



ASSOCIATION OF RESEARCHERS IN **CONSTRUCTION MANAGEMENT**

TWENTY-EIGHTH ANNUAL CONFERENCE
2012

September 3-5

Our Dynamic Earth, Edinburgh, Scotland

Conference Programme

ARCOM 2012 – PROGRAMME OVERVIEW

Day 1: Monday 3 September					
Registration					11.00
Lunch					12.00
Welcome & Introductions					12.40
Keynote Address: Professor Janet Druker					13.00
Session 1A	Session 1B	Session 1C	Session 1D	13.45	
Coffee & Tea Break					15.00
Session 2A	Session 2B	Session 2C	Session 2D	15.30	
Session 3A	Session 3B	Session 3C	Session 3D	16.30	
Break: Check in at hotels					17.30
Social Reception: Our Dynamic Earth					18.30 for 18.45
Close					23.00

Day 2: Tuesday 4 September					
Late Registration					08.30
Langford Lecture: Aletha Holborough					09.00
Coffee & Tea Break					09.45
Keynote Address: Don Ward					10.10
Debate: Legacies and Impacts					11.00
Lunch					12.00
Session 4A	Session 4B	Session 4C	Session 4D	12.45	
Session 5A	Session 5B	Session 5C	Session 5D	13.45	
Coffee & Tea Break					14.45
Session 6A	Session 6B	Session 6C	Session 6D	15.15	
ARCOM Annual General Meeting					16.00
Break/Tour					17.00
Conference Dinner					19.00

Day 3: Wednesday 5 September					
Late Registration					08.30
Session 7: Plenary Paper Session: Human Behaviour & Culture					09.00
Session 8A	Session 8B	Session 8C	Session 8D	10.15	
Coffee & Tea Break					11.15
Session 9A	Session 9B	Session 9C	Session 9D	11.45	
Closing Comments & ARCOM 2013 Conference					13.00
Lunch					13.15

MONDAY 3rd SEPTEMBER

From 11.00		REGISTRATION		Dominic Ahiaga-Dagbui & Alison Furber	Stratosphere
12:00	12:40	LUNCH			Stratosphere & Ozone
12:40	13:00	Welcome & Introductions			Biosphere Green
13:00	13:40	Keynote Address "Researchers and research: 2012 in overview"		Professor Janet Druker, Univeristy of Westminster	Biosphere Green
13:40	13:45	Disperse to parallel sessions			
Session 1:		1A: Biosphere Green	1B: Biosphere Blue	1C: Salisbury	1D: Hutton
13:45	15:00	Human Resource Mangement and Skills <i>Chair: Dr Shu-Ling Lu</i>	Inter-organisational Relations and Supply Chain 1 <i>Chair: Dr Robby Soetanto</i>	Research Methods and New Perspectives <i>Chair: Professor Andrew Dainty</i>	Procurement 1 <i>Chair: Dr Milan Radosavljevic</i>
<i>5 papers</i>		How is job satisfaction in Spanish building engineers influenced by training? – <i>Fuentes-del-Burgo and Navarro-Astor</i>	Designing a dynamic network based approach for asset management activities – <i>Volker, Scharpff, de Weerd and Herder</i>	A new research agenda into community-based protest in construction – <i>Teo and Loosemore</i>	Housing association preferred form of partnering – <i>Liguori, Sommerville and Manase</i>
		Job satisfaction of professionals within the Ghanaian construction industry – <i>Yirenskyi-Fianko and Chileshe</i>	Improving supplier relationship management within the aec sector – <i>Pala, Edum-Fotwe, Ruikar, Peters and Doughty</i>	Paradigm interplay to develop a sustainability related knowledge management strategy – <i>Leblanc and Thomson</i>	A process account of construction mediation – <i>Sidoli del Ceno</i>
		The socialisation of outsourced employees in facilities management: A research agenda – <i>Tucker, Ogungbemi and Noor</i>	Role conflict and role ambiguity in construction projects – <i>Kabiri, Hughes and Schweber</i>	Resolving the methodological conundrum: Bolstering the research Achilles heel in South Africa – <i>Emuze and Shakantu</i>	The influence of procurement methods on dispute resolution mechanism choice in construction – <i>Mante, Ndekugri, Ankrah and Hammond</i>
		Improving project performance through worker participation in alliance projects – <i>Vilasini and Neitzert</i>	Learning how to eat an elephant: implementing supply chain management principles – <i>Gosling, Towill and Naim</i>	Modelling the impact of extreme weather events on hospital facilities management using a system dynamics approach – <i>Chow, Loosemore and McDonnell</i>	A preliminary method of classifying collaborative contractual behaviour in higher education construction projects – <i>Crowe and Fortune</i>
		Architects in Spain: A profession under risk – <i>Navarro-Astor and Caven</i>	Influence of the macro-economy on trust in construction supply chain chains – <i>Manu, Ankrah, Chinyio and Proverbs</i>	Contextualising innovation in construction firms in regional areas – <i>Brewer, Gajendran and Le Goff</i>	Understanding post-contract changes in partnering projects: an ethnographic approach – <i>Shipton</i>
15:00	15:30	COFFEE / TEA			Stratosphere & Ozone

