but the potential opportunities for exploring Social Value in the context of construction management research. In addition, thanks are expressed to Dave Higgon for his contribution and providing the benefit of his experience from a practitioner perspective working for a large international contractor engaged in projects of all scales.

*Dr Craig Thomson  
Glasgow Caledonian University*

## Industry 4.0 and Building the Common Good

The Workshop on 'Industry 4.0 and Building the Common Good' comprised a panel discussion among Jenni Barrett (UCLAN, Cambridge and Director of CoLAB), Fred Sherratt (Anglia Ruskin University), John Spillane (University of Limerick) and Niraj Thurairajah (Northumbria University). There was a lot of convergence in the discussion, with panellists highlighting that the Fourth Industrial Revolution is NOT about technology but about people. Jenni Barrett suggested that Industry 4.0 provided a new opportunity and new tools to encourage gender diversity and inclusion, so that we do not just give voice to those who dominate and those who shout the loudest. Digital tools of communication during the Covid-19 crisis has started to show signs of encouraging psychological safety. For Niraj, Industry 4.0 is about connectivity not just between different professions but also between different academic disciplines. In particular, he also would like social scientists to embrace and not simply dismiss technological development. This is a gradual process of evolution, although Fred Sherratt thinks that we

should be more radical in our approach so that we ask uncomfortable questions on power and what Industry 4.0 is for. Is it simply for the few who have the power and fortune to accumulate wealth? What about those who toil in their labour to produce the built environment for such wealth accumulation? How can we challenge existing market systems to ensure Industry 4.0 tools facilitate more democratic participation? And John closed the discussion by reminding us that there is a need to think about the left-behind. These include not only the workers who are deskilled in the process of technological progression, but also the SMEs who often do not have the head room to engage with ever-upgrading technological tools. In summary, there was a lot of energy in the discussion and this is also reflected in the Industry 4.0 track, which saw 23 papers accepted for presentation in ARCOM 2020. It is also interesting to see a broadening of the agenda so that the focus is not simply about productivity gains, but also about how we can use these tools to understand and address health and safety.

*Professor Paul Chan  
TU Delft*

## New Book Series: Social Value in the Built Environment

**Series Editors:** Dr Ani Raiden, Nottingham Trent University, UK, and Professor Martin Loosemore, University of Technology Sydney, Australia

**S**ocial Value in the Built Environment is a new book series published by Routledge, part of the Taylor & Francis Group. The built environment sector has a major impact on the lives of people, the prosperity of businesses, and the resilience, health and well-being of communities through planning, design, construction and management of urban environments, buildings and infrastructure. The aim of this series is to present a sequence of books that address the many ways in which 'social value' can be created (and potentially destroyed) in and by the built environment.

The series defines social value as the impact that built environment has on the lives of people living in communities it builds and those who work in the sector.

Recognising the critically important contribution that the built environment makes to the achievement of the UN Sustainable Development Goals globally, the series will be multidisciplinary and international in outlook. It will address questions of both theory and practice, and it will be broad in scope, reporting new empirical work, ground-breaking approaches and exposing good and bad practice through real-life case studies.

The series will cover many subjects including, but not limited to community involvement and development, design, urban planning, environmental management

practices, human rights, procurement, social enterprise, managing people and labour practices, organizational governance, fair business practices, and consumer issues.

We are seeking expressions of interest from thought-leaders and researchers who are interested in social value relating to the planning, design, construction and management of the built environment. We are particularly interested in books that include scholarship from practice, and cross-disciplinary co-authorship is encouraged but not a requirement.

Expressions of interest should include your name and contact details, information on the book's subject, an indicative table of contents, an estimated completion date of the manuscript, and target audience. Edited books are appropriate to the series, but we are particularly interested in commissioning authored books and research monographs.

Please send expressions of interest by email to the series editors: Dr Ani Raiden ([ani.raiden@ntu.ac.uk](mailto:ani.raiden@ntu.ac.uk)) and Professor Martin Loosemore ([martin.loosemore@uts.edu.au](mailto:martin.loosemore@uts.edu.au)).

Please note that the series editors have no role in the peer-review or Routledge's final decision. All proposals need to go through peer-review and be accepted by Routledge before a contract is issued.

# Qualitative Research Methods Workshop

## Online via Microsoft Teams, 25<sup>th</sup> November 2020

In November 2020, ARCOM ran a doctoral workshop on qualitative research methods. The workshop is part of an ongoing series of focused workshops to explore approaches to research methodology ([www.arcom.ac.uk](http://www.arcom.ac.uk)), however, it was distinctive in that it was ARCOM's first virtual full-day doctoral workshop and was conducted during UK's second COVID lockdown period. Prof. Lloyd Scott delivered the welcoming address, and the workshop was convened by Dr. Vivien Chow, Prof. Libby Schweber, Dr. Emmanuel Aboagye-Nimo and Dr. Robby Soetanto. The workshop was attended by 14 participants spanning multiple time zones, from the United Kingdom, the Netherlands, South Africa, India, China, and Australia.

The workshop targeted doctoral students in the early stages of their studies who have identified their research problem and begun to think carefully about their research design. The workshop sought to provide a supportive environment where participants can share ideas, advance their understanding of research design and critique each other's work. In recognition that despite the increased use of qualitative research methods in construction management research, early career researchers sometimes find it difficult to justify their research approach, the workshop to explore the following topics:

