



Third International Conference on

# **Construction in the 21<sup>st</sup> Century**

*Advancing Engineering, Management and Technology*

## **Conference Program**

**September 15-17, 2005**

**DIVANI CARAVEL HOTEL  
Athens, Greece**



# Contents

|                                       |           |
|---------------------------------------|-----------|
| <b>Welcome Message</b>                | <b>3</b>  |
| <b>Appreciation</b>                   | <b>4</b>  |
| <b>Conference Program at a Glance</b> | <b>5</b>  |
| <b>Keynote Speakers</b>               | <b>6</b>  |
| <b>Detailed Conference Program</b>    | <b>8</b>  |
| September 15-16, 2005                 | 8         |
| September 17, 2005                    | 14        |
| <b>Research Methods Workshop</b>      | <b>19</b> |
| <b>Committees</b>                     | <b>22</b> |
| <b>List of Participants</b>           | <b>24</b> |
| <b>Conference Venue Maps</b>          | <b>27</b> |

# *Welcome to* **CITC-III** **ATHENS 2005**

Welcome to the **Third International Conference on Construction in the 21<sup>st</sup> Century (CITC): *Advancing Engineering, Management and Technology*** organized by the Department of Construction Engineering & Management, Faculty of Civil Engineering of the **National Technical University of Athens** together with the Department of Construction Management and the Department of Civil & Environmental Engineering of **Florida International University**. In this conference we have put together an elaborate program with 152 papers covering almost all aspects of construction.

The mission of CITC III is to facilitate communication between multi-disciplinary teams and especially those involved in engineering, management and technology. In this regard, a plethora of academics, researchers, construction educators, industrialists, professionals and policy makers, participate in the conference and contribute with their knowledge and experience to develop thoughts and knowledge on a variety of issues facing construction. We sincerely hope that you will find this event beneficial to your profession and career and that you will use this opportunity to meet colleagues from around the world.

CITC-III is being held in Athens, the capital of Greece. In addition to monuments from a 5,000 years long history, Athens has a lot more to offer to its visitors: A wonderful climate and excellent beaches, exciting performances at the Athens Festival; splendid culinary experiences and an impressive variety of late night entertainment options. Being a host to the 2004 Olympic Games, the city enjoys a new high-tech infrastructure facilitating transportation by land, sea or air. Use the new metro, tram, motorways and airport to get to the places you want to live your myth in Greece!

We, from National Technical University of Athens and Florida International University, wish you a successful conference and a very pleasant stay in Greece.



John-Paris Pantouvakis  
General Chair CITC-III  
Department of Construction Engineering & Management,  
Faculty of Civil Engineering,  
National Technical University of Athens, Greece.



Syed M. Ahmed  
Program Chair CITC-III  
Department of Construction Management  
Florida International University  
Miami, Florida, USA



Irtishad Ahmad  
Technical Chair CITC-III  
Department of Construction Management  
Florida International University  
Miami, Florida, USA



Salman Azhar  
Coordinator CITC-III  
Department of Civil & Environmental Engineering  
Florida International University  
Miami, Florida, USA



Juan Zheng  
Assistant Coordinator CITC-III  
Department of Construction Management  
Florida International University  
Miami, Florida, USA

Third International Conference on Construction in the 21<sup>st</sup> Century:  
*Advancing Engineering, Management and Technology*  
**DIVANI CARAVEL HOTEL** Athens, Greece,  
A member of  
*The Leading Hotels of the World*  
September 15-17, 2005

## *Appreciation*

We appreciate the hard work and help of the following persons in the organization of this conference.

*Mr. Umut Artuk (USA)*

*Mr. Mario Berrios (USA)*

*Mr. Nick Kourbelis (Greece)*

*Dr. Sergios Lambropoulos (Greece)*

*Mr. Weihua Mao (USA)*

*Ms. Aarti Pandit (USA)*

*Mr. Konstantinos. Savvidis (Greece)*

*Dr. George Yannis (Greece)*

# *Conference Program at a Glance*

**September 15, 2005 (Thursday)**

| Time                | Room: Macedonia B              |
|---------------------|--------------------------------|
| 02:00 PM – 03:30 PM | Registration                   |
| 03:30 PM – 05:00 PM | Research Methods Workshop-I    |
| 05:00 PM – 05:30 PM | Coffee Break                   |
| 05:30 PM – 06:45 PM | Research Methods Workshop-II   |
| 07:00 PM – 08:30 PM | Welcome Drink and Registration |

**September 16, 2005 (Friday)**

| Time                | Room: Macedonia B                                       | Room: Naoussa                                       | Room: Edessa  | Room: Kozani                                     |
|---------------------|---|---|---|--|
| 09:00 AM – 09:30 AM | Registration  |   |   |  |
| 09:30 AM – 10:30 AM | Opening Ceremony  |   |   |  |
| 10:30 AM – 11:30 AM | Keynote Lecture 1, 2                                    |   |   |  |
| 11:30 AM – 12:00 AM | Coffee Break (Foyer, Divani Caravel Hotel)              |   |   |  |
| 12:00 AM – 1:30 PM  | <i>Session A1:</i><br>Cost and Financial Management-I   | <i>Session B1:</i><br>Project Management Issues-I   | <i>Session C1:</i><br>Information Technology & Information Systems-I  | <i>Session D1:</i><br>Construction Technology-I  |
| 01:30 PM – 02:45 PM | Lunch (Amalia Restaurant, Divani Caravel Hotel)         |   |   |  |
| 02:45PM – 04:15PM   | <i>Session A2:</i><br>Cost and Financial Management-II  | <i>Session B2:</i><br>Project Management Issues-II  | <i>Session C2:</i><br>Information Technology & Information Systems-II | <i>Session D2:</i><br>Construction Technology-II |
| 04:15 PM– 04:45 PM  | Coffee Break (Foyer, Divani Caravel Hotel)              |   |   |  |
| 04:45 PM – 07:00 PM | <i>Session A3:</i><br>Decision Making and Risk Analysis | <i>Session B3:</i><br>Project Management Issues-III | <i>Session C3:</i><br>Safety and Quality Management-I                 | <i>Session D3:</i><br>Sustainable Construction-I |
| 08:30 PM– 10:30 PM  | Banquet (Athens View Hall, Divani Caravel Hotel)        |   |   |  |

**September 17, 2005 (Saturday)**

| Time                | Room: Macedonia B  | Room: Naoussa                                      | Room: Edessa   | Room: Kozani  |
|---------------------|--|--|--|---|
| 09:30 AM – 10:30 AM | Keynote Lecture 3, 4   |  |  |   |
| 10:30 AM – 11:00 AM | Coffee Break (Foyer, Divani Caravel Hotel)                       |  |  |   |
| 11:00 AM – 01:15 PM | <i>Session A4:</i><br>Partnership and Contractual Issues-I       | <i>Session B4:</i><br>Project Management Issues-IV | <i>Session C4:</i><br>Information Technology & Information Systems-III | <i>Session D4:</i><br>Construction Technology-III                     |
| 01:15 PM – 02:30 PM | Lunch (Amalia Restaurant, Divani Caravel Hotel)                  |  |  |   |
| 02:30 PM – 04:30 PM | <i>Session A5:</i><br>Cost Engineering & Financial Issues        | <i>Session B5:</i><br>Project Management Issues-V  | <i>Session C5:</i><br>Safety and Quality Management-II                 | <i>Session D5:</i><br>Information Technology & Information Systems-IV |
| 04:30 PM – 05:00 PM | Coffee Break (Foyer, Divani Caravel Hotel)                       |  |  |   |
| 05:00 PM – 06:00 PM | Invited Presentation 1,2 - Panel Discussion and Closing Ceremony |  |  |   |

The conference will be held at the **Divani Caravel Hotel** [2, Vas, Alexandrou Ave., 161 21 Athens, Tel. (+30) 210 720 7000], Mezzanine floor. Please see the map on page 27 for directions or contact any of the conference organizers.

## *Keynote Speakers*

### *John Golias, Ph.D.*

National Technical University of Athens (NTUA)  
Secretary General, Ministry of Transportation & Communication  
Greece

**Paper Title:** Monitoring Infrastructure Development: The case of Greek Railway Network

**About the Speaker:** Professor John Golias was born in Thessaloniki, Greece, in 1954. He graduated from the National Technical University of Athens (NTUA) in 1977 with a diploma in Civil Engineering. His post-graduate studies include a Master of Science in Transport from the Imperial College of Science and Technology and a Ph.D. from the University College London. During his extensive experience, he has participated in a large number of transport studies and led numerous research projects. Since 2002 he holds a position as a professor in the Department of Transportation Planning & Engineering in the National Technical University of Athens. As of 2004 he holds the position of Secretary General of the Ministry of Transport and Communications.

