

DETAILS	TO BE FILLED IN BY STAFF MEMBER
Name	Prof Ammar Kaka
Designation	The William Watson Chair of Building Engineering & the Professor of Construction Economics and Management
Role (including modules taught)	Deputy Head of Campus Modules taught are Construction Financial Management Strategic Project Management Supervision of PhD's and MSc dissertations
Telephone number	+971 4 361 6997
Email address	A.P.Kaka@hw.ac.uk
School Duties	Leader of the Construction Management & Economics research group
Research Interests	<ul style="list-style-type: none"> - Financial management of construction projects and organisations (cash flow, cost control, budgeting, cost modelling, etc.). - Contracts and procurements (incentive based contracts, payment and pricing systems, innovative procurement routes). - Business management (Lean construction, benchmarking, process mapping and re-engineering). - Information technology and management (management information systems, computer vision, automated data capture).
Academic Biography	<p>Professor Kaka graduated in 1986 with an Honours degree in Civil Engineering at Salford University. He worked briefly in the construction industry before undertaking postgraduate research in Construction Financial Management at the University of Loughborough. On completion of his PhD in 1990, he joined Liverpool University as a lecturer, and was involved in a wide range of research and course development projects. He is currently Professor of Construction Economics and Management and the William Watson Chair at Heriot-Watt University and the Deputy Head of Campus in Heriot Watt Dubai.</p> <p>Professor AP Kaka has an international reputation for research on the assessment, planning and control of construction projects. Author of more than a hundred research papers, he has held many large funded research grants that led to the development of a Dynamic Cash Flow Forecasting model, mapping of projects' financial management processes and occupancy cost prediction model for buildings.</p> <p>He has led an EPSRC funded projects aimed at studying innovative project payment mechanisms in response to the Latham-Egan agenda. This effort is continuing with current EPSRC funded studies including the one aimed at the use of computer vision to automate the process of measuring and valuing work in progress. This project advances and complements the significant construction IT research that has taken place during the last two decades and in particular in the</p>

area of integrating design with planning and costing. The research proposes a system that captures and measures construction progress based on images taken using digital cameras.

Professor Kaka is currently leading and working on an SFC and an EPSRC funded research grants. The Scottish Funding Council project is aimed at developing a Best Practice Process Map and Supporting Tools for FE/HE funded construction Projects. This project involves the observation of the daily activities of a real construction project aimed at developing a campus for the joint use of HE and FE institutions. The research objective is to capture and map the actual project practices and by applying process performance measurement methodologies, a 'best practice process map' is being developed for use by other institutions that are planning to undertake similar projects. Whilst the research is focused on the education infrastructure, its impact and contribution to construction management research, and in particular process reengineering, performance measurement; change management and knowledge management are more profound. The EPSRC grant was awarded to develop cost benefit methodologies to apply on health care infrastructures. This is part of the Health and Care Infrastructure and Innovation Research Centre (HaCIRIC), a consortium that includes Imperial College, Salford, Loughborough and Reading Universities.

Professor Kaka's research is recognised internationally with its impact demonstrated by the extent of citation and direct industrial application. For example, the Corporate Planning Model for Construction Organisations (developed as a result of two EPSRC funded research projects) is currently being applied in a large construction organisation. The standard cost commitment benchmarks he developed for different types of construction projects have been used by the industry and software companies. His work on the development of cost/duration models has triggered off a series of other international studies (in Hong Kong, Malaysia and India) to benchmark project time performance in different countries against the UK.

Key publications

1. A. P. Kaka and A. Price (1991), Relationship between Value and Duration of Construction Projects. *Construction Management and Economics*. Vol. 9 pp. 383-400.
2. A. P. Kaka and A. Price (1993), Modelling Cost Commitment Curves for Cash Flow Forecasting. *Construction Management and Economics*. Vol.11, No. 4, pp271-283.
3. A. P. Kaka (1994), Contractors' Financial Budgeting using Computer Simulation. *Construction Management and Economics*, Vol 12, 113-124.
4. A. P. Kaka (1996), Towards More Flexible and Accurate Cash Flow Forecasting. *Construction Management and Economics*, January Vol.14, No.1 pp 35-44.
5. D. W. Cheetham, A. P. Kaka and G. Humphreys (1997). Development and Implementation of a System of Financial Planning and Control for a Medium Sized Building Contractor. *Journal of Financial Management of Property and Construction*, February, Vol. 2, No. 1, pp 5-34.R.
6. C. Evans and A. P. Kaka (1998), Analysis of the accuracy of

standard/average value curves using food retail building projects as case studies. *Engineering Construction and Architectural Management*, vol. 5 number 1, pp 58-67.

7. Kaka A. P. (1999). The development of a benchmark model that uses historical data for monitoring the progress of current construction projects. *Engineering Construction and Architectural Management*, vol. 6 number 3, pp 256-267
8. M. Hadwan, A. P. Kaka, M. Knight and D. Carter (2000). Application of photogrammetry in lighting calculations for obstructed interiors. *Journal of Lighting Research Technology* 32(1) pp. 13-17.
9. A. P. Kaka, J Lewis (2003) Development of a company-level dynamic cash flow forecasting model (DYCAFF). *Construction Management and Economics* Vol. 21 pp 693-705.
10. Trucco E and Kaka A P (2004) A framework for automatic progress assessment on construction sites using computer vision. *International Journal of IT in Architect, Engineering and Construction*, Vol. 2 (2) pp 147-164 ISSN 1570-7822
11. Blyth K. and Kaka A.P. (2006), A novel multiple Linear regression model for forecasting S-curves. *Engineering, Construction and Architectural Management*. Vol 31 No. 1, pp82-95. ISSN 0969-9988.
12. Chan, P and Kaka, A (2007) Productivity improvements: understand the workforce perceptions of productivity first. *Personnel Review*, special issue “includes special section on “understanding construction employment”, Vol 36 No. 4, pp 564-584. ISSN 0048-3486.
13. [David W. Cattell](#), [Paul A. Bowen](#), and [Ammar P. Kaka](#) (2007) Review of Unbalanced Bidding Models in Construction. *J. Constr. Engrg. and Mgmt.*, ASCE, Volume 133, Issue 8, pp. 562-573.

Other Interests

* If required, please attach photo as a separate image file.