ARCOM welcomes its New Chair

David Greenwood became the new Chair for ARCOM in September 2002. He is Associate Dean (Research & Consultancy) in the School of the Built Environment at Northumbria University.

He worked for nearly ten years for a major contractor in a commercial role that involved tendering and planning for large building projects and the subsequent management of their commercial and physical progress. For the last 20 years he has been a full-time academic at Northumbria University where he teaches and researches in the field of construction management and contract administration. During this time he has maintained a close contact with the industry through consultancy and training work in related fields. Some of this work has been overseas, principally in the Far East and in France, where he is Professeur Invité at the Université d’Artois, France. He is on the management board of the Sustainable Cities Research Institute in Newcastle.

His primary research interests are the commercial relations between contracting organisations, including the way construction contracts are drafted. In 1992/3 he undertook a study of procurement and contract conditions in the specialist engineering sector which was referred to in the first of Sir Michael Latham’s reports and was influential in subsequent contractual reform.

He completed his PhD at Reading University on the topic of power and trust relations between construction organisations, including the way construction contracts are drafted. He completed his PhD at Reading University on the topic of power and trust relations between construction organisations.

ARCOM 2002 Annual Conference

ARCOM’s 18th Annual Conference was hosted this year by Northumbria University and took place on the 2nd - 4th September at St. James’ Park Football Ground, Newcastle.

The call for papers attracted well over 130 abstracts, most of which resulted in full papers that were peer reviewed by at least 2 referees. The process led to 82 papers being finally accepted. A good proportion of these came from new researchers, including those who are actively engaged in PhD study. We also welcomed old and new friends from outside the UK. We were happy to receive abstracts from new researchers, including those who are actively engaged in PhD study. We also welcomed old and new friends from outside the UK. We were happy to receive abstracts from

ARCOM 2003 Annual Conference

A note for your diaries, the next ARCOM conference will be in Brighton on the 3rd to the 5th of September, 2003.

Abstracts are invited to be submitted by 13th January, 2003 and full papers, by 7th April. We look forward to seeing you at Brighton.
You are most welcome to share any research experiences with us. I have done that on page 20 with my “trusty” glass of water.

Also included are four books that have been recently published and which we feel would be of interest to you. If you have any titles that you would like to share with other members please let us know through our contacts on the back page.

I hope that you like the new layout of the newsletter and the variety of topics that we have provided.

If you would like to make any suggestions and contributions for future issues please contact me directly.

Vian Ahmad

ARCOM 2002 Annual Conference

The two-volume proceedings are a fine record of academic achievement. ARCOM is indebted to the committee members, for all their hard work prior to the conference in refereeing abstracts and papers, and especially to Will Hughes for his unmatched skills in compiling them. For those who were not able to attend the conference, there are still copies available by contacting Dr. Hughes at Reading University.

The venue was, even by the grudging admission of the most ardent rival football supporter, a good one. All sessions proceeded smoothly, and in this regard a big thank-you is due to the staff at St. James’ as well as to the back-up they were given by staff from Northumbria University, particularly by Ms. Elaine Scotland and Mr. Guy Brown. The three days of presentation, debate and discussion were sandwiched, as it were, between two magnificent oral offerings of a very differing nature. First, the keynote speech, by the always-provocative Prof. Stuart Green of Reading University set the scene for the keen debate to follow. Like the true academic should, Stuart left no ‘trend’ unquestioned; no ‘initiative’ unexamined, and left us reflecting on how much that currently circulates in construction literature is no more than the ‘propaganda of corporatism’. Then, towards the end of the conference, in the relaxed surroundings of the Magpie Restaurant, our after-dinner speaker and active committee member Professor Dave Langford, raconteur and master of the mot just, served us an offering spiced with his inimitable wit and presented with all his usual elegance. Immediately following the dinner, the Paul Townsend memorial prize for best paper was presented to Alan Wild for his paper ‘The management college that never was’. At the Annual General Meeting, which was held, as usual, after the proceedings of the second day of conference, the outgoing Chair, Professor Akin Akintoye, spoke of the significant achievements that ARCOM had made in recent years, such as:
- the ARCOM forum,
- the ARCOM Abstracts and Indices service (now available on internet).
- and the Doctoral Research Workshops, to name but a few.

Akin received a warm vote of thanks and a standing ovation from the AGM. The AGM was then addressed by Dr. Farzad Khosrowshahi as Vice-Chair.