### *Jimmie Hinze, Ph.D., PE*

Holland Professor  
Director, Fluor Program for Construction Safety  
M. E. Rinker, Sr. School of Building Construction  
University of Florida  
Gainesville, Florida, USA

**Paper Title:** Construction Safety in the 21<sup>st</sup> Century

**About the Speaker:** Jimmie Hinze, Ph.D., P. E. is a Professor in the M. E. Rinker, Sr. School of Building Construction and the Director of the Fluor Program for Construction Safety at the University of Florida. He received a B.S. and M.S. in Architectural Engineering from the University of Texas and a Ph.D. from Stanford University. He was previously a Professor of Civil Engineering at the University of Washington and also at the University of Missouri-Columbia. For the past 30 years, he has conducted research in a variety of construction-related topics, but primarily in the areas of construction safety. He has authored textbooks on construction safety, construction contracts and construction scheduling. He has written over a hundred articles and conference papers on construction safety.

### *Miles Shepherd*

Chairman of the Council, International Project Management Association (IPMA),  
Hon Senior Research Fellow, Bartlett School of Construction and Project Management  
University College London, London, UK, United Kingdom

**Paper Title:** Searching For Effective Project Managers Skills, Knowledge and Measurement

**About the Speaker:** Miles Shepherd has been involved with the management of projects for more than 30 years, first with the British Army and latterly with AEA Technology where he was a Senior Project Manager. He now runs his own consulting company. A long-standing member of the Association for Project Management, he was elected Chairman in 2001 and became Vice President in 2004. He was President of the International Project Management Association in 2003 and 2004, he is currently Chairman of the Council. He lectures on project management for the Open University in the United Kingdom, USA and Eastern Europe. He is a research supervisor with interests centring on the project manager as a

professional. He has acted as an industry specialist in project management for the validation of postgraduate programs at Bournemouth University and is an examiner in Project Management for the British Computer Society's Information System Examinations Board. He has chaired conferences on e-project management, the development of project management as a profession, the management of Government IT Projects and project management for the Public Sector. He is an assessor for the German Project Management Association's Excellence in Project Management Awards. His spare time interests are vintage motoring and hill walking.

***Ronald McCaffer, Ph.D., D.Sc.***

Deputy Vice-Chancellor and Leader of Construction Management Group  
of Department of Civil and Building Engineering  
Loughborough University  
Loughborough, UK

**Paper Title:** Managing Intangibles – The Latent Dimension for Achieving Project and Corporate Competitiveness in Construction

**About the Speaker:** Professor Ronald McCaffer is a renowned scholar and the Leader of Construction Management Group at Loughborough University, United Kingdom. He holds dual doctoral degrees, first from the Loughborough University of Technology (1978) and the second from the University of Strathclyde (1998). Professor McCaffer has over 25 years of research experience in the areas of estimating, tendering and procurement, strategic management, organizational management, knowledge management, and use of ICT in large scale engineering projects. He is the fellow of Royal Academy of Engineering, Institution of Civil Engineers, and the Chartered Institute of Building. He is also the editor of the International Journal of Engineering Construction and Architectural Management (ECAM).

# *Detailed Conference Program*

## **September 15, 2005**

|                     |  |
|---------------------|--|
| 02:00 PM – 03:30 PM | Registration (Foyer, Divani Caravel Hotel)       |
| 03:30 PM – 05:00 PM | Research Methods Workshop-I (Room: Macedonia B)  |
| 05:00 PM – 05:30 PM | Coffee Break (Foyer, Divani Caravel Hotel)       |
| 05:30 PM – 06:45 PM | Research Methods Workshop-II (Room: Macedonia B) |
| 07:00 PM – 08:30 PM | Welcome Drink and Registration                   |

## **September 16, 2005**

|                   |   |
|-------------------|---|
| 09:00AM – 09:30AM | Registration (Foyer, Divani Caravel Hotel)  |
| 09:30AM – 10:30AM | Opening Ceremony (Room: Macedonia B)<br>Welcome Remarks by Dr. John-Paris Pantouvakis, CITC-III General Chair |

### *Opening Speeches*

Prof. Th. Xanthopoulos, Deputy Minister of Public Works  
Prof. A.G. Andreopoulos, Rector, National Technical University of Athens  
Prof. C.I. Moutzouris, Chairman, Faculty of Civil Engineering, National Technical University of Athens

Introducing the CITC-III Conference by Dr. Syed M. Ahmed, CITC-III Program Chair

Note of Thanks & Introduction to Keynote Speakers by Dr. Irtishad Ahmad, CITC-III Technical Chair

|                   |  |
|-------------------|--|
| 10:30AM – 11:00AM | Keynote Lecture 1: Monitoring Infrastructure Development: The case of Greek Railway Network<br><i>Prof. John Golias, Ph.D.</i> |
| 11:00AM – 11:30AM | Keynote Lecture 2: Construction Safety in the 21 <sup>st</sup> Century<br><i>Prof. Jimmie Hinze, Ph.D., PE</i>                 |
| 11:30AM – 12:00AM | Coffee Break (Foyer, Divani Caravel Hotel)   |

## 12:00 AM – 1:30 PM Paper Presentations (Parallel Sessions-1)

### Session A1: Cost and Financial Management-I (Room: Macedonia B)

Session Chair: Professor. Dr. Rajan Sen, University of South Florida, Tampa, Florida, USA

- |          |             |  |
|----------|-------------|--|
| Paper 1. | 12:00-12:15 | Preventing corruption in Public Works—Rediscovering the function of surety bonding system<br><i>Xiaomei Deng</i>   |
| 7.       | 12:15-12:30 | A New Approach for Setting a Tunnel Excavation Tender Budget<br><i>Cleopatra Petroutsatou, Sergios Lambropoulos, and Nikolaos Rachaniotis</i>                          |
| 3.       | 12:30-12:45 | The Assessment of The Public Order's Tender<br><i>Jana Korytarova and Alena Ticha</i>  |
| 4.       | 12:45-01:00 | Prices of The Structural Works and Production Costs<br><i>Leonora Markova</i>  |
| 5.       | 01:00-01:15 | Cost Management Under Construction Management (CM) Contracts in The Case Of Large Building Projects in Finland<br><i>Juhani Kiiras, Pekka Huovinen and Matti Kruus</i> |
| 6.       | 01:15-01:30 | Vendor Selection in Construction Projects<br><i>Odyseus G. Manoliadis and Ioannis Tsolas</i>   |

### Session B1: Project Management Issues-I (Room: Naoussa)

Session Chair: Dr. Theo Haupt, Cape Peninsula University of Technology, South Africa

- |           |             |  |
|-----------|-------------|--|
| Paper 61. | 12:00-12:15 | Improving Organizational Performance of Construction Management Processes<br><i>Alfredo F. Serpell And Jaime Herdoiza</i>                                |
| 57.       | 12:15-12:30 | New Partnering Models and their Success Factors in the Swiss Construction Market<br><i>Gerhard Girmscheid</i>  |
| 63.       | 12:30-12:45 | Web-Based Information System for Project Monitoring<br><i>Serafeim Sakellaropoulos and Athanasios Chassiakos</i>   |
| 64.       | 12:45-01:00 | Sustainability and Performance of Projects<br><i>Odyseus Manoliadis and John-Paris Pantouvakis</i>   |
| 65.       | 01:00-01:15 | Comparing PMBOK to the Greek Construction Production Process<br><i>John-Paris Pantouvakis and Evgenia Voulgari</i>                                       |
| 66.       | 01:15-01:30 | Engineering and Construction Features of an Extremely Complicated Redevelopment Project in the Densely Built-Up Area of Hong Kong<br><i>Raymond Wong</i> |

### Session C1: Information Technology and Information Systems -I (Room: Edessa)

Session Chair: Dr. O.G. Manoliadis, Tech.Educ. Inst. of West Macedonia & PM-Greece, Greece

- |           |             |   |
|-----------|-------------|---|
| Paper 92. | 12:00-12:15 | Unleashing Innovation and Creativity Through Managing Knowledge in Supply Chains: Creating the Learning Chains<br><i>Tayyab Maqsood, Derek H.T. Walker, and Andrew D. Finegan</i> |
| 93.       | 12:15-12:30 | Innovative Application of Information Technology in China Construction Engineering Management: Status Quo, Question and Some Advice<br><i>Shang Chunjing and Liu Changbin</i>     |
| 94.       | 12:30-12:45 | A Self-Assessment Tool for Knowledge Management Implementation in the Construction Industry<br><i>Le Chen and Sherif Mohamed</i>  |
| 95.       | 12:45-01:00 | A Software Tool for the Life Cycle Management of Information Technology Projects in Construction: ProjectIT<br><i>Rodney A. Stewart</i>   |
| 96.       | 01:00-01:15 | Managing Inter-Enterprise Information Exchange in Construction Virtual Organizations<br><i>Abdul Samad Kazi</i>   |

97. 01:15-01:30 Evaluation of an Automatic Monitoring System of Surface Displacements at "Prinotopa" Landslide of Egnatia Odos  
*Konstantinos Lakakis*

**Session D1: Innovative Construction Technology and Techniques-I (Room: Kozani)**

*Session Chair: Dr. Emilia van Egmond, Eindhoven University of Technology, The Netherlands*