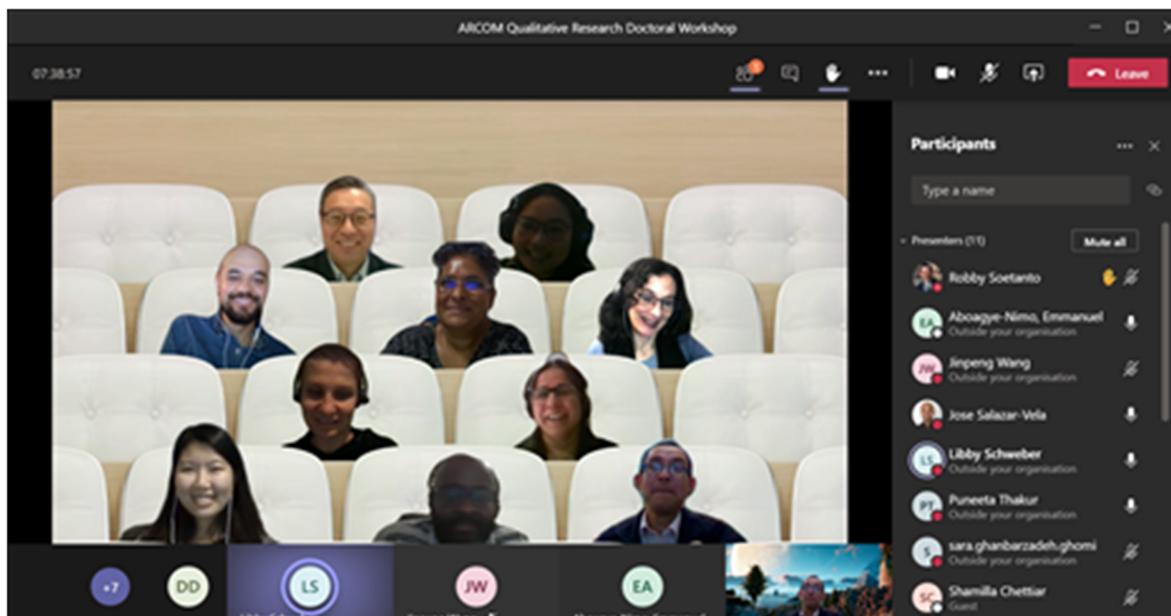
- Coherence and rigour in qualitative research design
- Common misconceptions about qualitative research
- Critiquing data collection and analysis approaches
- Contingency planning and what to do when circumstances change unexpectedly

The proceedings featured a mix of interactive sessions, lectures, Q&As, and breakout sessions in small groups. Participants were given opportunities to examine their research design through several guided workshop sessions

and to discuss their work with other participants. We were also delighted to be joined remotely by recent PhD graduates Dr. Katherine Adams, Dr. Dilek Ulutas, and Dr. Lewis Sullivan, who shared their research experiences and revealed some of the challenges they faced in operationalising their qualitative research design as well as how they overcame these challenges.

The feedback from participants for this workshop was overwhelmingly positive. In the debriefing session, participants said that they learnt to critique how the way their research question is framed impacts on their methodological approach. They learnt about the difference between a positivist and an interpretivist approach and to distinguish how qualitative and quantitative data are used differently depending on the philosophical approach. They learnt that "a lot is not everything" - rather than prioritising collecting large volume of data, having a coherent research design and developing a data collection strategy specifically tailored to address their research question is more important. They commented on the importance of being flexible when planning their research and how the iterative process of questioning their research design against their aims and objectives is inherent to qualitative research. They also appreciated hearing the first-hand experience from recent PhD graduates and the ability to meet and network with other PhD students especially considering the unusually restrictive opportunities for social interactions this year. They commented on the importance of actively seeking to present their research and have conversations about their research with their peers. Many were new to the ARCOM community and they commented on how supportive and welcoming the community was. We look forward to meeting them face-to-face in future and welcoming them to future ARCOM events.

*A report by Dr Vivien Chow  
Loughborough University*



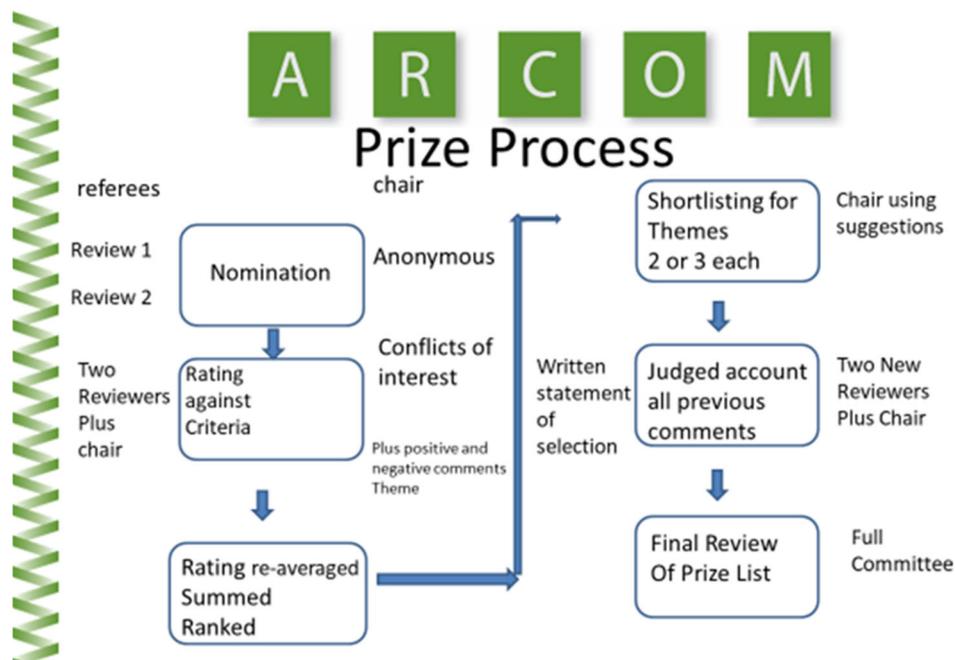
*Workshop attendees*

# ARCOM Prizes 2020



It has been an honour and a pleasure to chair the ARCOM paper prize committee for the last 3 years. This year with the virtual delivery of the conference, the paper prizes became an essential element of engagement with our community and the prize ceremony itself became a statement of our continued sense of purpose of ARCOM as a builder of the quality research in construction management. The prize committee this year involved: Professor Paul Chan (TU Delft), Dr Craig Thomson (Glasgow Caledonian University), Dr Libby Schweber (University of Reading), Dr Simon Smith (University of Edinburgh), Dr Vivien Chow (Loughborough University). Their diligence and timeliness made the process smooth and rigorous. We as a committee are passionate about good research and good communications which we feel celebrates the success of our community. Thus this task became a pleasure even with the quantity of work for us.

Just to emphasise our process. The first shortlisting occurs during the two stages of refereeing. During this process, papers are identified as potential prize winners and referees are encouraged to challenge authors to improve their paper to the quality required for a prize. The ARCOM chair and conference chair are also able to nominate papers as they see the entirety of the submitted papers. So from approximately 160 submitted papers; the process identifies about 25 potential papers for prizes. I send out these papers to our five reviewers who numerically rate the papers against criteria of Coherence; Contribution to the Field of Study; Innovation and Creativity; Rigor and Robustness of Methodology. I normalise the score and create a list of our top 10 rated papers; whilst reading all the papers to keep an overview. We then reissue these papers for further review, against the prize themes and our greater purpose of developing the community. We finish with a robust, but pragmatic discussion, where we make a collective decision on the winning papers.