David Greenwood

Capturing Client Requirements in Construction Projects

by John M. Kamara, Chimay J. Anumba and Nosa F. Evbuomwan.

This book describes an innovative and structured approach for capturing client requirements on construction projects. The new approach, encapsulated in a Client Requirements Processing Model (CRPM) and associated prototype software, ClientPro, facilitates better understanding and implementation of clients’ requirements, more effective collaborative working and design creativity. It also minimizes uncertainties and downstream problems because of the early consideration of issues affecting the lifecycle of a facility, and provides the basis for effective requirements management throughout the facility lifecycle.

Blackwell Publishing is pleased to announce the publication of the following three books:

Public Private Partnerships edited by Akintola Akintoye, Matthias Beck and Cliff Hardcastle

This edited book will familiarise both researchers and construction professionals working with public private partnerships (PPP) with the issues involved in their planning, implementation and day-to-day management and it offers a number of frameworks for managing the risks associated with PPP.


Construction Process Improvement by Brian Atkin, Jan Borgrant and Per-Erik Josephson

This book analyses the way forward for improving the construction process, in particular the links between research and development and industrial competitiveness. The implementation of new methods and thinking in companies is examined and important advice for senior managers and researchers is offered.


This book is a standard reference text for use with the standard forms of building contract and sub-contract. The new edition takes account of extensive changes to the forms since the first edition was published in 1994, including the Housing Grants Act and case law. It also includes a free CD of all the letters.

For further details go to http://www.thatconstructionsite.com/index.asp?page=book&ref=0632065561

For more information about any of the books contact:

Charlotte Cunliffe

Engineering and Construction - Marketing Professional Division
Blackwell Publishing Ltd
9600 Garsington Road
Oxford OX4 2DQ
Tel (direct line): 01865 476537

Book corner

Delgates at the conference

Delgates at the annual conference

Delegates from as far afield as Australia, Canada, China, Denmark, Eire, Holland, Hong Kong, India, Portugal, New Zealand, Singapore, South Africa, Turkey and the USA; indeed, this attests to the growing international standing of ARCOM, of which we are very proud.

This bookcorner feature continues on page 12.
nD Modelling Platform Grant at Salford

(Continued from page 9)

is funded by the EPSRC (Engineering and Physical Sciences Research Council) in the tune of £0.5 million for four years under a Platform Grant. The unique nature of this grant encourages blue-sky innovative re-search, international collaboration and supports future funding opportunities.

The objective of the project includes developing a business process and IT vision for how integrated environments will allow future nD enabled construction to be undertaken.

The research team at Salford is currently developing this vision – identifying how nD modelling can improve and shape the design and construction process, and the barriers and opportunities for change. This directive will be fortified by industrial input at the forthcoming national workshop that will be held on the 9th October 2002 in Milton Keynes, UK.

We hope that you can contribute your experi-
tise in this area at the international work-
shop, which will be held at Mottram Hall on the 30th January to the 1st February 2003. A subsequent international workshop is also planned for 2005 and details will be sent to you in due course.

We aim to gain knowledge of similar re-
search initiatives you are undertaking during the international workshop. Therefore, there is the opportunity for you to make a 20 minute presentation at the event within the con-
text of the project (i.e. 3D + time, 3D + cost, 3D + accessibility, decision-making etc). This will not only help to inform the vision, but also enable us to explore potential collabora-
tion opportunities by combining our research efforts to apply for future research funding.

A major report will be produced and widely disseminated following the output of the work, and your contribution to the future vision of nD-enabled construction will be recognised.

Laugh (and Learn) from a trusty glass of water

My first conference paper. In fact, my first paper ever. It bounced back and forth, at least 1½ million times be-
tween me and my supervisor.

At the time, it felt as though it was the toughest thing I had ever done. It took me a month trying to put it right, but I managed to finish it eventu-
ally.

The paper looked immaculate. When it did get accepted in the conference, I celebrated my achievement by having a take away and allowing myself to eat it in front of the TV!!

As the days rolled over, I had to attend the conference to present the paper. I bought a new outfit, practised my pres-
entation over and over again, read the map and got my di-
rections right!!!!

The clock was ticking and my name was called to present. My heart was about to jump out of my body and bounce on the floor. Seventy people were staring at me, waiting for me to talk!!

I managed to introduce myself and gave a short introduc-
tion...but soon after...I choked.