- Paper 12:00-12:15 New Erection Method and Nonlinear Analysis of Arch Shaped Space Structure with Multi-Directional Joint  
121. *Jin Woo Kim*
122. 12:15-12:30 Economic Aspects of Composite Beam using Trapezoidal WebProfiled Sections with Unequal Flange  
*Mahmood Md. Tahir, Thong Chin Mun, Shahrin Mohamad, and Nordin Yahya*
123. 12:30-12:45 Dealing with Construction Waste: Policies and Response  
*Emilia.L.C. van Egmond*
124. 12:45-01:00 Developing an Airy Timber Frame Wall  
*S.P.G Moonen*
125. 01:00-01:15 Role of Construction in the Poor Performance of Deck Panel Bridges  
*Atiq Alvi, Ivan Gualtero, Niranjana Pai, Rajan Sen and Gray Mullins*
126. 01:15-01:30 Analysis of Vibrations in Light-Weight Floor Systems  
*S.F.A.J.G. Zegers, F. Herwijnen, and N.A. Hendriks*

**01:30PM – 02:45PM Lunch (Amalia Restaurant, Divani Caravel Hotel)**

**02:45PM – 04:15PM Paper Presentations (Parallel Sessions-2)**

**Session A2: Cost and Financial Management-II (Room: Macedonia B)**

*Session Chair: Dr. Mohan M. Kumaraswamy, The University of Hong Kong, Hong Kong*

- Paper 02:45-03:00 Contribution of Czech Classification on West European Market  
2. *Tomas Hanak*
8. 03:00-03:15 The Social Discount Rate and Project Appraisal  
*K.P. Anagnostopoulos and F. Kalpakis*
9. 03:15-03:30 On the Strengths and Weaknesses of Real Options Analysis for Investment Decisions  
*K.P. Anagnostopoulos*
10. 03:30-03:45 Longest Path Time-Cost Analysis of Construction Projects with Generalized Activity Constraints  
*Athanasios P. Chassiakos*
11. 03:45-04:00 A Prototype System for the Prediction of Final Cost in Construction Projects  
*George Aretoulis*
12. 04:00-04:15 Efficiency Improvement of the Curtain Wall Construction through Its Life-Cycle Process  
*Yea-Sang Kim, Soon Oh Jung, Chang Duk Kim, and Jae Youl Chun*

**Session B2: Project Management Issues-II (Room: Naoussa)**

*Session Chair: Dr. K.P. Anagnostopoulos, Democritus University of Thrace & PM-Greece, Greece*

- Paper 02:45-03:00 Exploring Delays of Korea Express Railroad Project using Macro-Microscopic Approach  
67. *Sung Min Yun, Sang Hyuk Park and Seung Heon Han*
68. 03:00-03:15 Effect of National Culture on Construction Project Management  
*Peter Rutland*

69. 03:15-03:30 Policy Framework for Management of Physical Infrastructure In Pakistan  
*Sarosh Hashmat Lodi, Khalid Iqbal, Rizwan Ul Haque Farooqui and Sahibzada farooq Ahmad Rafeeqi*
70. 03:30-03:45 Factors for Implementation of Affordable Housing in Saudi Arabia  
*Sadi Assaf and Muhammed Mubashir Ali*
71. 03:45-04:00 The New Scottish Parliament Building – A Critical Examination of the Lessons to be Learned  
*Keith Potts*
72. 04:00-04:15 How Would the Management of Design Projects Change into the Future?  
*Francis Tekyi Edum-Fotwe and Antony Thorpe*

### **Session C2: Information Technology and Information Systems -II (Room: Edessa)**

*Session Chair: Dr. Tai Sik Lee, Hanyang University, Korea*

- Paper 02:45-03:00 The Application of OLAP Technology in Monitoring Construction Cost  
98. *Alexander Maravas, Alexandros Kallantzis and Sergios Lambropoulos*
99. 03:00-03:15 The Project Management Office a Centre of Knowledge Excellence?  
*Dale Christenson and Derek Walker*
100. 03:15-03:30 Using a Multiobjective Local Search Procedure for Construction Time-Cost Analysis  
*K.P. Anagnostopoulos and L. Kotsikas*
101. 03:30-03:45 Developing a Common “AEC” Extranet for Regional Networking of Professional Practice  
*Edwin H.W. Chan*
102. 03:45-04:00 An RFID-Based Supply Chain Management System for Curtain Walls  
*Su-Won Yoon, Sangyoon Chin, Yoon-Ki Choi, and Cheolho Choi*
103. 04:00-04:15 A Method of Retrieving Similar Construction Plans for Conpla-CBR (Construction Planning by CBR)  
*Han-Guk Ryu, Bo-Sik Son, and Hyun-Soo Lee*

### **Session D2: Innovative Construction Technology and Techniques-II (Room: Kozani)**

*Session Chair: Dr. Željko M. Torbica, Roger Williams University, Bristol, Rhode Island, USA*

- Paper 02:45-03:00 Rudiments of a New Foundation Concept  
127. *S.P.G. Moonen*
128. 03:00-03:15 CMU Elastomers and Window Safety Films: Innovative Retrofit Technologies for Airblast and Windload Protection  
*Kevin R.. Grosskopf and Abdol Chini*
129. 03:15-03:30 Reliability Construction of Multi-Story Reinforced Concrete Buildings  
*Toshihiko Yamamoto and Yamamoto*
130. 03:30-03:45 The Determination of Rut Susceptibility of Carbon Fiber Modified Asphalt Binders in Hot-Mix Asphalt  
*R..Christopher. Williams, Andrea. N. Kvasnak and Bruce R.. Wiljanen*
131. 03:45-04:00 Building Construction System with Recycled Materials  
*Naoto Mine and Hiroki Tsutsumi*
132. 04:00-04:15 Identifying Segregation in Asphalt Pavements Using Rapid, Non-Destructive Techniques  
*Scott Shuler, Andrew Creteau, and Kim Gilbert*

**04:15PM – 04:45PM Coffee Break (Foyer, Divani Caravel Hotel)**

## 04:45PM – 07:00PM Paper Presentations (Parallel Sessions-3)

### Session A3: Decision Making and Risk Analysis (Room: Macedonia B)

Session Chair: Dr. Sergios Lambropoulos, Nat. Tech. Univ. of Athens & Egnatia Odos S.A., Greece

- Paper 19. 04:45-05:00 Comparative Analysis of BOOT and BOT System for Project Delivery of Public Projects  
*Mihir J. Soneji and Chandrakant Bhuta*
20. 05:00-05:15 Key Management Decisions on the Route to Construction Project Success or Failure  
*Mladen Radujkovic and Maria Parova Ing*
21. 05:15-05:30 Risk Breakdown Structure for Construction Projects  
*Mladen Radujkovic and Ivana Burcar*
22. 05:30-05:45 Expert Views and Analysis of the New Yellow Book (Plant Contract)  
*Ayman H. Nassar*

#### 05:45-06:00 Short Break

23. 06:00-06:15 A DSS for Resource-Constrained Project Scheduling Under Uncertainty  
*Odysseus G. Manoliadis*
24. 06:15-06:30 Risk Management Analysis during Contract Preparation of Co-Financed Projects  
*K. C. Zapounidis, G. Kalfakakou, and B. A. Partsalidou*
25. 06:30-06:45 Construction Sector Risk Considerations on PPP Projects in Greece  
*Athena Roumboutsos, Konstantinos P. Anagnostopoulos and Antonios-Athanasios Milonas*
26. 06:45-07:00 Risk Management Process Applied on Motorway Service Areas  
*Petros Evgenikos and David J. Ling*

### Session B3: Project Management Issues-III (Room: Naoussa)

Session Chair: Dr. P.G. Ipsilandis, Technological Education Institute of Larissa & PM-Greece, Greece

- Paper 73. 04:45-05:00 Global Project Management: Pre-Project Planning for International Construction Projects  
*Scott W. Kramer and Hiliary H. Henderson*
76. 05:00-05:15 A Fuzzy Logic Approach to the Criticality in Scheduling  
*D.M. Emiris and D.E. Koulouriotis*
77. 05:15-05:30 A Multi Objective Linear Programming Model for Scheduling of Linear Repetitive Projects  
*Pandelis G. Ipsilandis*
78. 05:30-05:45 Multicriteria Construction Project Scheduling Method Using Evolutionary Algorithm  
*Anna Sobotka and kowski Piotr*

#### 05:45-06:00 Short Break

79. 06:00-06:15 Multicriteria Construction Project Scheduling Method - Practical Application  
*kowski Piotr and Anna Sobotka*
80. 06:15-06:30 Schedule Delay Analysis  
*Maria Petrov*
81. 06:30-06:45 Implementation of Methods in Architecture and Civil Engineering  
*Elmar Erdell and Udo Lindemann*
82. 06:45-07:00 Data Requirements Analysis of Construction Scheduling Methods  
*John-Paris Pantouvakis. and Elena Petroulopoulou*