This year we were limited in the number of sponsor prizes and so the chair and myself reformed the prize themes to create a list that we could fund through ARCOM. Our prize themes were:

1. Paul Townsend Commemorative Award for Research into Practice
2. Rod Howes Commemorative Award for Conference Theme
3. David Langford Commemorative Award for Social/International Impact
4. ARCOM Award for Construction Transformation
5. Emerald Award for Sustainability
6. Taylor and Francis Award for Theory/ Methodology

We found it difficult to make some decisions and so we awarded highly commended papers in two categories as well as the prize winners.

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*Continued – ARCOM Prizes...***Paul Townsend Commemorative Award for Research in Practice**

Papers were judged on their contribution towards or exploration of practice and might involve challenging current thinking on practice, advancing debate of a practice area, providing a new understanding of practice, or reporting on and analysing insightful data on practice.

The winner this year was Daniella Troje, Chalmers University of Technology, Sweden, for her paper:

*“Can I Get Some Help Down Here? Inter-Project Support for Creating Social Value through Social Procurement”*

This paper explored the challenges of employing interns from marginalised groups as part of social procurement initiatives and illustrated how collaboration between different actors is difficult to achieve in practice. Its contribution to practice was that it critiqued some of the assumptions of social procurement and identified how addressing issues around resourcing, organisational support, and goal-setting can enhance the potential for social value.

**Rod Howes Commemorative Award for the Conference Theme (Common Good)**

Papers were judged on their contribution towards the conference theme, which this year was on the Common Good.

The award went to Tara Brooks, John Bruen and Michael Curran, Queens University Belfast, UK, for their paper:

*“The Value of Non-Value Adding Activity”*

This paper resurfaced forgotten arguments that are still relevant today and are essential to support the common good. It questioned, in particular, the orthodoxy of lean construction principles, and got people to think more broadly about the social aspects that can be valuable in creating strong bonds between workers and managers, so that waste in the form of slack time can actually lead to higher productivity.

**David Langford Commemorative Award for Social Impact**

This award looks for excellent papers that highlight positive Social Impact, and explore the relationship that the built environment has with society.

The winning paper was:

*“The Supportive Role of Construction Employment in Preventing Youth Homelessness: A Capability Empowerment Approach”*

written by Jemma Bridgeman, Martin Loosemore and Hugh Russell in a cross national collaboration between End Youth Homelessness Cymru, Cardiff, UK and the University of Technology, Sydney, Australia.

This paper has a strong alignment between theory and practice. The authors use a capabilities empowerment framework, as a framing device around the needs of the problem. The use of theory is novel in the context of construction employment.



*Continue next page...*

*Continued – ARCOM Prizes...***ARCOM Award for Construction Transformation**

This is a new theme that is rewarding papers that analyse the thinking behind the industry's transformation agenda.

The winners were Thayla Zomer, Andy Neely and Ajith Parlikad, from the Centre for Digital Built Britain at the University of Cambridge, UK for their paper:

*"Institutional Pressures and Decoupling in Construction Projects: An Analysis of BIM Implementation "*

This work considered the problem of the decoupling of the actual use of BIM from that stated in the policy on BIM. Using 5 BIM projects, it demonstrated the practical problems of transformation; showing how policy makers and construction reformers, when designing policy, need to account for the prior knowledge of practitioners' who are implementing projects.

**Emerald Award for Sustainability**

This award considers papers that explore sustainable development goals, renewable and clean energy; management of energy, water and pollution control, in the built environment. The prize committee had a dilemma this year and to resolve this decided to create a Highly Commended award.

The prize went to Stina Månsson and Pernilla Gluch, Chalmers University of Technology, Sweden, for their paper:

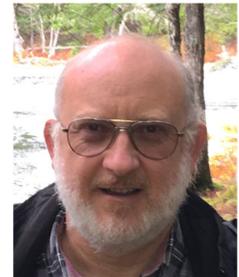
*"How sustainability professionals navigate in the sea of sustainability in construction"*

The paper creatively introduced a small but growing body of work on the role of sustainability experts in construction firms and the way they manage their tensions between conventional ways of working and sustainability goals. The prize committee especially like the seafaring metaphor which made the paper an excellent example of good academic communications.

Highly commended award went to Peter Robinson and Stephen McIlwaine Queen's University Belfast, UK for their paper:

*"Losing Ground: Adapting Construction Management Approaches to Permafrost Retreat"*

which presented an original practical perspective on construction management and sustainability.

**Taylor and Francis Award for Best Theoretical/ Methodological Paper**

Papers were judged on their theoretical/ methodological contribution to the debate and practice of construction. Again there was a dilemma and the committee created a Highly Commended award.

The award went to Mustafa Selçuk Çıdık, University College London, UK, for his paper:

*"Project-Managing the Social Value of Built Assets: A Call for a Focus on Value Manifestation "*

This was a challenging and highly theoretical paper that critiqued the limits of managerial approaches to social value. The discussion coherently linked theory to practice and challenged us all to think more deeply about difficult concepts like social value.

Highly commended award went to George Denny-Smith and Martin Loosemore from the University of New South Wales, Australia, and University of Technology Sydney, Australia, respectively. Their paper:

*"A Theoretical Framework Of Social Value In Construction Employment"*

used, uniquely, employee participation rather than policy and regulation as the source of their theory.

**Congratulations to all the prize winners!**

These papers really demonstrate the value of ARCOM and its ability to advance construction management research. The complexity of the world and the operation of construction requires us to even more to undertake robust research in a critical manner that is the hallmark of ARCOM. All indexed papers are now available via the ARCOM abstracts service on the ARCOM website: <https://www.arcom.ac.uk/abstracts-browse.php>

Professor David Boyd, Birmingham City University

*PhD Abstract:* “External Stakeholder Management and Engagement on Urban Construction Projects in the UK and Ireland” by Michael Curran, Queen’s University Belfast



Unprecedented urbanisation is a trend reshaping our world today, where construction projects are growing in increased size and complexity. The construction industries in the United Kingdom (UK) and Ireland are renowned for being fragmented and complex, with the element of risk higher in urban development projects. Construction sites are a common feature in urban areas, and the development and redevelopment of urban located construction sites is quickly becoming the norm. Moreover, the identification, management and engagement of external stakeholders involved in these projects must be given further consideration, as they can influence the overall implementation of the project, even though they have no contractual relationship.

Therefore, the aim of this research was to identify and document who the external stakeholders are; what issues are encountered and how they affect urban construction projects; and what strategies and methods of communication and engagement are used by on-site project managers to counteract the issues identified. In achieving this aim, there were five key objectives, summarised as the identification of external stakeholders, the documentation of the issues, strategies and methods of communication, and the development of a supporting practical framework in the management and engagement of external stakeholders on urban construction projects in the UK and Ireland.