MONDAY 3rd SEPTEMBER

Session 2:		2A: Biosphere Green	2B: Biosphere Blue	2C: Salisbury	2D: Hutton
15:30	16:30	Forecasting and Decision Making 1 <i>Chair: Dr Andrew Ross</i>	Offsite Construction <i>Chair: Professor Charles Egbu</i>	Sustainability (Operation & Practice) 1 <i>Chair: Professor Chris Gorse</i>	Project Management 1 <i>Chair: Dr Paul Chan</i>
<i>4 papers</i>		<p>An exploration of theoretical concepts and methods for assessing risk impacts on the variability between contract sum and final account in design and build projects – <i>Larkin, Odeyinka and Eadie</i></p> <p>A system dynamics-based method for demand forecasting in infrastructure projects - A case of PPP projects – <i>Alasad, Motawa and Ogunlana</i></p> <p>Neural networks for modelling the final target cost of water projects – <i>Ahiaga-Dagbui and Smith</i></p> <p>Decision-making in façade selection for multi-storey buildings – <i>Garmston, Pan and de Wilde</i></p>	<p>Interface management from an offsite construction perspective – <i>McCarney and Gibb</i></p> <p>Barriers and drivers for increased use of off-site bridge construction in Sweden – <i>Larsson and Simonsson</i></p> <p>Re-engineering the construction supply chain: Transferring on-site activity, off-site – <i>Tennant, McCarney and Tong</i></p> <p>Identification and reduction of non-value adding activities in the precast concrete construction projects in Singapore – <i>Wu, Feng and Zhong</i></p>	<p>Investment appraisal tools and sustainability evaluation in social housing – <i>Higham and Fortune</i></p> <p>The domestication and use of low and zero carbon technologies in new homes – <i>Lees and Sexton</i></p> <p>Lowering CO₂ emissions in the new build social housing sector: A Spanish case study – <i>Downey</i></p> <p>Integrating responsible sourcing in the construction supply chain – <i>Upstill-Goddard, Glass, Dainty and Nicholson</i></p>	<p>Attaining zero defects within Building Schools for the Future: a realistic target or a Sisyphean task? – <i>Boothman, Higham and Horsfall</i></p> <p>The role of problem solving in construction management practices - <i>Schultz</i></p> <p>House building service quality and buyer expectations – <i>Sommerville, Craig and Callaghan</i></p> <p>Re- conceptualising agile for lean construction: The case for “agilean” project management – <i>Demir, Bryde, Fearon and Ochieng</i></p>