### **Session C3: Safety and Quality Management-I (Room: Edessa)**

*Session Chair: Dr. G. Kalfakakou & Dr. G. Fotiadis, Aristotle Univ. of Thes/niki & PM-Greece, Greece*

- Paper 04:45-05:00 Predicting Safe Work Behaviour: The Case of Pakistan  
33. *Tauha H. Ali and Sherif Mohamed*
34. 05:00-05:15 Economic Aspects of Safety in the Construction Industry  
*Georgios D. Panopoulos and Richard T. Booth*
35. 05:15-05:30 The Health Status of Construction Workers  
*T.C. Haupt, Claire Deacon and John Smallwood*
36. 05:30-05:45 The Impact of Information and Communication Technology (ICT) on Construction Health and Safety (H&S) Knowledge Management  
*David Oloke, Hao Yu and David Proverbs*
- 05:45-06:00 Short Break**
37. 06:00-06:15 Smoke Control Systems at the Miami International Airport  
*Mario G Berrios, Juan Zheng and Weihua Mao*
38. 06:15-06:30 Quality Cultural Auditing for Construction Sites  
*S.L. Tang, Raymond T. Aoieong and M.H. Ng*
39. 06:30-06:45 Towards a Quality Management System in Construction  
*John Christian*
40. 06:45-07:00 The Confucianism Quality Management Philosophy in ISO9000 and Total Quality Management (TQM) in Hong Kong  
*Johnny Mok and Hebe How*

### **Session D3: Sustainable Construction-I (Room: Kozani)**

*Session Chair: Dr. S.L. Tang, The Hong Kong Polytechnic University, Hong Kong, China*

- Paper 04:45-05:00 Evaluating the Impact of Pressure and Leakage Management Strategies on Urban Water  
141. Systems: A Trial Study  
*Mark Girard and Rodney A.. Stewart*
142. 05:00-05:15 Performances of Double-Skin Envelopes in Mediterranean Areas  
*Francesco Fiorito and Paolo Pastore*
143. 05:15-05:30 Global Infrastructure as Counter Measures for Disaster Caused by Climate Change  
*Keizo Baba*
144. 05:30-05:45 Achieving Energy Conservation - The Role of Corporate Culture  
*Peter Rutland*
- 05:45-06:00 Short Break**
145. 06:00-06:15 Sustainable Engineering as a Tool for Improving the Manufactured Housing Industry within the United States  
*Donald D. Liou and G. Bruce Gehrig*
146. 06:15-06:30 Reducing Impact of Construction Operations on the Environment  
*Hazem Elzarka*
147. 06:30-06:45 Seismic Behaviour of Reinforced Concrete Columns with Rectangular Spiral Shear Reinforcement  
*Chris G. Karayannis and George M. Sirkelis*

### **End of Day 1 Presentations**

**08:30PM – 10:30PM Banquet (Athens View Hall, Divani Caravel Hotel)**

## September 17, 2005

- 09:30AM – 10:00AM      Keynote Lecture 3: Searching For Effective Project Managers Skills, Knowledge and Measurement  
*Miles Shepherd*
- 10:00AM – 10:30AM      Keynote Lecture 4: Managing Intangibles – The Latent Dimension for Achieving Project and Corporate Competitiveness in Construction  
*Prof. Ronald McCaffer*
- 10:30AM – 11:00AM      Coffee Break (Foyer, Divani Caravel Hotel)

### 11:00AM – 01:15PM Paper Presentations (Parallel Sessions 4)

#### Session A4: Partnership and Contractual Issues-I (Room: Macedonia B)

Session Chair: Dr. Sherif Mohamad, Griffith University, Australia

- |           |                    |   |
|-----------|--------------------|---|
| Paper 48. | 11:00-11:15        | Developing Main Contractors-Subcontractor Long-Term Relationships: Practice and Strategies<br><i>Patrick Zou</i>  |
| 49.       | 11:15-11:30        | Optimising Tender Process Outcomes through Effective and Efficient Organisational and Project Knowledge Identification and Capture<br><i>Andrew J. Wilson</i> |
| 50.       | 11:30-11:45        | Developing Public Private Partnership in Croatia - A Pilot Public Building Project<br><i>Sasa Marenjak, Vladimir Skendrovic, and Josip Cengija</i>            |
| 51.       | 11:45-12:00        | The Process of Partnering; Gluing Contracts, Organising and Financing Together<br><i>Christian Koch and Stefan Gottlieb</i>                                   |
|           | <b>12:00-12:15</b> | <b>Short Break</b>  |
| 52.       | 12:15-12:30        | Developing Public Private Partnerships in Denmark –The Role of Construction Firms in Networked Public Services<br><i>Christian Koch and Martine Buser</i>     |
| 53.       | 12:30-12:45        | Validating Specialist Task Organization (STO) Route through the Organization Theories and Empirical Studies<br><i>Adekunle Oyegoke</i>                        |
| 54.       | 12:45-01:00        | Management Contractor - At What Stage Should it be Appointed?<br><i>S.L. Tang and C.S. Chan</i>   |
| 55.       | 01:00-01:15        | A Research Framework for Comparing the Partnering Practices in Australia and Hong Kong<br><i>A.P.C. Chan, DWM Chan, LCN Fan, PTI Lam and JFY Yeung</i>        |

#### Session B4: Project Management Issues-IV (Room: Naoussa)

Session Chair: Anoo Sattineni, Auburn University, U.S.A.

- |           |             |   |
|-----------|-------------|---|
| Paper 83. | 11:00-11:15 | Leonardo da Vinci Programmes - Tools for Improvement of Construction Managers Mobility across European Union<br><i>Andrew Minasowicz and Paul Nowak</i> |
| 84.       | 11:15-11:30 | The Role of Continuing Professional Development (CPD) in Formal Higher Education<br><i>Paul Watson</i>  |

85. 11:30-11:45 Higher Education: A Global View of Construction through Study Abroad  
*Scott W. Kramer and Michael Hein*
86. 11:45-12:00 The Influence of Construction Management Work Experience on University Students' Academic Achievement  
*Scott W. Kramer*
- 12:00-12:15 Short Break**
87. 12:15-12:30 Proposal of a New Paradigm for Construction Management Education  
*Lincoln H. Forbes and Syed M. Ahmed*
88. 12:30-12:45 An Empirical Study on E-Learning for Construction Education  
*Patrick Zou*

#### **Session C4: Information Technology and Information Systems-III (Room: Edessa)**

*Session Chair: Dr. Abdul Samad Kazi, VTT, Finland*

- Paper 11:00-11:15 Data Exchange Technology and Database in Engineering Drawings  
105. *Algirdas Sokas*
106. 11:15-11:30 Supply Chains Management in Construction Procurement Systems  
*Anna Sobotka and Agata Czarnigowska*
107. 11:30-11:45 A Survey on E-Government in Chinese Construction Industry  
*Shang Chunjing and Liu Changbin*
108. 11:45-12:00 Supply Chain Management in Monolithic Works  
*Zygmunt Orłowski*
- 12:00-12:15 Short Break**
109. 12:15-12:30 Integrated Process-Oriented Selection Method for the Most Efficient Construction Techniques  
*Bernhard Schaiter and Gerhard Girmscheid*
110. 12:30-12:45 A Strategic Approach to Bridging the Gap between Global Digital Construction and the Low-Tech Third World: An Overview  
*Wilfred Masuwa Matipa and Nguesso Pandawe*
111. 12:45-01:00 Studies of Emergency Management Procedures in Greece Italy and UK  
*Eleana Asimakopoulou, Chimay J ANumba and Dino Bouchlaghem*

#### **Session D4: Innovative Construction Technology and Techniques-III (Room: Kozani)**

*Session Chair: Prof. Ronald Baier, Florida International University, USA*

- Paper 11:00-11:15 A Computational Proposal for the Efficient Use of the Rapid Tunnel Excavation Approach  
133. *D.M. Emiris, D.K. Paterakis, and D.E. Koulouriotis*
134. 11:15-11:30 Siphon and Submerge Pipeline, Design and Behaviour using the Reptile  
*Afshin Turk and Shabnam Ghanavatzadeh*
135. 11:30-11:45 Effect of Soil Stabilization on California Bearing Ratio and Pavement Construction Cost  
*Saad Abo-Qudais and Naseem Matalaka*
136. 11:45-12:00 K-Nut Factor of High Strength Bolts  
*Khairedin M. Abdalla*
- 12:00-12:15 Short Break**
131. 12:15-12:30 Building Construction System with Recycled Materials  
*Naoto Mine and Hiroki Tsutsumi*
138. 12:30-12:45 Hurricane Survivability for Underrepresented Populations Living in Manufactured Housing  
*Kevin R.. Grosskopf and Abdol Chini*