The words just wouldn’t come out of my mouth. There was no water. I suddenly saw a can of coke on one of the desks in front of me. I swiftly reached for it and started drinking without looking who it belonged to. I survived, but was incredibly embarrassed.

These days, I don’t depart from my glass of water when I am giving a presentation.

Writing papers is not so pain-ful anymore. Although no one remembers what happened, I will never forget my first paper and my trusty glass of water.

(Author’s note: The above is hoping for a reaction of “laugh” from the reader.)

An invitation to host an ARCOM research workshop

Following the success of our previous workshops, we would like to invite ARCOM members to propose new workshop themes for 2003/4. Those that have attended and par-
ticipated in these workshops in the past will testify to the benefits that they can provide construction management re-
searchers. ARCOM runs two types of workshop:

Doctoral workshops

Doctoral workshops provide an opportunity for PhD stu-
dents to present papers and receive feedback on the methodological issues raised by their work.

The usual format is for five or six researchers at various stages of their PhD to pres-
t for about 20 minutes each, with 10 to 15 minutes of dis-
cussion for each speaker.

We would like members to propose venues, themes and chairpersons for workshops which would attract students and academics to attend. We expect the host institu-
tion to provide a room and audio-visual equipment, but ARCOM will pay for lunch!

If you have an idea for a theme, venue and chairper-
son, then please contact:

Andy Dainty

ARCOM Doctoral Research Workshop Convener

Dept of Civil and Building Engineering
Loughborough University
Email: a.r.j.dainty@lboro.ac.uk

Regional research workshops

These are to support academic-
ics and senior researchers in areas such as how to write research proposals, research methods, how to attract re-
search funding, how to man-
age research projects etc.

The usual format is for two or three keynote speakers to be invited to speak at the events with plenty of time allowed for open discussion.

Regional workshop dates and venues

The programme for workshops will be decided in the forthcoming months and will be sent to you in due course.

Regional workshops will be funded by the EPSRC. The unique nature of each call for proposal will encourage blue-sky innovative research. To this end, we will require a number of the workshops to be open to non-academic participants, e.g. industry representatives and construction managers who wish to find out more about research methods, training and research opportunities.

We would like to hear from you if you would like to host one of these workshops and would be interested in being involved in the regional workshops.

Construction Creativity Clubs

ARCON published its first book shortly after the last conference. It emerged from the ARCOM project which was entitled A Network of Construction Creativity Clubs. This was a one year project funded by the Engineering and Physical Sciences Research Council (EPSRC).

The book, entitled “The Construction Creativity Casebook” was written by Dave Langford and Branka Dimitrijevic and pub-
lished by Thomas Telford. Dave is on the AR-
COM Committee and Branka was the national Co-ordinator for the network.

The book is based upon data collected at a number of innovation meetings. The book showcases 42 innovations and was based upon a standard template to analyse the data. This template proted the challenges which prompted the innovation, how solutions were derived and the beneficiaries from the innovation.

An overview is provided where all of the inno-
vations recorded are analysed by the business activity of the innovators, size by turnover and number of employees, how the innovation was funded and the genesis of the innovation.

The findings from the project were:

• Presenters at the NCCC events were from industry (61%), academia (31%), profes-
sional organisations (3%) and government initiatives (5%).

• The highest number of presentations was about environmental impact management (8 presentations), procurement (7), and contracting and partnering (7).

• Among those who provided the information on financial turnover, 11% had a...
Construction Creativity Clubs

(Continued from page 3)

A well-developed proposal, corresponding project plan, and methodology for collection of information on innovations.

- The enthusiasm and hard work of the National and Regional network co-ordinators.

- The willingness of the 'host and club' Universities within each Regional CCC, and the benefits generated from being able to plug into their industry networks.

- The availability of support from other organisations such as the UK Network of Centres for the Built Environment.

- Participation in a number of events by National Construction Initiatives such as the Construction Best Practice Programme and the Movement for Innovation.

- The willingness of industry to present and showcase their innovations, and the interest shown by event attendees.

- The availability of the EPSRC grant funding, which took away the commercial pressure to generate income to support the innovators perception that the clients will be the main beneficiaries of innovation.

- Among the companies who provided the information, 68% declared that their innovations are not subject to patent.

- While 75% of companies encountered a range of difficulties in the conception, development and implementation of their innovations, 26% did not have any difficulties.