The research method undertaken used a sequential mixed methods approach, encompassing both qualitative (an in-depth literature review, exploratory case study analysis involving individual interviews and focus group seminars with industry professionals) and quantitative (a questionnaire survey) analysis techniques. Through the use of coding, cognitive and oval mapping, factor analysis, correlation analysis and regression analysis with computational software packages, the external stakeholders, their issues, resultant strategies and methods of communication were highlighted along with their associated attributes.

Results indicated that at least twenty-eight external stakeholders exist on urban construction projects, with the local authority; local residents; general public; client; road users and pedestrians; local businesses; utility companies; and regulatory agencies identified as the most prevalent, among a plethora of others. Following external stakeholder identification, the research concluded that there are forty-four wide-ranging issues concerning these stakeholders under the themes of health, safety and security; traffic management; site location; local engagement; legal and administrative; site activity; surrounding site; and resident issues.

Moreover, forty-five response strategies to counteract and mitigate the issues were highlighted under the themes of general management; communication; noise, dust and vibration mitigation; local engagement; and image and relationship improvement strategies. Finally, fifteen communication methods used to manage and engage the external stakeholders were identified, and the most prevalent include face-to-face conversations; meetings; emails; phone calls; and a notice board at the site entrance including site information and contact details.

Due to the impromptu and spontaneous nature of external stakeholder management and engagement on urban construction projects, this research encourages the conformance and compliance to a more formalised and systematic approach in the strategic management of stakeholders in these inherently complex environments. The research concluded with the development of a practical framework which provides the management team with the necessary information, to not only identify, but to proactively manage and mitigate the potential significant negative impact these external stakeholders can have on the project.

Overall, the key contribution of this research was the development and formation of the W2H External Stakeholder Framework, which is a practical tool that is useful to the industry due to its simplicity and comprehensiveness. This straightforward guide outlines to project and site management teams external stakeholder identification (who?); issues involving the identified external stakeholders (what?); and resultant strategies to counteract the issues identified, along with methods of communication (how?) on urban construction projects in the UK and Ireland.

Michael undertook his PhD with guidance from Dr. John Spillane (University of Limerick) and Dr. Joseph Gunning (Queen’s University Belfast).

# Beyond Surveys and Interviews Doctoral Workshop

## Programme: Rethinking Construction Management Research Methods in Disruptive Times

### Online Workshop (via Zoom), 23 April 2021

Globally, the Covid-19 pandemic has created severe disruptions to our everyday lives, and these include new challenges confronted by the research process. In a field that has a longstanding interest in engaging with practice and practitioners, safe distancing measures and lockdowns mean that it is more difficult to get close to both. The purpose of this workshop is therefore to bring together researchers in Construction Management research to share experiences and ideas on how we can overcome Covid-19 disruptions to our research practice. This is also a moment for us to rethink our conventional methods (e.g. surveys and interviews that inform case study research) to search for novel and creative ways of addressing our research questions in the field.

Five provocations helped frame the workshop discussions. In the first provocation, Professor Giorgio Locatelli (University of Leeds) kicked off proceedings by prompting participants to think about preparation and about seizing the opportunities. On preparation, Giorgio suggested the need to keep abreast with reading and he offered some tips on how he does this by browsing new feeds in the key journals during his daily morning coffee. He also encouraged participants to read around the topic areas so that this preparatory reading can allow for a much broader perspective. This broader perspective can also insulate the researcher against sudden shocks (like Covid-19) and embrace opportunities when these arise. Giorgio showed an example of how he analysed perspectives of risks and uncertainty by analysing secondary data and already-published information (e.g. from the press).

Professor Emerita Christine Räisänen (Chalmers University of Technology) urged the participants to be creative and walk on the wild side. She shared a few examples from her previous research into communication practices by using video cameras and practitioner diaries. In the age of digital and social media, there are many tools and (mobile) apps that can be used to capture a glimpse of what goes on in the world of practice. It is important to note, though, that there is no method that is without any shortcomings. Therefore, Christine also encouraged participants to think through their methods, make a strategic choice of what is feasible, and always have a back-up plan.

Dr. Maja Kevdžija (TU Wien) followed on after Christine by sharing her research that builds on shadowing and observational research. In her recent study, she worked with students to analyse how people comply with safe distancing requirements. In two different lockdown periods, Maja noted that her observational research had to change, from face-to-face observation to using video footage from surveillance cameras. Maja noted that there were differences between the two ways of observing practices. The surveillance footage captured a much broader range of activities, and there are also ethical considerations that need to be accounted for. Maja also noted that it is important to

always reflect on whether the data analysis is still answering the research question.

Professor Emeritus Will Hughes (University of Reading) also emphasised the importance of the research question and problem. It is important to position the research against previous studies by asking: "What is the general class of problem that your specific question is an example of?" Therefore, it is important not to start with the method, but rather to start with what problem or phenomenon you are trying to understand and address... and ask the question "why?". Will also questioned the dominance of surveying and interviewing practitioners to understand the world of practice. It is important to note that what people do and what people say they do are different things. Furthermore, it does not make sense to think that practitioners have the answers to the questions we have in our research.

Dr. Emmanuel Manu (Nottingham Trent University) shared his final provocation with us about the value of secondary research. Emmanuel explained that there is a large range of secondary data that one can draw on which could form part or even the whole of the research process. There is, for instance, value in doing systematic reviews and meta-analyses. Company reports, official publications and even social media may also be useful bases for providing data to help answer our research questions. Therefore, there is a lot of missed opportunities if we ignore secondary research. Of course, it is important to pay attention to the research question, especially if one draws on secondary data that was intended for answering a different question. For more information, there is a recent book co-edited by Emmanuel: <https://www.routledge.com/Secondary-Research-Methods-in-the-Built-Environment/Manu-Akotia/p/book/9780367429874>

#### Some key points that came up in the discussion:

- It is important to read and take notes (preparation), and network with stakeholders (opportunity).
- Collect secondary data when possible.
- Look at different online tools, and try to work with methods that don't require face-to-face contact.
- Be mindful when observing practice. How much of that 'practice' is the everyday normal, and how much of that is the exceptional as a result of Covid-19?
- It is worth noting that Construction Management Research today is much broader than conventional surveys and interviews. Construction Management Research nowadays integrates perspectives from many disciplines like psychology, computer programming, etc, which widens our choices for research methods.