**1:15PM – 02:30PM Lunch (Amalia Restaurant, Divani Caravel Hotel)**

**02:30PM – 04:30PM Paper Presentations (Parallel Sessions-5)**

**Session A5: Cost Engineering and Financial Issues (Room: Macedonia B)**

*Session Chair: Dr. Mohammed E. Haque, Texas A&M University, USA*

- |           |             |  |
|-----------|-------------|--|
| Paper 13. | 02:30-02:45 | Support Tool for Comparable Life Cycle Oriented Decision<br><i>Michael J. Kapp and Gerhard Girmscheid</i>  |
| 14.       | 02:45-03:00 | Lifecycle Oriented Construction and Maintenance of Traffic Tunnels – Strategy Assessment to Develop Tunnel Drainage Systems with Low Calcification and Minimal Required Maintenance<br><i>Tobias Gamisch and Gerhard Girmscheid,</i> |
| 15.       | 03:00-03:15 | PPP in Switzerland - Economic Comparison for Street Maintenance and Rehabilitation Delivery Models<br><i>Jennifer Dreyer and Gerhard Girmscheid</i>  |
| 16.       | 03:15-03:30 | Reducing Overruns In a Volatile AEC/FM Market: Can Vendor Planning and Estimating Software Help?<br><i>Wilfred Masuwa Matipa</i>   |
| 17.       | 03:30-03:45 | An Experimental Investigation on Aggregate Gradation and W/C ratio on Strength and Cost Effectiveness of Concrete<br><i>Sunil Kumar Thattanappillil and Mohammed E. Haque</i>  |
| 18.       | 03:45-04:00 | Expected Reduction in Workers' Compensation Claims for Owner Controlled Insurance Programs<br><i>Gouranga Banik and Frank J. Bickerstaff</i>   |
| 27.       | 04:00-04:15 | An AHP Model for Construction Contractor Prequalification<br><i>K.P. Anagnostopoulos and A. Vavatsikos</i>   |
| 28.       | 04:15-04:30 | Contractors' Pricing For Time-Related Contract Risks At The Tendering Stage<br><i>Maria C.Y. Au and Edwin H. W. Chan</i>   |

**Session B5: Project Management Issues-V (Room: Naoussa)**

*Session Chair: Professor Albert P.C. Chan, Hong Kong Polytechnic University, Hong Kong*

- |           |                    |   |
|-----------|--------------------|---|
| Paper 56. | 02:30-02:45        | Relational Contracting Culture and Teambuilding Prospects and Perspectives in Singapore<br><i>Motiar Rahman and Mohan M. Kumaraswamy</i>  |
| 62.       | 02:45-03:00        | Learning From Failures in Operations<br><i>Christian Koch</i>   |
| 58.       | 03:00-03:15        | A Study into the Use of On-Line Tendering and E-Procurement in the Construction Procurement Process<br><i>Pauline Corbett and Rodney Moulder</i>                                |
| 59.       | 03:15-03:30        | A Survey of the Use of KPI to Augment Current Evaluation Criteria of Projects<br><i>Tik Sang Leung and Francis T Edum-Fotwe</i>   |
|           | <b>03:30-03:45</b> | <b>Short Break</b>  |
| 29.       | 03:45-04:00        | Profit Forecasting Model for International Projects Using Multiple Regression Analysis and Neural Networks<br><i>Duyon Kim, Sangmin Yeom, Seung Heon Han, and Myungjin Chae</i> |
| 30.       | 04:00-04:15        | Analysis of Discontinuous Housing Prices<br><i>Xin Janet Ge, G. Runeson., and A.Y.T. Leung</i>  |
| 31.       | 04:15-04:30        | Chosen Techniques of Risk Analysis in Construction<br><i>Andrzej Minasowicz and Jacek Zawistowski</i>   |

### **Session C5: Safety and Quality Management-II (Room: Edessa)**

*Session Chair: Dr. Derek H.T. Walker, RMIT University, Australia*

- |           |                    |   |
|-----------|--------------------|---|
| Paper 41. | 02:30-02:45        | Analysis of Smoke Control Systems at Airports<br><i>Mario G. Berrios, Juan Zheng and Weihua Mao</i>   |
| 42.       | 02:45-03:00        | Noise Generated by Construction Power Tools<br><i>Jimmie Hinze</i>  |
| 43.       | 03:00-03:15        | Improving Efficiency of Materials Management Using CDPM Methodology<br><i>Kashif ul Asad Mohammed and Sadi Assaf</i>  |
| 44.       | 03:15-03:30        | Impact of Organisational Size and Maturity on Implementation of TQM: Empirical Findings from the UK Construction Related SMEs<br><i>Nicholas Chileshe and Paul Watson</i> |
|           | <b>03:30-03:45</b> | <b>Short Break</b>  |
| 45.       | 03:45-04:00        | Critical Success Factors of TQM: Regression Analysis versus Structural Equation Modeling Approach<br><i>Nicholas Chileshe</i>   |
| 46.       | 04:00-04:15        | Impact of Contract Language on Implementation of TQM in the Building Construction Industry<br><i>Hazem Elzarka</i>  |
| 47.       | 04:15-04:30        | A Survey on the Employee Satisfaction and Productivity in the A/E/C Industries<br><i>Željko M. Torbica and Jeannette M. Rivera</i>  |

### **Session D5: Information Technology and Information Systems-IV (Room: Kozani)**

*Session Chair: Prof. Mladen Radujkovic, University of Zagreb, Croatia*

- |            |                    |  |
|------------|--------------------|--|
| Paper 112. | 02:30-02:45        | Automatic Integration of Construction Images using Digital Imaging and Pattern Recognition Tools<br><i>Ioannis K. Brilakis</i>   |
| 113.       | 02:45-03:00        | Framework of Construction Management Task Map for Integrated Project Management Systems<br><i>Boong-yeol Ryoo and Ronald Baier</i>                                       |
| 114.       | 03:00-03:15        | Interoperability in Construction Software Solutions: Re-Inventing Web Based Project Management<br><i>Anoop Sattineni</i>   |
| 115.       | 03:15-03:30        | Charting the Future of RTD in Construction IT<br><i>Abdul Samad Kazi</i>   |
|            | <b>03:30-03:45</b> | <b>Short Break</b>   |
| 116.       | 03:45-04:00        | Information and Communication Technology: Organisational and Supply Chain Adoption and Diffusion - An Australian Case Study<br><i>Andrew J. Wilson and Graham Brewer</i> |
| 117.       | 04:00-04:15        | Strategy of Project Management Information System for Subcontractor<br><i>Tai Sik Lee, Young Hyun Kim, and Ja Kyung Koo</i>  |
| 32.        | 04:15-04:30        | Quantitative Risk Management Model for Life-Cycle Oriented General Contractors<br><i>Thorsten A. Busch and Gerhard Girmscheid</i>  |

**04:30PM – 05:00PM**

**Coffee Break (Foyer, Divani Caravel Hotel)**

**05:00PM – 06:00PM            Invited Presentations, Panel Discussion and Closing Ceremony**

- 05.00-05.15    *Invited Presentation 1: Presentation of the Hellenic Construction Economics Institute  
Hellenic Construction Economics Institute*
- 05.15-05.30    *Invited Presentation 2: Athens Metro base project and extensions - Project structuring and  
management characteristics  
George Leoutsakos*
- 05.30-06.00    Panel Discussion and Closing Ceremony

**End of Day 2 Presentations**

(Please see the map on page 27 for directions or contact any of the conference organizers)

# ***Research Methods Workshop***

**(September 15, 2005; 3:30 PM - 6:45 PM)**

## **Introduction to Action Research**

An essential part of our academic professional life is consulting. It enables us to actually practice what we teach, keep in touch with the “real world” not to speak of enhancing our income. Just about everyone of us engage in consulting projects, so much so that some of us come under criticism for being too involved in consulting and thereby seemingly ignoring research.

It does not necessarily have to be so. What many of us are unaware is that consulting projects provide us with excellent opportunities for doing research. The perfect research approach for doing so is ***action research***. The essential features are:

- action research is building/testing theory within context of solving an immediate practical problem in real setting
- thus it combines theory and practice, researchers and practitioners, and intervention and reflection
- collaboration with practitioners and their learning is vital. Both, the researcher and the practitioner emerge with enhanced learning.
- action research is not consulting: it is action, but still research

This workshop will provide you with the knowledge and skills necessary to develop and conduct a research study using action research approach. Conducting research often involves a series of trade-offs. This workshop will help you understand the consequences and implications of these trade-offs so that you can make informed and defensible choices of research methods and approaches.

## **Research Methods Workshop – “Soft approaches”**

An essential part of action research is evaluation of both the action and the learning from a research project. Almost by definition, such evaluation often requires a “*soft*” or “qualitative” approach. Additionally, many research questions in construction management are not suited for the traditional “hard”/quantitative approaches. This workshop will focus on an alternate, “soft” approach.

The essential features are:

- Use of qualitative data
- Various degrees of researcher involvement
- Inductive (most often)
- Research process not ‘fixed’ - acceptable to follow new leads
- Focus on context
- Holistic view
- Interpretive analysis
- Iterative data analysis

This workshop will provide you with the knowledge and skills necessary to develop and conduct a research study using soft approach. You will learn about specific methods including case study and ethnography and data collection methods such as interviews, document analysis and observation.