MONDAY 3rd SEPTEMBER

Session 3		3A: Biosphere Green	3B: Biosphere Blue	3C: Salisbury	3D: Hutton	
16:30	17:30	Sustainability (Theory & Design) 1 <i>Chair: Professor David Proverbs</i>	Equality and Diversity 1 <i>Chair: Dr Ani Raiden</i>	Health & Safety and Respect for People (Practice & Regulation) 1 <i>Chair: Professor Sam Wamuziri</i>	Forecasting and Decision Making 2 <i>Chair: Dr Simon Smith</i>	
<i>3/4 papers</i>		Delivering sustainable buildings in retail construction – <i>Dangana, Pan and Goodhew</i>	Women at top level management at contractors in Denmark and Norway – <i>Buser and Koch</i>	Safety impacts of alcohol and other drugs in construction: development of an industry policy and cultural change management program – <i>Biggs and Williamson</i>	Forecasting the number of jobs created through construction – <i>Forbes, El-Haram, Horner and Lilley</i>	
		A multidisciplinary literature review of low and zero carbon technologies into new housing – <i>Bevan and Lu</i>	Gender inequality in the construction industry: Lessons from Pierre Bourdieu – <i>Sang and Powell</i>	Evaluating the role and effectiveness of training interventions in improving the occupational health and safety of younger construction workers: A literature review – <i>Nyateka, Dainty, Gibb and Bust</i>	Time series analysis for the prediction of RC material components prices in Egypt – <i>Bassioni, Elmasry, Ragheb and Youssef</i>	
		Delivering zero carbon homes in the UK – <i>Heffernan, Pan and Liang</i>	An assessment of occupants' expectation in the delivery of low-income housing in South Africa – <i>Aigbavboa and Thwala</i>	The principal contractor's role under construction (Design and Management) Regulations 2007: Areas for further research based on a qualitative inquiry – <i>Mzyece, Ndekugri, Ankrah and Hammond</i>	Forecasting capability of a construction organisation model: 10 years later – <i>Tang, Lim and Gan</i>	
		Key criteria of sustainable hospital refurbishment: A stakeholder review – <i>Wilson and Kishk</i>			Comparison of the Grey Model and the Box Jenkins Model in forecasting manpower in the UK construction industry - <i>Ho</i>	
17:30	18:30	<i>Break: Check-in at hotels</i>				Hotels
18:30	18:45	Return to Dynamic Earth				
18:50	23:00	Social Reception: Our Dynamic Earth				

TUESDAY 4th SEPTEMBER

08:30	09:00	Registration	Dominic Ahiaga-Dagbui & Alison Furber		Stratosphere
09:00	09:45	Langford Lecture	Aletha Holborough		Biosphere Green
09:45	10:10	COFFEE / TEA	Stratosphere & Ozone		
10:10	10:55	Keynote Address: "Industry and academia working collaboratively: the benefits and challenges"	Don Ward, Chief Executive, Constructing Excellence		Biosphere Green
11:00	12:00	Debate	Legacies & Impacts		Biosphere Green
12:00	12:45	LUNCH	Stratosphere & Ozone		
Session 4		4A: Biosphere Green	4B: Biosphere Blue	4C: Salisbury	4D: Hutton
12:45	13:45	Sustainability (Operation & Practice) 2 <i>Chair: Professor David Proverbs</i>	Health & Safety and Respect for People (Behaviour) <i>Chair: Dr Simon Smith</i>	Risk Management <i>Chair: Dr Milan Radosavljevic</i>	Organisational Strategy and Business Performance 1 <i>Chair: Dr Chris Harty</i>
4 papers		Evaluating factors in sustainable road construction and management – a life cycle approach – <i>Thorpe</i>	Inconsistent, incomplete and incidental: Site safety culture from a constructionist perspective – <i>Sherratt, Farrell and Noble</i>	Reviewing risk allocation for infrastructure PFI: between theory and practice – <i>Issa, Emsley and Kirkham</i>	Corporate entrepreneurship for contracting companies: The current issues – <i>Setiawan, Erdogan and Ogunlana</i>
		Environmental assessment tools and efficiency in housing and office refurbishment – <i>Sezer</i>	A framework for enhancing and improving the safety culture on Saudi construction sites – <i>Alasamri, Chrisp and Bowles</i>	Perceptions of fuzzy set theory in construction risk analysis – <i>Tokede and Wamuziri</i>	Managing the performing paradox in architectural competitions – <i>Manzoni, Morris and Smyth</i>
		Factors of sustainability in building design: Establishing their relative significance – <i>Quigley, Heaney and Odeyinka</i>	Cultural interpretation of health and safety and its appropriateness in the United Arab Emirates – <i>Borthwick and McAndrew</i>	An examination of the risk management process in Venezuelan construction projects – <i>Calzadilla, Awinda and Parkin</i>	Managing change through participation: Developing shared construction guidelines in 26 public organisations – <i>Baldursdóttir</i>
		Early stage evaluation of the socio-economic benefits of built environment housing regeneration projects – <i>Akotia and Fortune</i>	Exploring human error through the safety talk of utilities distribution operatives – <i>Patel, Sherratt and Farrell</i>	Incorporating security measures into the built environment – <i>Harre-Young, Boshier, Dainty and Glass</i>	Towards the identification of factors affecting the development of small sized construction contacting organisations – <i>Ozols and Fortune</i>