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**PhD Abstract: "Towards behavioural equality: the impact of employee perception of justice on employee attitudes towards company equality approaches in large UK main contractor companies" by Chrissi McCarthy, Loughborough University**



Although large UK main contractor companies have put increasing resources into reducing inequalities experienced by employees who are out-group members, we lack understanding of the factors necessary to support this endeavour. Resistance to equality approaches from in-group members is common, but there is currently a lack of understanding regarding the type of environments that may make such responses more or less likely. This thesis inhabits a 'behavioural equality' perspective that embraces a deeper understanding of employees' reactions to company equality approaches. In doing so it introduces organisational justice to the field of critical diversity studies to question whether justice is a determinant of attitudes towards equality approaches.

The research drew on a multiple embedded case study as a research strategy and examined the relationship between employee perceptions of justice, company equality approaches and employee attitudes. Three large main contractor companies were analysed, using expert interviews to determine the intent of the company's response to equality, questionnaires to establish the relationships between perceptions of justice and attitudes toward equality approaches and employee interviews to analyse consequences.

The questionnaire returned 782 usable responses across three organisations and established a substantial relationship between employee perceptions of interactional justice and employee attitudes towards company equality approaches. The employee interviews utilised critical incident technique to conduct interviews with eight employees to analyse any outcomes from the relationship established between perceptions of interactional justice and attitudes towards equality approaches. The qualitative analysis revealed that perceptions of interactional justice influenced whether employees aligned with the in-group or the company, presented in the employee alignment framework and model.

In-group aligned employees demonstrated attitudes and behaviours designed to protect the in-group such as spurious support for company equality approaches, seeing company equality approaches as bad for the company and good for out-groups, justifying inappropriate behaviour and resistance to company equality approaches. Whereas company aligned employees showed genuine support for company equality approaches, saw out-group support as beneficial to the company, demonstrated a desire to hold inequality to account and valued upskilling around equality. The employee alignment model presents these attitudes and behaviours as a result of employee perceptions of interactional justice.

The implications for practice are, where employees hold negative perceptions of interactional justice, main contractor companies should focus on improving these perceptions before implementing equality approaches to prevent increasing instances of backlash and discrimination.

The original contribution to knowledge is the proposal of a new approach to equality theory that intends to reduce resistance and increase employee engagement, termed behavioural equality. It is supported by an empirical link between employee perceptions of interactional justice and attitudes towards equality approaches; and reinforced by the inference that justice perceptions may directly impact attitudes and behaviours towards equality approaches and out-groups. A further contribution is the employee alignment model, which demonstrates how employee behaviours are influenced by interactional justice in the context of company equality approaches. These findings explain employee resistance to equality approaches and provide a plausible solution to the inconsistent outcomes of company equality approaches.

Although this work has focused on the construction sector, there is evidence that the findings apply to any UK or even global company or social grouping.

Chrissi undertook her PhD research, with guidance from Dr Derek Thomson, Dr Sarah Barnard and Professor Andrew Dainty.

**Continued – Beyond Surveys...**

**Interesting Papers**

Tips on how to conceptualise a research project

<https://will-hughes.blogspot.com/2015/07/conceptualizing-research-project.html>

A review of Social Network Analysis <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0041911>

An example of Big Data Analytics that can be employed by Construction Management researchers

<http://mozdeh.wlv.ac.uk/> Page 3 of 3

A very interesting example of using job advertisements as secondary data of BIM-related jobs analysis published in Automation in Construction

<https://www.sciencedirect.com/science/article/pii/S092658051630259X>

On visual methodologies in general

<https://journals.sagepub.com/doi/10.1111/1467-954X.00230>

Behavioural mapping

<https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119162124.ch3>

Shadowing

<https://www.emerald.com/insight/content/doi/10.1108/QROM-09-2012-1100/full/html>

<https://journals.sagepub.com/doi/10.1177/1077800408318318>

Walk-along interview

<https://pubmed.ncbi.nlm.nih.gov/18606557/>

Professor Paul Chain  
TU Delft

# ARCOM Virtual 5k Run 2020

After the success of our first 5km run at the 2019 ARCOM Conference in Leeds the 2020 conference run was much anticipated. Alas this year we had to resort to a virtual 5km run as part of our 2020 virtual conference. Thanks very much to all 13 runners that took part in 9 counties around the world. We look forward to hopefully meeting delegates in person at next years ARCOM conference and running together in Glasgow.

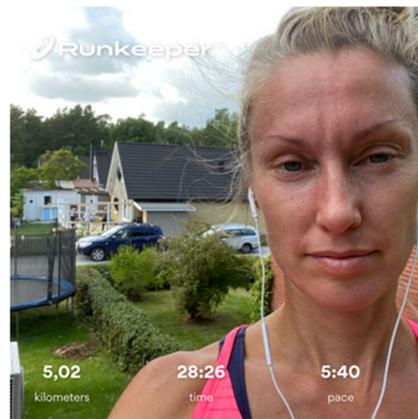
*Organiser: Alex Copping  
University of Bath, UK*

## 'Roll of Honour'

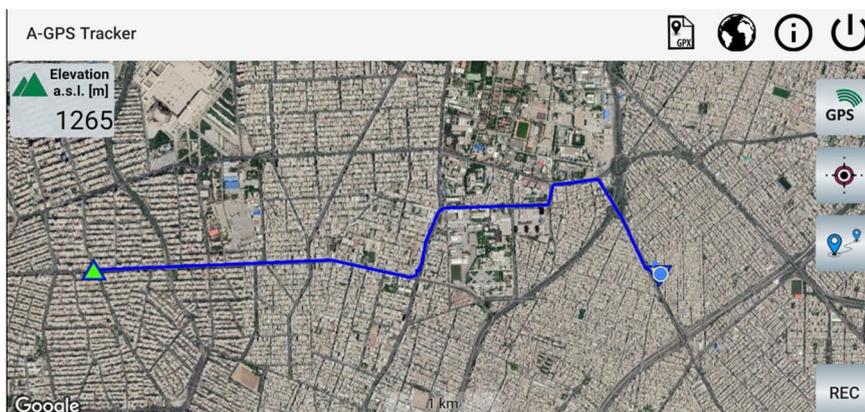
Henning Grosse	19.39	Berlin Germany
Alex Copping	21.01	Bath UK
Craig Thomson	22.06	Glasgow Scotland
Gavin Ford	22.29	Newport Wales
Chris Gorse	26.38	Ossett UK
Jessica Molens	28.26	Stockholm Sweden
George Denny-Smith	28.30	Sydney Australia
Ani Raiden	37.00	Nottingham UK
Reza Zandi	39.00	Tehran Iran
Yvonne Wong	41.24	Hong Kong China
Gladys Nyamagere	47.15	Dar es Salaam Tanzania
Henrik Linderoth	61.00	Jonkping Sweden
Andrea Jia	76.00	Melbourne Australia