- With regard to the dissemination of innovations, 57% of companies have a dissemination structure in place. The main reason for not having a dissemination structure was identified as 'the innovation being specific to the business' (23%).

- The largest percentage of innovators (27%) consider their innovations to be transferable to a wider construction industry, clients (21%), other sectors (19%), subcontractors (15%), and other groups (5%).

The network and research achievements of the NCCC, despite the complexity of co-ordination of activities across 4 Regional CCCs, over a comparatively short time frame of 12 months, can be put down to a range of critical success factors, which include:

- A well-developed proposal, corresponding project plan, and methodology for collection of information on innovations.

- The enthusiasm and hard work of the National and Regional network co-ordinators.

- The willingness support of ‘host and club’ Universities within each Regional CCC, and the benefits generated from being able to plug into their industry networks.

- The availability of support from other organisations such as the UK Network of Centres for the Built Environment.

- Participation in a number of events by National Construction Initiatives such as the Construction Best Practice Programme and the Movement for Innovation.

- The willingness of industry to present and showcase their innovations, and the interest shown by event attendees.

- The availability of the EPSRC grant funding, which took away the commercial pressure to generate income to support the innovators perception that the clients will be the main beneficiaries of innovation.

- Among the companies who provided the information, 68% declared that their innovations are not subject to patent.

- While 75% of companies encountered a range of difficulties in the conception, development and implementation of their innovations, 26% did not have any difficulties.

- With regard to the dissemination of innovations, 57% of companies have a dissemination structure in place. The main reason for not having a dissemination structure was identified as 'the innovation being specific to the business' (23%).

- The largest percentage of innovators (27%) consider their innovations to be transferable to a wider construction industry, clients (21%), other sectors (19%), subcontractors (15%), and other groups (5%).

The downside to this success is that the NCCCs EPSRC grant funding came to an end, with it proving to be almost an impossible task to secure the minimum £50,000 per annum required to keep the concept going as a UK wide network.

There are lessons here for funding bodies and industry, because such initiatives have immense and accessible value in providing learning environments and methods for knowledge exchange. The problem is that somebody has to be willing to foot the bill to sustain this value, through grant funding or sponsorship. This is particularly the case given the levying of sizeable user fees (e.g. hundreds of pounds), on the NCCC’s smaller business participants, would serve to exclude them from similar networks in the future.

nD Modelling Platform Grant at Salford

The University of Salford is currently leading a research programme, entitled ‘3D to nD modelling’. This project aims to enable and equip the design and construction industry with a tool that allows users to create, share, contemplate and apply knowledge from multiple perspectives of user requirements.

This research differs from other 4D modelling tools as its objective is to develop infrastructure, methodologies and technologies that will facilitate the integration of time, cost, buildability, accessibility, sustainability, maintainability, acoustics, lighting and thermal requirements.

The tool will allow construction professionals to perform true what-if analysis at a very early stage of a project, based on the manipulation and impact of changes to the aforementioned parameters, so that informed decisions can be made.

The project is funded for four years under the EPSRC (Engineering and Physical Sciences Research Council) at £0.5 million per year under a Platform Grant.

The three day nD Modelling international workshop held at the Mottram Hall, Manchester in January 2003, was a great success. It brought together more than fifty experts from industry and academia, to share their expertise and research experiences in nD modelling. A subsequent international workshop is also planned for 2005. Congratulations to Salford on their great achievement.

The University of Salford is currently leading a research programme, entitled ‘3D to nD modelling,’ that will leverage 3-dimensional computer modelling to integrate scheduling, costing, accessibility, crime, sustainability, maintainability, acoustics and energy simulation into a holistic building model, thus, to an almost infinite number of dimensions.

The project aims to aid the decision-making process by enabling true what-if analysis - It (Continued on page 10)
Research Tips: Part 1 - Writing a literature review

(Continued from page 7)

It is a good idea to use words, boxes and arrows to sort out your own view of these relationships, but do not reproduce these in the thesis. Such diagrams convey little to anyone else. So, structure the chapter according to your diagram, then dispose of the diagram.

One very important matter that is frequently done badly in the majority of published papers is name-dropping instead of useful citation. You will often see authors place a citation after a particular idea, so that they can denote where the idea came from. We all do it. But we tend to be sloppy about it. If we merely provide the citation, the reader has no idea what led the cited author to make the claim that we are attributing to him or her, nor any idea about the context in which the cited author stated it. Most pieces of writing contain observations made in passing, as well as major research findings. So a few words or a sentence about what the cited author did that led to this marvellous fact being quoted makes the argument a lot more persuasive.