TUESDAY 4th SEPTEMBER

Session 5		5A: Biosphere Green	5B: Biosphere Blue	5C: Salisbury	5D: Hutton
13:45	14:45	Project Management 2 <i>Chair: Dr Stephen Gruneberg</i>	Organisational Strategy and Business Performance 2 <i>Chair: Professor David Boyd</i>	Sustainability (Operation & Practice) 3 <i>Chair: Professor Charles Egbu</i>	Education and Learning 1 <i>Chair: Dr Shu-Ling Lu</i>
<i>4 papers</i>		Adaption of structured analysis design techniques methodology for construction project planning – <i>Agyekum-Mensah, Knight and Pasquire</i>	Value management in infrastructure projects in Western Australia: techniques and staging – <i>Whyte and Cammarano</i>	Building refurbishment: Holistic evaluation of barriers and opportunities – <i>Babangida, Olubodun and Kangwa</i>	Workshops as embryonic boundary objects for collaborative university-industry innovation in construction – <i>Stokes, Carillo and Dainty</i>
		An investigation of the factors influencing the success of construction planning for the 2012 Olympic stadium: An ethnographic study – <i>Subbiah</i>	The actors and their roles in the meaning making process of an energy target – <i>Ludvig and Stenberg</i>	A critical review of the concept of facilities management in community-based contexts – <i>Tammo and Nelson</i>	A study on new construction techniques and skills training with focus on the plastering subcontractor in Japan – <i>Mihara, Yoshida, Suzuki and Hojo</i>
		A genetic algorithm for resource leveling of construction projects – <i>Iranagh and Sonmez</i>	A critical review of PMS in construction: Towards a research agenda – <i>Deng, Smyth and Anvuur</i>	Optimising the role of Facilities Management (FM) in the Development Process (DP): The development of FM-DP integration framework for sustainable property development – <i>Tucker, Anang Masuri and Mohd Noor</i>	Framework for formative assessment learning strategies in built environment higher education programmes – <i>Scott and Fortune</i>
		Current practice of variation order management in the Saudi construction industry – <i>Alsuliman, Bowles and Chen</i>	Pro-innovation bias in construction-enablers and risks – <i>Loosemore and Holliday</i>	Green building challenges: evaluating the operation of adopted building assessment tools - case study – <i>Mpakati, Wamuziri and Sloan</i>	Communication modes and performance of virtual design teams in an undergraduate building project – <i>Soetanto, Poh, Austin, Hao and Katsanis</i>
14:45	15:15	COFFEE / TEA			Stratosphere & Ozone