Gladys Nyamagere; 47.15 (Dar es Salaam, Tanzania)



Jessica Molens; 28.26 (Stockholm, Sweden)



Reza Zandi; 39.00 (Tehran, Iran)



Yvonne Wong; 41.24 (Hong Kong)

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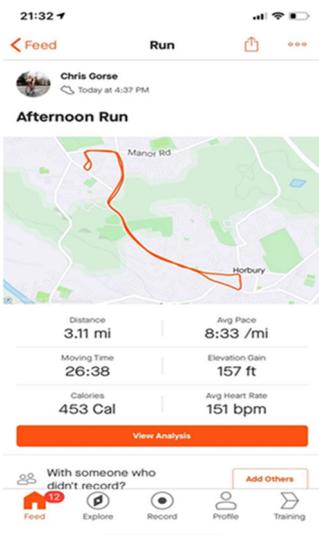
Continued – Virtual 5k Run...



Henrik Linderoth; 7 km in 61.00, (Jönköping, Sweden)



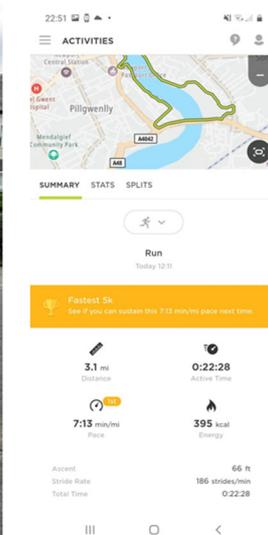
Alex Copping; 21.01, (Bath, UK)



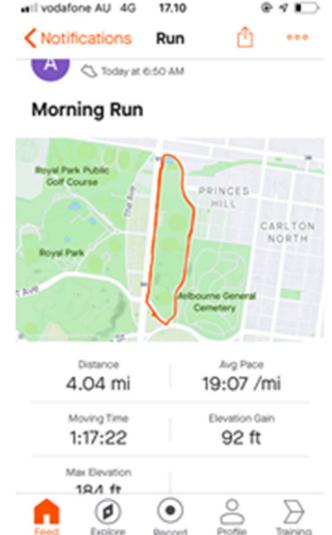
Chris Gorse; 26.38 (Ossett, UK)



Ani Raiden; 37.00 (Nottingham, UK)



Gavin Ford; 22.29 (Newport, Wales)



Andrea Jia; 76.00 (Melbourne, Australia)



George Denny-Smith; 28.30 (Sydney, Australia)



Craig Thomson; 22.06 (Glasgow, UK)



Henning Grosse; 19.39 (Berlin, Germany)



# ARCOM Membership 2021



**Membership Secretary Dr John Spillane provides an update:**

## ARCOM has 676 Individual Members and 19 Institutional Members

The number of individual and institutional members remains very healthy and continues to grow year on year. Figure 1 shows that the number of individual members increased significantly over the previous ten years: from 88 in 2010 to 676 this year. Similarly, Figure 2 shows that the number of institutional members has increased from 14 in 2011 to 19 this year.

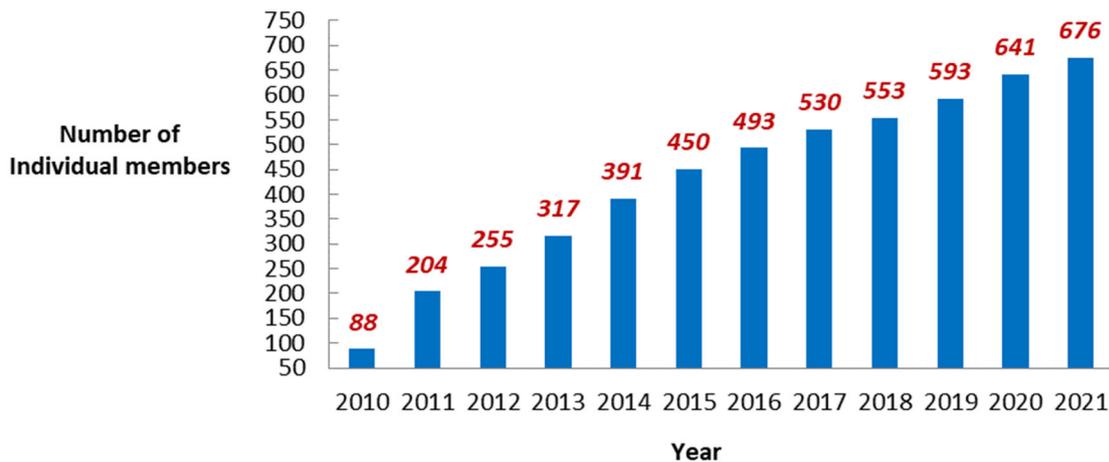


Figure 1 Number of individual members between 2010 and 2021

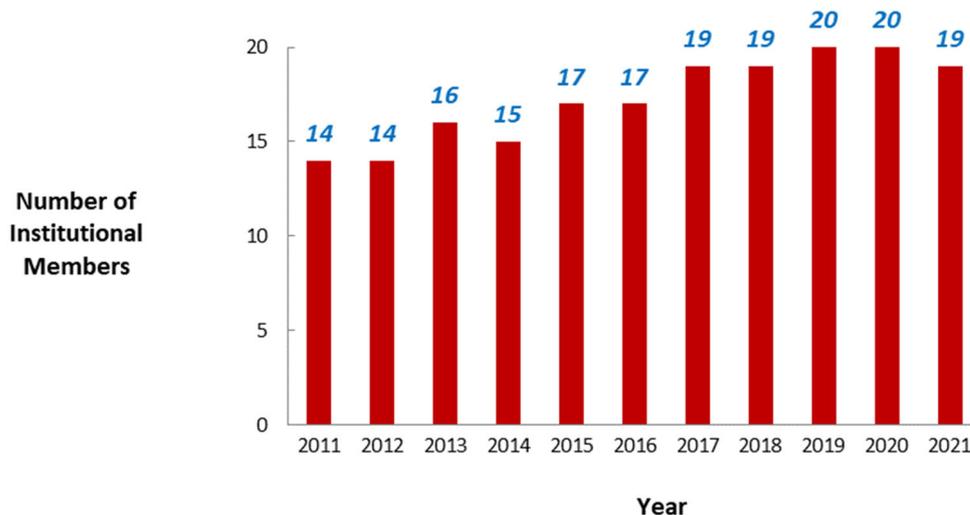


Figure 2 Number of institutional members between 2011 and 2021

The geographic breakdown of individual membership from 2012 to 2021 is shown in Figure 3.