For example, “Lorimer (1934) stated that scaffolding tends to be merely thrown up unless scaffold erectors are closely supervised” is nowhere near as persuasive as “Lorimer (1934), in a review of site diaries and accidents on 1626 building sites monitored in 1931-2, recorded poor supervision as a major factor in 27 out of 35 fatalities.”

The former approach requires the reader to go and find your source material, or to be left with the sense that this is not particularly convincing. The worst thing to do is to merely scatter citations through the text at the end of sentences. These tell your reader nothing about your understanding of past research or the relative strengths and weaknesses of different approaches to the problem.

In choosing what to review, use authoritative sources. Your work is only as good as these sources, so base it on good papers from refereed journals, not magazine articles. Peer reviewed material is better simply because the strength of the science is more likely to have been checked by someone who knows about the field. This includes sources that have been vetted by editors, referees, or funders. If you feel that there has been nothing written on your topic, then you are probably defining it too narrowly. Remember, it would be a strange piece of research if you were investigating a totally new field previously unknown to science. One way out of such a block is to think of topics that provide useful metaphors. Are there other industrial sectors in which this particular issue has been a problem? What is the general class of problem of which yours is a specific example? How would your question look if you applied a similar approach to a different academic discipline? By making these connections, you are more likely to come up with something that is more generalizable, a common aim in research.

References


Research Tips: Part 1 - Writing a literature review

In a research thesis, the purpose of a literature review chapter is to provide the context of your study. It should make clear that you have acquired an expertise in the subject, that you are aware of all the appropriate literature, and that you can use past research and other evidence to put together a logical and structured argument. It is usually quite useful if it concludes with the need for your study and some specific research objectives. The purpose of this article is to provide some advice and guidance about the mechanics of carrying out the literature review.

When you are reviewing research papers, allocate keywords to each paper. You should use your own keywords not the author’s. This is because your purpose is to review the literature that forms the context of your study. The author’s purpose was to provide indexing terms. Therefore, it is likely that you will want to develop and allocate your own keywords that will help you to develop your own understanding of the field. As you go through each successive research paper, you will need to introduce new keywords, especially at the outset of the study. This is a good thing to do, but you must re-check previous keyword allocations to see if the new keyword applies to papers that you have already looked at, or renders an older one redundant.

As well as allocating keywords to topics, try to also use keywords for describing the methods and data sources used in the research that you are reviewing.

For example, does the paper that you are reviewing report the results of a survey, a case study, a controlled experiment? Where was the data collection undertaken and when?

Using the word processor, make an alphabetical list of keywords and data sources used in the research that you are reviewing. Having undertaken an international review of contractor performance, the research has:

- defined ‘best practice’ for contractors and established criteria to evaluate contractor performance and practice in terms of construction cost, construction time, construction quality and sustainable development;
- developed a new research approach towards comparing international contractor performance based on a hypothetical construction project which maintains the comparability and representativeness of data;
- conducted a questionnaire survey among contractors in the three countries to collect information in regards to their performance and practices;
- identified the significant differences in contractor performance and practices between the three countries and revealed the possible causes for the disparities;
- developed six best practice performance models by means of multiple regression analysis.

The thesis concluded that there exist significant differences in contractor performance and practice between Japan, the UK and the US. Based on the practices of contractors in the three countries, factors significantly influencing contractor performance are identified and measures for performance improvement are recommended for contractors.

As you acquire the copies of papers that you find, take notes on everything that you read. Always begin with the full bibliographical record, and add your notes as you go. Reproduce the author’s abstract as well as your own notes, but ensure that you keep them separate. Include quotable quotes as you go. You might not use them again, but if you do, it can save an enormous amount of time later on if you know exactly where they came from (including page numbers). Make your own critical notes of the paper as well as your own summary of what it is about. Again, this will differ from the author’s summary or abstract, as your purposes are different. Use the questions from Hughes (2001) as a guide.

Once you have reviewed most of the papers that you have found, look for connections between the themes. The keywords that you have chosen will provide you with the main headings for your write-up. Those that crop up most frequently will probably form the main sections of the write-up. Draw “mind-maps” to show the links, looking for strong links between key ideas.