## **Program at a glance (September 15, 2005)**

### **Session 1: Action research in construction management (3:30 PM - 5:00 PM)**

#### **Objectives:**

- To understand the basic philosophical foundation of action research
- To understand the process and practical aspects of action research

#### **Readings and Material:**

- Lecture notes (power point slides)
- Baskerville, R. "Investigating information systems with action research", (A tutorial on how to do action research)
- Avison, D., Lau, F., Myers, M., Nielsen, P.A. "Action research", *Communications of the ACM*, 42, (1999), 94-97

#### **Other useful sources and readings:**

- Baskerville, R.L. and Wood-Harper, A.T. (1996). A critical perspective on action research as a method for information systems research, *Journal of Information Technology* (11), pp. 235-246.
- Chisholm, R.F. and Elden, M. (1993). Features of emerging action research, *Human Relations* (46:2), pp. 275-298.
- Hult, M. and Lennung, S-A. (1980). Towards a definition of action research: A note and bibliography, *Journal of Management Studies*, May, pp. 241-250.
- Rapoport, R.N. (1970). Three dilemmas in action research, *Human Relations*, (23:4), pp. 499-513
- Reason, P. & H. Bradbury (2001). *Handbook of Action Research: Participative Inquiry & Practice*. Sage Publications, London, 2001.
- Susman, G. I. & R. D. Evered, (1978). An assessment of the scientific merits of action research. *Administrative Science Quarterly*, 23:582–603.

### **Coffee Break (5.00 PM - 5:30 PM)**

### **Session 2: Soft approaches to research in construction management (5:30 PM - 6:45 PM)**

#### **Objectives:**

- To establish a general overview of different varieties of "soft" approaches and their role in construction management research
- Get a more detailed understanding of case studies
- To understand the difference between single case studies (within-case analysis) and multiple case studies (between-case analysis)
- To understand ethnographic research
- To understand the criteria for judging soft research

#### **Readings and Material:**

- Lecture notes (power point slides)
- Handouts
- Dube, L. and Robey, D. "Software stories: Three cultural perspectives on the organizational practices of software development", *Accounting, Management and Information Technologies*, 9, 1999, 223-259
- Myers, M.D. "Investigating information systems with ethnographic research", *Communications of the AIS*, 2, Article 23, (1999)

#### **Other useful sources and readings:**

- *Qualitative Research in Information Systems*, Myers, M.D. (editor)
- *Several handbooks are useful for example:*
- Denzin & Lincoln (2000). *Handbook of Qualitative Research*.
- Miles & Huberman (1994). *Qualitative data analysis: an expanded sourcebook*.
- Yin (1994). *Case study research: design and methods*

**Maung K. Sein** is Professor of Information Systems (IS) at Agder University College (AUC), Norway. A Ph.D. graduate from Indiana University, USA, he has served at Georgia State University, Florida International University, Indiana University (all in USA) and University of Bergen (UB, Norway). His current research interests are IT and national development and IT in public sector and e-Government. He has conducted research in end-user training, human-computer interaction, conceptual database design, systems development methods, data warehousing, computer personnel, and IS management. He has published widely in such prestigious journals as *Information Systems Research*, *Management Information Systems Quarterly (MISQ)*, *Communications of the Association of Computing Machinery (CACM)*, and *Human Computer Interaction* and presented his research around the world. He has also published in *Construction Management and Economics*. He has or is serving on editorial boards of *MISQ*, *MISQ Executive*, *Communication of the Association of Information Systems*, and *E-Service Journal* and guest-edited *CACM*. He has chaired conferences and served on program committees of several international conferences.

Professor Sein currently teaches research method courses at AUC and in doctoral programs in Denmark and Finland. He has lectured widely on different aspects of research methods such as research approaches and their philosophical paradigms. He has conducted workshops and seminars and lectured on research methods at several universities in USA, Norway, Finland, Denmark and Tanzania.

# *Committees*

## **Organizing Committee**

- *Dr. John-Paris Pantouvakis*, General Chair CITC-III, Department of Construction Engineering & Management, Faculty of Civil Engineering, National Technical University of Athens (NTUA), Greece
- *Dr. Syed M. Ahmed*, Program Chair CITC-III, CM Dept., Florida International University, USA
- *Dr. Irtishad Ahmad*, Technical Chair CITC-III, CM Dept., Florida International University, USA
- *Salman Azhar*, Coordinator CITC-III, CEE Dept., Florida International University, USA
- *Juan Zheng*, Assistant Coordinator, CITC-III, CM Dept, Florida International University, USA

## **Advisory Committee**

- *Prof. Abdol R. Chini*, Director and Holland Professor, Rinker School of Building Construction, University of Florida, USA
- *Prof. John Golias*, National Technical University of Athens (NTUA) & Secretary General, Ministry of Transportation & Communication, Greece
- *Prof. Amir Mirmiran*, Chair, Department of Civil and Environmental Engineering, Florida International University (FIU), Miami, FL, USA
- *Dr. Brain C. Moore*, Southern Polytechnic State University, Georgia, USA
- *Prof. Constantinos I. Moutzouris*, Chairman of the Faculty of Civil Engineering, National Technical University of Athens (NTUA), Greece
- *Prof. Ronald McCaffer*, Loughborough University, UK
- *Dr. S. L. Tang*, Hong Kong Polytechnic University, Hong Kong

## **Greek Scientific and Organizing Committee**

- *Dr. Konstantinos P. Anagnostopoulos*, Democritus University of Thrace (DUTH)
- *Dr. Athanasios Chassiakos*, University of Patras
- *Dr. George Fotiadis*, Aristotle University of Thessaloniki (AUTH)
- *Dr. Charis Gantes*, National Technical University of Athens (NTUA)
- *Dr. Pantelis G. Ipsilantis*, Technological Education Institute of Larissa
- *Dr. Glykeria Kalfakakou*, Aristotle University of Thessaloniki (AUTH)
- *Dr. Mathios Karlaftis*, National Technical University of Athens (NTUA) & Vice-President of the Athens Urban Transport Organisation - State Representative
- *Prof. Vlasis Koumoussis*, National Technical University of Athens (NTUA)
- *Dr. Demitris Koutsogiannis*, National Technical University of Athens (NTUA)
- *Dr. Sergios Lambropoulos*, National Technical University of Athens (NTUA) & General Manager Egnatia Odos S.A.
- *Prof. Demetrios Panagiotakopoulos*, Democritus University of Thrace (DUTH)
- *Prof. Viron Papathanasiou*, Aristotle University of Thessaloniki (AUTH)
- *Dr. Kostas Rokos*, National Technical University of Athens (NTUA)
- *Prof. John Siskos*, University of Pireaus
- *Dr. Dimitris Tsamboulas*, National Technical University of Athens (NTUA)
- *Dr. G. Yannis*, National Technical University of Athens (NTUA) & Chairman of the BoD Attiko Metro A.E.

## International Scientific Committee

- *Dr. Vasantha Abeysekera*, Unitec New Zealand, New Zealand
- *Dr. Luis F. Alarcón*, Universidad Católica de Chile, Chile
- *Dr. Gouranga Banik*, Southern Polytechnic State University, USA
- *Prof. Elias Carayannis*, George Washington University, USA
- *Prof. Albert P.C. Chan*, Hong Kong Polytechnic University, Hong Kong
- *Mr. Mark W. Cohen*, The Nielsen-Wurster Group, Inc., Princeton, NJ, USA
- *Dr. Jesus M. de la Garza*, Program Director, CMS, National Science Foundation, Professor of Construction Engineering & Management, Virginia Polytechnic University, USA
- *Dr. Francis Edum-Fotwe*, Loughborough University, UK
- *Dr. David Edwards*, Loughborough University, UK
- *Dr. Emilia, L.C. van Egmond*, Eindhoven University of Technology, Netherlands
- *Dr. Lincoln H. Forbes*, Miami-Dade County Schools Office, USA
- *Dr. Rainer Gilich*, University 'Eftimie Murgu', Romania
- *Prof. A. R. Ghumman*, Taxila University of Engineering and Technology, Pakistan
- *Prof. Colin Gray*, University of Reading, UK
- *Dr. Mohammed E. Haque*, Texas A& M University, USA
- *Dr. Makarand Hastak*, Purdue University, USA
- *Dr. Theodore C. Haupt*, Peninsula Technikon, South Africa
- *Prof. Tarek Hegazy*, University of Waterloo, Canada
- *Dr. Keith Jones*, University of Greenwich, UK
- *Prof. Ammar Kaka*, Heriot-Watt University, UK
- *Dr. M. A. Kamal*, University of Engineering and Technology, Taxila, Pakistan
- *Dr. Dean Kashiwagi*, Arizona State University, USA
- *Dr. Malik M. A. Khalfan*, University of Salford, UK
- *Dr. Moustafa Khatab*, Colorado State University, USA
- *Dr. Christian Koch*, Denmark Technical University, Denmark
- *Dr. Mohan Kumaraswamy*, University of Hong Kong, Hong Kong
- *Prof. David Langford*, Strathclyde University, UK
- *Prof. Tai Sik Lee*, Hanyang University, Korea
- *Prof. Heng Li*, Hong Kong Polytechnic University, Hong Kong
- *Prof. Sarosh H. Lodi*, NED University of Engineering and Technology, Pakistan
- *Prof. Peter Love*, Edith Cowan University, Australia
- *Prof. Saverio Mecca*, University of Florence, Italy
- *Dr. Sherif Mohamad*, Griffith University, Australia
- *Dr. Paul Nowak*, Warsaw University of Technology, Poland
- *Prof. Mark O'Brien*, University of Akureyri, Iceland
- *Prof. Stephen Ogunlana*, Asian Institute of Technology, Thailand
- *Prof. Maung K. Sein*, Agder University College (AUC) and University of Bergen (UB), Norway
- *Dr. Khalid Siddiqi*, Southern Polytechnic State University, USA
- *Dr. Amarjit Singh*, University of Hawaii, Honolulu, USA
- *Prof. Mirosław Skibniewski*, Purdue University, USA
- *Prof. Zeljko M. Torbica*, Roger Williams University, USA
- *Dr. Jorge Vanegas*, Georgia Institute of Technology, USA
- *Prof. Derek H.T. Walker*, RMIT, Australia
- *Prof. Shou Qing Wang*, Tsinghua University, China
- *Dr. Yimin Zhu*, Florida International University, USA