- In 2021, our members originate from Europe (51%), Sub-Saharan Africa (14%) and Asia Pacific (25%), with the Middle East, North Africa and Other Regions, accounting for the balance (10%).
- In Europe, the majority of members come from the UK (82%), followed by Ireland (5%) and the Netherlands (2%).

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*Continued—Membership...*

- In Sub-Saharan Africa region, the majority of the members originate from Nigeria (53%), followed by South Africa (17%) and Ghana (16%).
- In Asia Pacific region, the membership in this region is historically more equally distributed, which again proves to be the case this year with Australia (20%), India (17%), Malaysia (16%), China (10%), Sri Lanka (7%), and New Zealand (5%) accounting for 83% of the region. There are only slightly changes for these six countries since 2012. .
- In Middle East and North Africa, 6% of members originate from this region. Iran, Oman, Saudi Arabia, and Egypt account for 23%, 18%, 10% and 10% of the members within this region, respectively.
- In Other Regions, 4% of members originate, where Latin America (1%) and North America (2%) make up the majority of this region, with Turkey and Western Balkans making up the balance (1%).

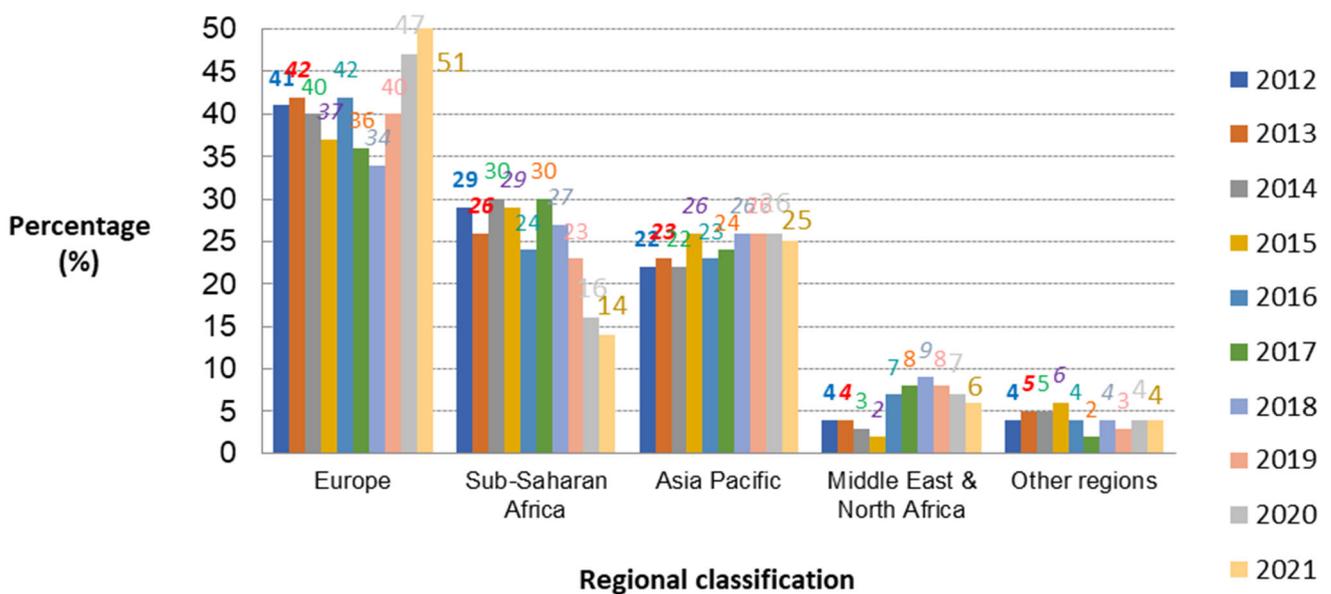


Figure 3 Geographic breakdown of the individual membership from 2012 to 2021

- ARCOM currently has 19 Institutional Members:
- 15 Institutions from the UK - Birmingham City University, Glasgow Caledonian University, Queen's University Belfast, Leeds Beckett University, Liverpool John Moores University, Loughborough University, Northumbria University, Robert Gordon University, University of Brighton, University College London, University of Manchester, University of Reading, University of Salford, London South Bank University and the University of Huddersfield.
- 2 Institutions from Sweden - Chalmers University and Luleå University of Technology.
- 2 Institutions from Ireland - Technological University Dublin and University of Limerick.

For any ARCOM Membership inquiries, be they Individual or Institutional Membership, please feel free to email the Membership Secretary, Dr John Spillane on [membership@arcom.ac.uk](mailto:membership@arcom.ac.uk), where I would be more than happy to help.

# ARCOM 2022

## Build Back Wiser

5-7<sup>th</sup> September - Glasgow Caledonian University, UK

Over two years ago, ARCOM Committee decided to take the 36th Annual Conference and General Meeting to Glasgow, Scotland. COVID-19 pandemic stopped us from implementing this decision. About a year ago, the Committee decided to take the 37th Annual Conference and General Meeting to Glasgow but the pandemic stopped us again. We are determined to meet in Glasgow. This is why we are delighted to inform you that after two successive years of virtual conferences and meetings, we hope to return to our traditional face-to-face event and hold the 38th Annual ARCOM Conference and General Meeting in Glasgow. This will be possible because of the patience and hospitality of Glasgow Caledonian University. COVID-19 has challenged humanity over the last twenty-one months. It has challenged our ARCOM community. But our community is resilient and has survived. Our community has survived with knowledge, understanding and determination to continue to grow! This is why our chosen theme for the 38th Annual ARCOM Conference of 'BUILD BACK WISER' articulates our ARCOM outlook so aptly. The theme is a call to all of us to build on what we have historically known and what we have learnt relatively recently in a manner that exemplifies renewed vigour, creativity and innovation in our efforts to create, disseminate and apply new knowledge for the common good. BUILD BACK WISER encourages us to continuously challenge ourselves to question what may be considered to be established 'matter of fact' things or ideas. The theme encourages us not to be completely satisfied with what we know/see but, instead, seek to question and demand regular validation and modification (or even deviation, if necessary) and, in so doing, get closer to achieving ideal wisdom. In line with ARCOM tradition, the 38th Annual ARCOM Conference will be an inclusive conference. We invite paper submissions that not only address our traditional topics but also reflect on what needs to be addressed, within

these topics, to enable humanity to BUILD BACK WISER. We welcome (and hope to receive) papers that cover topics pertinent to the construction industry such as:

Building information modelling; Equality and diversity; Human resources management; Information management; Infrastructure development; Offsite construction; Planning, productivity and quality; Research and education; Sustainability in the built environment; Construction design and technology; Disaster management and resilience; Health, safety and well-being; Law; Contract Management; Pedagogic research; Other themes will be considered.