TUESDAY 4th SEPTEMBER

Session 6		6A: Biosphere Green	6B: Biosphere Blue	6C: Salisbury	6D: Hutton	
15:15	16:00	Sustainability (Operation & Practice) 4 - Take-up <i>Chair: Dr Andrew Ross</i>	Human Behaviour & Culture 1 <i>Chair: Professor Will Hughes</i>	Equality and Diversity 2 <i>Chair: Dr Paul Chan</i>	Health & Safety and Respect for People (Practice & Regulation) 2 <i>Chair: Professor Andrew Dainty</i>	
	<i>3 papers</i>	Variations in the mainstreaming of sustainability: a case study approach – <i>Boyd and Schweber</i> Investigating a suitable learning environment to advance sustainable practices among micro construction enterprises – <i>Gleeson and Thomson</i> Detailed design ethnography: architects embedding low carbon performance - <i>Poveda</i>	IDEA contribution in construction: In search for evidence of the interface between idea generation and its implementation – <i>Sergeeva and Radosavljevic</i> A case study of the impact of cultural differences during a construction project in Ghana – <i>Furber, Smith and Crapper</i> Culture shock of alliance projects – <i>Reed and Loosemore</i>	Striving for inclusive design in the built environment: Learning strategy adopted by policy implementers at Local Authorities in England – <i>Amakali, Cook and Larsen</i> Juggling work, family... and life in academia: The case of the “new” man – <i>Raiden, Räisänen and Caven</i> Working hours in a large New Zealand construction company – <i>Morrison and Thurnell</i>	The use of experience and situated knowledge in ensuring safety among workers of small construction firms – <i>Aboagye-Nimo, Raiden, Tietze and King</i> A review of compliance with health and safety regulations and economic performance in small and medium construction enterprises - <i>Arewa and Farrell</i> Determinants of construction firms’ compliance with health and safety regulations in South Africa – <i>Windapo and Oladapo</i>	
16:00	17:00	ARCOM Annual General Meeting				Biosphere Green
17:00	18:00	BREAK (Please note: due to a separate event, all delegates must vacate Stratosphere by 17:00)				
18:00	19:00	BUS TOUR: Depart in front of Dynamic Earth at 18:00 prompt; tour of Edinburgh; arrive Old College 19:00				
19:00	23:00	CONFERENCE DINNER: Reception from 19:00 Raeburn Room; Dinner from 19:45 Playfair Library			University of Edinburgh, Old College	
	23:00	Close				

WEDNESDAY 8th SEPTEMBER

08:30	09:00	Late Registration	Dominic Ahiaga-Dagbui & Alison Furber		Stratosphere
		<i>Please remember to check out of hotels</i>			
09:00	10:15	Session 7: Plenary Paper Session: Human Behaviour and Culture 2 Chair: Dr Chris Harty Do you feel what I feel? Empowerment contagion in project teams – <i>Tuuli and Acquah</i> The case for slack to promote innovative behaviour in construction firms – <i>Horsthuis, Thomson and Fernie</i> Corruption in the South African construction industry: A mixed methods study – <i>Bowen, Edwards and Cattell</i> Constructing a sense of time in projects: implications of a Bergsonian view of time – <i>Chan</i>			Biosphere Green
Session 8		8A: Biosphere Green	8B: Biosphere Blue	8C: Salisbury	8D: Hutton
10:15	11:15	Building Information Modelling Chair: Professor Chris Gorse	Sustainability (Theory & Design) 2 Chair: Dr Ani Raiden	Education & Learning 2 Chair: Dr Milan Radosavljevic	Disaster Management Chair: Professor Will Hughes
4 papers		Awareness, usage and benefits of Building Information Modelling (BIM) adoption – the case of the South Australian construction organisations – <i>Newton and Chileshe</i> Exploring CAVE: Using immersive environments for design work – <i>Maftai and Harty</i> BIM implementation plans: A comparative analysis – <i>Ahmad, Demian and Price</i> Control, surveillance and the ‘dark side’ of BIM – <i>Davies and Harty</i>	Thermal performance of buildings and the management process – <i>Gorse, Stafford, Shenton, Johnston, Sutton and Farmer</i> A conceptual model for user-centred passive building design – <i>Alzaed and Boussabaine</i> Optimizing embodied energy of building construction through bioclimatic principles – <i>Sattary and Thorpe</i> Diagrammatic representations of sustainability – A review and synthesis – <i>Moir and Carter</i>	Developing an understanding of research principles to support post-graduate education in the built environment – <i>Scott and Shaurette</i> Effectiveness of the construction management courses – <i>McArdle, Gunning and Spillane</i> The integration of diplomats and graduates into the construction industry: A pilot South African study – <i>Smallwood and Emuze</i> Curriculum innovation in transnational teaching: A pilot study – <i>Iyer-Raniga and Wingrove</i>	Hospital facility resilience: an adaptation framework for extreme weather events – <i>Chand and Loosemore</i> Stakeholders’ approaches towards natural disasters in built environment: A theoretical framework – <i>Mojtahedi and Oo</i> . Identifying the added-value of various roles in the post-disaster response and recovery of Christchurch – <i>Kestle and Potangaroa</i> Building capability for disaster resilience – <i>Crawford, Langston and Bajracharya</i>