## *List of Participants*

|                          |  |
|--------------------------|--|
| Abdalla, Khairedin M.    | Jordan University of Science and Technology, Jordan          |
| Abo-Qudais, Saad A.      | Jordan University of Science and Technology, Jordan          |
| Ahmad, Irtishad U.       | Florida International University, USA                        |
| Ahmed, Syed M.           | Florida International University, USA                        |
| Akbiyikli, Rifat         | Univesity of Salford, UK                                     |
| Ali, Muhammed Mubashir   | King Fahd University of Petroleum and Minerals, Saudi Arabia |
| Anagnostopoulos, K.P.    | Democritus University of Thrace & PM-Greece, Greece          |
| Anagnostopoulos, P.      | Hellenic Construction Economics Institute, Greece            |
| Andreopoulos, Andreas    | National Technical University of Athens, Greece              |
| Aretoulis, Georgios      | Aristotle University of Thessaloniki, Greece                 |
| Asad, Mohammed Kashif UI | King Fahd University of Petroleum and Minerals, Saudi Arabia |
| Asimakopoulou, Eleana    | Loughborough University, UK                                  |
| Azhar, Salman            | Florida International University, USA                        |
| Baba, Keizo              | Kochi University of Technology, Japan                        |
| Baier, Ronald A.         | Florida International University, USA                        |
| Berrios, Mario           | Florida International University, USA                        |
| Bhuta, Chandrakant       | Victoria University, Australia                               |
| Brilakis, Ioannis K.     | Universiy of Michigan Ann Arbor, USA                         |
| Buser, Martine           | Technical University of Denmark, Denmark                     |
| Chan, Albert P.C.        | The Hong Kong Polytechnic University, Hong Kong              |
| Chan, Edwin H.W.         | The Hong Kong Polytechnic University, Hong Kong              |
| Chassiakos, Athanasios   | University of Patras, Greece                                 |
| Chin, Sang-Yoon          | Sungkyunkwan University, Korea                               |
| Choi, Yoon-Ki            | Soonsil University, Korea                                    |
| Christian, John          | University of New Brunswick, Canada                          |
| Chunjing, Shang          | Jiao Tong University, China                                  |
| Corbett, Pauline         | University Of Wolverhmapton, UK                              |
| Davis, Richard           | Sheefield Hallam University, UK                              |
| Deng, Xiao mei           | Tsinghua University, China                                   |
| Dreyer, Jennifer         | Swiss Federal Institute of Technology Zurich, Switzerland    |
| Edum-Fotwe, Francis T.   | Loughborough University, UK                                  |
| Egmond, Emilia van       | Eindhoven University of Technology, Netherlands              |
| Elzarka, Hazem           | University of Cincinnatti, USA                               |
| Emiris, D.M.             | University of Piraeus & PM-Greece, Greece                    |
| Erdell, Elmar            | Technische Universität München, Germany                      |
| Evgenikos, Petros        | National Technical University of Athens, Greece              |
| Fiorito, Francesco       | Politecnico Di Bari, Italy                                   |
| Forbes, Lincoln H.       | Miami-Dade County Schools, USA                               |
| Fotiadis, G.             | Aristotle University of Thessaloniki & PM-Greece, Greece     |
| Gamisch, Tobias          | Swiss Federal Institute of Technology Zurich, Switzerland    |
| Ge, Janet Xin            | UNITEC New Zealand, New Zealand                              |
| Gehrig, G. Bruce         | University of North Carolina at Charlotte, USA               |
| Giannaros, I.            | Hellenic Construction Economics Institute, Greece            |
| Girmscheid, Gerhard      | Swiss Federal Institute of Technology Zurich, Switzerland    |
| Golias, John             | National Technical University of Athens, Greece              |
| Grosskopf, Kevin R.      | University of Florida, USA                                   |
| Han, Seung Jeon          | Yonsei University, Korea                                     |
| Hanak, Tomas             | Brnu University of Technology, Czech Republic                |
| Haque, Mohammed E.       | Texas A&M University, USA                                    |
| Haupt, Theodore C.       | Cape Peninsula University of Technology, South Africa        |

|                           |   |
|---------------------------|---|
| Hinze, Jimmie             | University of Florida, USA  |
| Ipsilandis, Pandelis      | Technological Education Institute of Larissa & PM-Greece, Greece    |
| Janjua, Nazar Sadiq       | M/S Big Construction Co., Pakistan                                  |
| Jaskowski, Piotr          | Lublin University of Technology, Poland                             |
| Juodis, Arvydas           | Kaunas University of Technology, Lithuania                          |
| Kalfakakou, G.            | Aristotle University of Thessaloniki & PM-Greece, Greece            |
| Kallianis, D.             | National Technical University of Athens & PM-Greece, Greece         |
| Kalpakis, Fanourios       | Democritus University of Thrace, Greece                             |
| Kapp, Michael J.          | Swiss Federal Institute of Technology Zurich, Switzerland           |
| Karagiannis, Christos     | Democritus University of Thrace, Greece                             |
| Karandinos, H.            | PM-Greece, Greece   |
| Kashiwagi, Dean           | Arizona State University, USA                                       |
| Katsarelis, Triantafyllos | National Technical University of Athens & PM-Greece, Greece         |
| Katsibokis, Mihalis       | Hellenic Open University, Greece                                    |
| Kazi, Abdul Samad         | VTT, Finland  |
| Kim, Chang Duk            | Kwang Woon University, Korea  |
| Kim, Du Yon               | Yonsei University, Korea  |
| Kim, Jin Woo              | Gyeongsang National University, Korea                               |
| Kim, Yea Sang             | Sungkyunkwan University, Korea                                      |
| Koch, Christian           | Technical University of Denmark, Denmark                            |
| Korytanova, Jana          | Brnu University of Technology, Czech Republic                       |
| Kotsikas, Lazaros         | Democritus University of Thrace, Greece                             |
| Kourbelis, Nick           | National Technical University of Athens, Greece                     |
| Kramer, Scott W.          | Auburn University, USA  |
| Kumaraswamy, Mohan M.     | The Unuversity of Hong Kong, Hong Kong                              |
| Lakakis, Kostas           | Aristotle University of Thessaloniki, Greece                        |
| Lambropoulos, Sergios     | National Technical University of Athens & Egnatia Odos S.A., Greece |
| Latvala, Paula            | TKK, Finland  |
| Leoutsakos, George        | Attiko Metro A.E., Greece   |
| Malik, Khalid Mehmood     | Department of Public Works, Pakistan                                |
| Manoliadis, Odysseus G.   | Technological Education of West Macedonia & PM-Greece, Greece       |
| Maravas, Alexandros       | Egnatia Odos S.A., Greece   |
| Marenjak, Sasa            | Croatian Institut for Bridge and Structural Engineering, Croatia    |
| Markova, Leonora          | Brnu University of Technology, Czech Republic                       |
| Matipa, Wilfred M.        | University of Central Lancashire, UK                                |
| McCaffer, Ronald          | Loughborough University, UK   |
| Memon, Zubair Ahmed       | University Technology Malaysia, Malaysia                            |
| Mentizi, Petroula         | Egnatia Odos S.A., Greece   |
| Minasowicz, Andrzej       | Warsaw University of Technology, Poland                             |
| Mine, Naoto               | The University of Kitakyushu, Japan                                 |
| Mohamed, Sherif           | Griffith University, Australia                                      |
| Mok, Johnny Yin Min       | Hong Kong College of Technology International, Hong Kong            |
| Moonen, S.P.G.            | Eindhoven University of Technology, Netherlands                     |
| Moutzouris, Constantinos  | National Technical University of Athens, Greece                     |
| Nassar, Ayman Hamdi       | Higer Technological Institute, Egypt                                |
| Naveed, Kashif            | M/S Big Construction Co., Pakistan                                  |
| Oloke, David              | University Of Wolverhmapton, UK                                     |
| Orlowski, Zygmunt         | Bialystok University of Technology, Poland                          |
| Oyegoke, Adekunle         | Helsinki University of Technology, Finland                          |
| Panas, Antonios           | National Technical University of Athens, Greece                     |
| Pandis, Haralambos        | Ellinitexniki S.A. & PM-Greece, Greece                              |
| Panopoulos, Georgios D.   | Management Force SA. Greece   |