### "Build Back Wiser"

We encourage you to explore many and varied ideas about incorporating BUILD BACK WISER in your papers. Please find below some examples which, we hope, provide some guidance.

**Design for COVID-19 safety:** Society has been awakened about risk and impact of COVID-19 in particular and severe acute respiratory syndrome coronaviruses (SARS-CoVs) generally. We have been taken through discontinuities we have not experienced before and, thus, given the opportunity to consider our lives as academia, researchers or practitioners in completely new ways. As we seek to BUILD BACK WISER, laws and regulations, codes of practice, policies and procedures are some of the things we need to interrogate afresh to understand changes we need in work places, living places and urban places as well as infrastructure to facilitate a future that is safe from COVID-19/SARS-COVs.

**Construction people:** A few 'people issues' have come to sharper focus in the recent past, including mental health, long COVID and competence deficit. Mental health in society generally appears to be getting increased

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Glasgow Caledonian University – conference venue



Kelvingrove Art Gallery and Museum

*Continued – ARCOM 2022....*

attention but the construction industry lags behind many other sectors. Long COVID has emerged as a condition affecting some COVID-19 survivors and affects their ability and productivity. Competence deficit has emerged as a key issue due to national lockdowns and how they affect education and training programmes especially in the psychomotor and affective domains that are critical for the construction industry. Papers that help us understand these and other issues, their impacts and what we can do about them can certainly help us to BUILD BACK WISER in the short, medium and long term.

**Climate change:** We have continued to learn more about how our climate is changing and the impacts this change is having and is likely to have on our planet. Ever stricter national and organisational policies for net zero carbon in all sectors continue to emerge. However, gaps still remain between the 'talk' and 'walk' of net zero carbon. We invite you to deploy the idea of BUILD BACK WISER and interrogate, visualise, test, experiment and, ultimately, disseminate processes to address the match to net zero carbon from people, plant and materials with which we create the built environment.

**International context:** Our ARCOM community comes from, and is distributed, all over the world. This gives us tremendous opportunity to share intimately some of the geopolitical influences on the construction industry. Brexit became a reality on 31 January 2020, and since then new and/or modified bilateral and multilateral trade agreements have been discussed and some have been ratified. Also, over the last few years, relationships between China and the many countries have, somehow, changed. These two phenomena and others continue to impact supply chains, project procurement, project finance, availability of labour, to name but a few. We invite you to consider, how these new international realities can be exploited to address the perennial problems performance, productivity and quality as we seek to BUILD BACK WISER.

**Construction management experiments:** Over the years, ARCOM community has conducted research using largely non-experimental and quasi-experimental basic designs and these are appropriate designs for some of what we research. But 'cause and effect' research requires true-experimental designs to which we have, hitherto, paid limited attention. This has led us to avoid 'cause and effect' research or attempt it with questionable methodologies. We hope BUILD BACK WISER will nudge you to consider construction management experiments in your papers.

*New Committee Member*

**Dr Nicola Callaghan** is a Senior Lecturer in Construction Project Management at Glasgow Caledonian University (GCU). She has a BSc (Hons) in Quantity Surveying, a PhD relating to the delivery of energy efficient homes and has contributed to the leadership of a variety of postgraduate programmes in the UK, Asia and the Middle East. Her academic vision includes; the reduction of carbon emissions, energy efficient decision making, and the non-energy benefits associated with building

design. Her work on the health and wellbeing of an ageing population relates to how the Built Environment can improve the lives of some of the most vulnerable people in society which aligns with the United Nations Sustainable Development Goals. Her contribution to this research area hopes to improve economic and social value efficiencies within social housing providers, drawing together the housing, energy and health sectors by creating a more joined-up approach to housing improvements.

**ARCOM Committee 2020-2021**

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# ARCOM 2022: Build Back Wiser

## *Key dates*

Submission of abstracts: 2359hrs GMT, Friday 8 January 2022

Notification of decision about abstracts: Monday 14 February 2022

Submission of full papers for initial review: 2359hrs GMT, Friday 8 April 2022

Notification of decision on full papers (after initial review): Friday 20 May 2022

Submission of final papers: 2359hrs GMT Friday 17 June 2022

ARCOM 2022 Conference: 5–7 September 2022

## Submission of Abstracts and Keywords

Please submit an abstract of around 300 words and include up to 5 keywords online via the MyARCOM portal. Abstracts will be sent to two referees for peer-review. From this peer-review process, an abstract will be either accepted or rejected. The deadline for the submission of abstracts is 23:59hrs GMT on Friday 8 January 2022.

### Submission of Papers for Initial Review

Authors of accepted abstracts will be invited to submit full papers. Full papers must not exceed 10 sides of A4 (including all references, tables and illustrations) and should adhere to the ARCOM paper template, which is available for download at [www.arcom.ac.uk](http://www.arcom.ac.uk). Each paper will be sent to two members of the Scientific Committee for peer-review. From this peer-review process, a paper will be accepted, accepted with minor alterations, accepted with major alterations or rejected. The deadline for the submission of full papers for initial review is 23:59hrs GMT on Friday 8 April 2022.

### Submission of Papers for Final Review

After initial review, authors of papers accepted with minor alterations or accepted with major alterations will be invited to revise the papers and resubmit for final review. Final review will lead to papers being either accepted or rejected. The deadline for the submission of full papers for final review is 23:59hrs GMT on Friday 17 June 2022.

### Presentation and Publication of Accepted Papers

If a paper is accepted, its authors will be invited to present the paper at the conference. At least one of the authors must register for the conference to be able attend and present the paper. Authors of accepted papers will have a choice to publish their paper as a working paper or an indexed paper.

## Venue Information

Glasgow is a city that has survived only by creating and recreating economic, social and cultural bridges between individuals and communities. Our chosen venues for ARCOM 2022 reflect this city's famous ability to find a common good. We will be based in Glasgow Caledonian University's stunning conference centre, we will visit Glasgow's City Chambers for our traditional Monday social evening and the recently restored Kelvingrove Art Gallery and Museum for our Annual Conference Dinner (see photos in page 18).