WEDNESDAY 8th SEPTEMBER

11:15	11:45	COFFEE / TEA				Stratosphere & Ozone
Session 9		9A: Biosphere Green	9B: Biosphere Blue	9C: Salisbury	9D: Hutton	
11:45	13:00	Construction Design & Technology <i>Chair: Professor Charles Egbu</i>	Interorganisational Relations and Supply Chain 2 <i>Chair: Professor David Boyd</i>	Procurement 2 <i>Chair: Dr Stephen Gruneberg</i>	Project Performance <i>Chair: Dr Robby Soetanto</i>	
	<i>5 papers</i>	<p>Industrialised Building System (IBS) in Malaysian housing: An emerging innovation system explanation – <i>Sazalli, Greenwood, Morton and Agnew</i></p> <p>Exploring Process, Productivity and Structure in Design – <i>Shah, Tang and Hughes</i></p> <p>Beyond Scoring: Advancing a new approach to the design evaluation of NHS buildings – <i>O’Keeffe, Thomson and Dainty</i></p> <p>The roles of representations in building design: materiality and visualisation – <i>Harty and Tryggestad</i></p> <p>Standardisation of specification driven buildings with serial and repeat order designs – <i>Robinson, Gibb and Austin</i></p>	<p>A conceptual model for construction supply chain management implementation – <i>Aloini, Dulmin, Mininno and Ponticelli</i></p> <p>Collaborative supply chain practices during severe economic downturn in the Republic of Ireland – <i>Taggart, Koskela and Rooke</i></p> <p>Pre-selection of construction consultants based on attributes of trust – <i>McClements, Odeyinka and Eadie</i></p> <p>Knowledge transfer within and across organizational boundaries -A Case Study in the Construction Industry – <i>Berg, Legnerot, Lindström, Nilsson, Bosch and Gluch</i></p> <p>Trust, control and knowledge integration in a rock tunnel project – <i>Eriksson and Kadefors</i></p>	<p>Probabilistic pre-requisites contributing to successful housing association partnering – <i>Liguori, Sommerville and Manase</i></p> <p>Impact of the Public Procurement Reform on public building projects delivery in Nigeria – <i>Shwarka and Anigbogu</i></p> <p>Understanding Early Contractor Involvement (ECI) procurement forms – <i>Walker and Lloyd-Walker</i></p> <p>Multinational contracting Into Australia: Developing Dunning’s Theory and case study design – <i>Rahman, Bridge, Rowlinson and Kwok</i></p> <p>How to proportion capability and fee percentage for team comparison in competitive early involvement – <i>Lahdenperä</i></p>	<p>Evaluation of key metrics for measurement of project performance – <i>Alsulamy, Wamuziri and Taylor</i></p> <p>Evaluating political aspects of success for PPP/PFI sports hall in Croatia – <i>Kušljčić and Marenjak</i></p> <p>Improving project performance of PPP/PFI project-based organisations – <i>Ndoni and Elhag</i></p> <p>Delivery of complex construction multi-projects in contractor-led procurement – <i>Hagan, Bower and Smith</i></p> <p>Glitches, snags and crises: A study of change in hospital adaptation projects – <i>Garthwaite and Eckert</i></p>	
13:00	13:15	Closing comments and Looking ahead to ARCOM 29 th Annual Conference, Reading, 2013				Biosphere Green
13:15		LUNCH				Stratosphere & Ozone