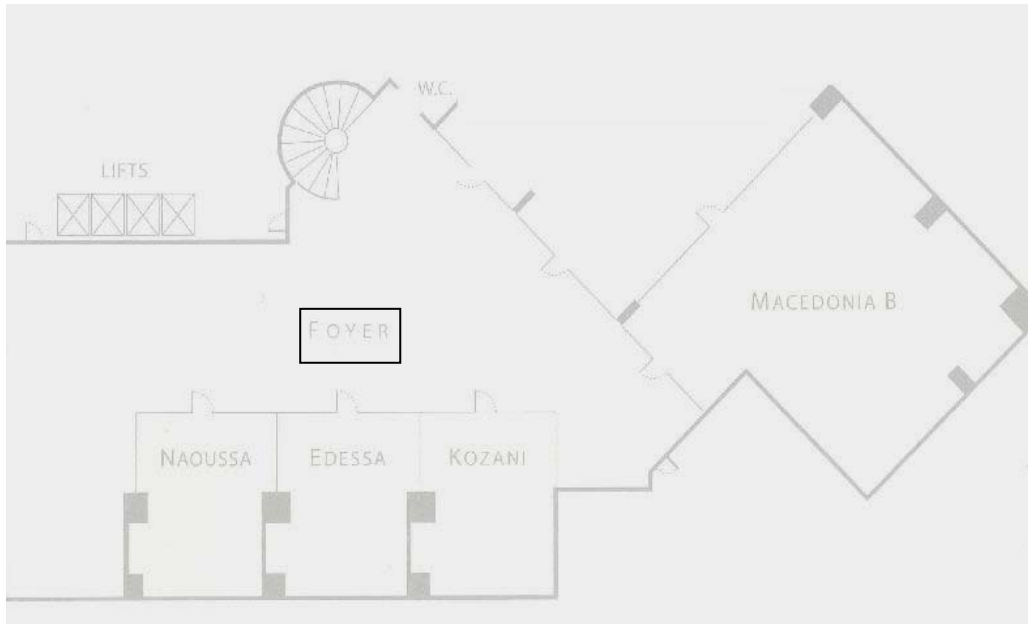
|                           |   |
|---------------------------|---|
| Pantouvakis, John-Paris   | National Technical University of Athens & PM-Greece, Greece |
| Papanikolaou, Eleni       | National Technical University of Athens, Greece             |
| Papassiopi, Zoe           | Egnatia Odos S.A. & PM-Greece, Greece                       |
| Parova, Maria             | University of Prague, Czech Republic                        |
| Petroulopoulou, Elena     | National Technical University of Athens, Greece             |
| Petroutsatou, Cleopatra   | National Technical University of Athens, Greece             |
| Petrov, Maria             | The Nielsen-Wurster Group, USA                              |
| Potts, Keith              | University of Wolverhampton, UK                             |
| Radujkovic, Mladen        | University of Zagreb, Croatia                               |
| Rokos, Kostas             | National Technical University of Athens & PM-Greece, Greece |
| Roumboutsos, Athena       | University of Aegean & PM-Greece, Greece                    |
| Rutland, Peter            | The Open Polytechnic of New Zealand, New Zealand            |
| Ryu, Han-Guk              | Seoul National University, Korea                            |
| Sakellaropoulos, Serafeim | University of Patras, Greece                                |
| Sattineni, Anoop          | Auburn University, USA                                      |
| Savvidis, Konstantinos    | Hellenic Construction Economics Institute, Greece           |
| Schaiter, Bernhard        | Swiss Federal Institute of Technology Zurich, Switzerland   |
| Sein, Maung               | Agder University College, Norway                            |
| Sen, Rajan                | University of Southern Florida, USA                         |
| Serpell, Alfredo          | Pontificia Universidad Catolica De Chile, Chile             |
| Shepherd, Miles           | Open University UK & USA, UK                                |
| Shuler, Scott             | Colorado State University, USA                              |
| Siddiqi, Khalid           | Southern Polytechnic State University, USA                  |
| Siskos, George            | University of Piraeus, Greece                               |
| Sobotka, Anna             | Lublin University of Technology, Poland                     |
| Sokas, Algirdas           | Vilnius Gediminas Technical University, Lithuania           |
| Spirou, Georgia           | National Technical University of Athens, Greece             |
| Stewart, Rodney           | Griffith University, Australia                              |
| Striagka, Fenia           | PM-Greece, Greece   |
| Tahir, Mahmood Md         | University Technology Malaysia, Malaysia                    |
| Tang, S.L.                | The Hong Kong Polytechnic University, Hong Kong             |
| Thorsten, Busch           | Swiss Federal Institute of Technology Zurich, Switzerland   |
| Ticha, Alena              | Brnu University of Technology, Czech Republic               |
| Torbica, Zeljko           | Roger Williams University, USA                              |
| Vassiliou, Dimitra        | Hellenic Open University, Greece                            |
| Vavatsikos, A.            | Democritus University of Thrace, Greece                     |
| Vlassis, Mihalīs          | Hellenic Open University, Greece                            |
| Walker, Derek H.T.        | RMIT University, Australia                                  |
| Williams, R. Christopher  | Iowa State University, USA                                  |
| Wilson, Andrew J.         | RMIT University, Australia                                  |
| Wong, Raymond W.M.        | City University of Hong Kong, Hong Kong                     |
| Yamamoto, Toshihiko       | Daido Institute of Technology, Japan                        |
| Yannis, George            | National Technical University of Athens, Greece             |
| Zapounidis, Konstantinos  | Aristotle University of Thessaloniki & PM-Greece, Greece    |
| Zavrski, Ivica            | University of Zagreb, Croatia                               |
| Zawistowski, Jacek        | Warsaw University of Technology, Poland                     |
| Zegers, S.F.A.J.G.        | Eindhoven University of Technology, Netherlands             |
| Zheng, Juan               | Florida International University, USA                       |
| Zhu, Yimin                | Florida International University, USA                       |
| Zou, Patrick X.W.         | University of New South Wales (UNSW), Australia             |

## *Conference Venue Maps*

The conference will be held at the **Divani Caravel Hotel**, Mezzanine floor in rooms:

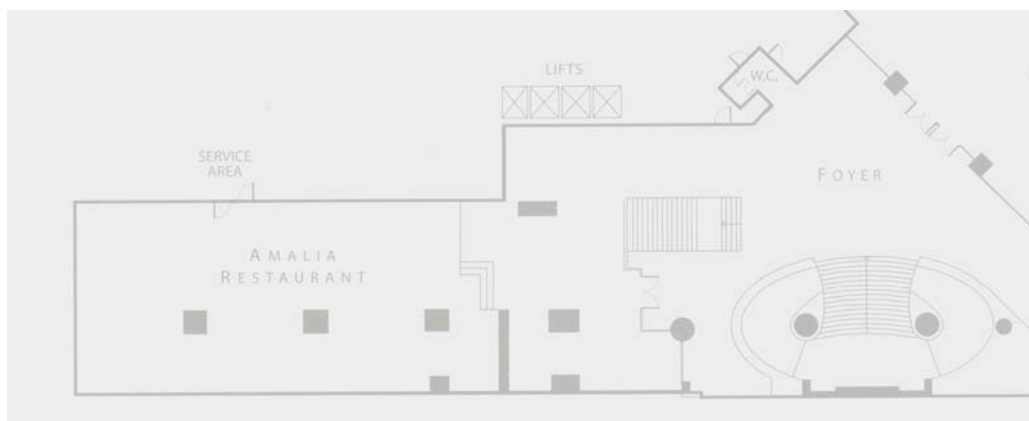
**Macedonia B** (main conference room)

**Naoussa, Edessa & Kozani** (break out rooms).



Coffee breaks will take place at the **Foyer** outside the conference rooms.

Lunches will be served at the semi-basement, in **Amalia Restaurant** :



The Gala Dinner (Fri, Sept, 16) will take place at the roof garden (9<sup>th</sup> floor), in **Athens View Hall**.

CITC-III



Athens 2005

*Organized by:*



**Department of Construction Engineering & Management  
Faculty of Civil Engineering  
National Technical University of Athens  
Athens, Greece**



**Department of Construction Management  
Department of Civil & Environmental Engineering  
Florida International University  
Miami, Florida, USA**