

# EIA9: E-ACTIVITIES AND INTELLIGENT SUPPORT IN DESIGN AND THE BUILT ENVIRONMENT

Istanbul Technical University, Faculty of Architecture, Taskisla 80191 Taksim-Istanbul, Turkey

## Detailed Program

### Wednesday, 8 October 2003

**10:00 - 14:00 Registration**

**14:00 - 14:30 Opening session Room 109**

**14:30 - 15:45 Session 1 [ Plenary session ] Room 109**

#### Information modelling and representation

*Chair: Rudi STOUFFS*

*John GERO, Vladimir KAZAKOV*

On measuring the visual complexity of 3D solid objects

*Jos P. VAN LEEUWEN, Sverker FRIDQVIST*

Object version control for collaborative design: Characteristics of the concept-modelling framework

*Hans SCHEVERS, Edwin DADO, Reza BEHESHTI*

Towards an agent based early design environment: A framework implementation using Java

**15:45 - 16:15 Coffee break**

**16:15 - 18:00 Session 2 [ Parallel session ] Room 109**

#### Design environments and multimedia

*Chair: Bob MARTENS*

*Ercument GORGUL, Emine GORGUL*

Spaces of immersive media: Transformation of spatial enclosure to interface of information

*Ahmad RAFI*

Motion capture: Animation alternative for creative exploration

*Burcu SENYAPILI*

A demonstrational case of a visual reference tool model for architectural heritage

*Sevil SARIYILDIZ, Ozer CIFTCIOGLU, Rudi STOUFFS, Bige TUNÇER, Saban Suat OZSARIYILDIZ*

Information, communication and knowledge technology in the building sector

**Session 3 [ Parallel session ] Room 213**

#### Knowledge modelling and soft computing

*Chair: Chimay ANUMBA*

*Cemal ALTUNAY, Abdulrezak N. MOHAMED*

A knowledge based system for selection of building floor covering

*Ozer CIFTCIOGLU, Saban Suat OZSARIYILDIZ and Sevil SARIYILDIZ*

Bi-directional attribute relations in design by knowledge modelling

*Sevgi Zeynep DOGAN, Husnu Murat GUNAYDIN*

Applications of artificial neural networks and their potential uses for building construction industry: A review

*Sinan M. SENNER, Esra IDEMEN*

An expert system for earthquake resistant designs: Torsion effect

**19:00 Reception**

## Thursday, 9 October 2003

**9:00 - 10:15**    **Session 4 [ Plenary session ]**                    **Room 109**

**Automation in building and construction**

*Chair: Robert AMOR*

**9:00 - 9:50**    Keynote lecture

*Prof. Chimay J. ANUMBA*

Agents and multi-agent systems for the AEC sector

**9:50 - 10:15**    *Chris GORDON, Frank BOUKAMP, Daniel HUBER, Edward LATIMER, Kuhn PARK, Burcu AKINCI*

Combining reality capture technologies for construction defect detection: A case study

**10:15 - 10:45**    **Coffee break**

**10:45 - 12:30**    **Session 5 [ Plenary session ]**                    **Room 109**

**Design communication**

*Chair: Khaldoun ZREIK*

*Sabrina KACHER, Jean-Claude BIGNON, Gilles HALIN*

Image indexing vocabulary in architecture: Taxonomic hierarchy and categorisation

*Jan KOOISTRA, Rudi STOUFFS, Bige TUNÇER*

Metadata as a means for correspondence in design analysis

*Rivka OXMAN*

Virtual university for design: E-teaching and e-learning for design

*Bob MARTENS, Ziga TURK, Bo-Christer BJÖRK*

The SciX Platform - Reaffirming the role of professional societies in scientific information exchange

**12:30 - 14:00**    **Lunch**

**14:00 - 15:45**    **Session 6 [ Parallel session ]**                    **Room 109**

**Design requirements and generative design**

*Chair: John GERO*

*Can BAYKAN*

Spatial relations and architectural plans: Layout problems and a language for their design requirements

*Ipek OZKAYA, Omer AKIN*

Electronic requirement management: A framework for architectural requirement engineering

*John Paul SWIFT*

The National Museum of Australia: A study in generative design

*Aant VAN DER ZEE, Bauke DE VRIES*

Evolutionary development of early stage design alternatives for buildings

**Session 7 [ Parallel session ]**                    **Room 213**

**Process modelling and business process reengineering**

*Chair: Edwin DADO*

*Mohamed BOUATTOUR, Gilles HALIN, Jean Claude BIGNON*

A cooperation model for architectural design: The virtual cooperative project

*Michael CUMMING*

Coordination of design using loops and peer groups

*Paul STEPHENSON, Teck Leong CHUAN*

E-business in supporting supply chain activities in the Malaysian construction industry

*Sule TASLI PEKTAS*

Process integration in building design using the parameter-based design structure matrix

**15:45 - 16:15**    **Coffee break**

**16:15 - 18:00**    **Sesion 8 [ Parallel session ]**

**Room 109**

**Sesion 9 [ Parallel session ]**

**Room 213**

**Design evaluation**

*Chair: Can BAYKAN*

*Stefan BOEYKENS, Herman NEUCKERMANS*

Implementation of an architectural design environment: The development of IDEA+

*Kerem ERCOSKUN, Alaattin KANOGLU*

Bridging the gap between design and use processes: Sector-based problems of a CRM oriented approach

*F. Hilal HALICIOGLU*

Translating customers' needs into building design process: Quality Function Deployment

*M. Tanyel TÜRKASLAN-BÜLBÜL, Ömer AKIN,*

*James H. GARRETT, Jr., Burcu AKINCI*

Overview of design evaluation towards a comprehensive computational approach

**Representation, automation and visualisation**

*Chair: Burcu SENYAPILI*

*Yenal AKGUN*

HizmO: History of Izmir architecture on-line: An interactive database for e-learning architectural history

*Ahmad RAFI*

Designing sound to reinforce architectural visualisation

*Murat AYGÜN, İkbâl ÇETİNER*

Conceptual modelling of generic building elements

*Esin ERGEN, Burcu AKINCI, Rafael SACKS*

Automation of effective tracking and locating precast components at a storage yard

*Ahmad RAFI*

City Administration System (CAS): Flood crisis management

**20:00**

**Conference dinner**

## Friday, 10 October 2003

- 9:00 - 10:15**    **Session 10 [ Plenary session ]**    **Room 109**  
**Dynamic architecture and urbanism**  
*Chair: Sevil SARIYILDIZ*
- 9:00 - 9:50**    Keynote lecture  
  
*Prof. Kas OOSTERHUIS*  
Emotive Architecture
- 9:50 - 10:15**    *Peter SZALAPAJ*  
The representation of contextual place for urban and rural planning
- 10:45 - 12:30**    **Session 11 [ Plenary session ]**    **Room 109**  
**Information modelling and exchange**  
*Chair: (Burcu AKINCI)*  
  
*Robert AMOR, Wolfgang KLOEP*  
E-Product catalogues  
  
*Edwin DADO, Reza BEHESHTI, Eddie KOENDERS*  
The integrated construction site of the future  
  
*Yasemin NIELSEN, Francis T. EDUM-FOTWE*  
Information flow automation and related security aspects in public construction projects  
  
*Eddy KOENDERS, Edwin DADO*  
Towards a virtual platform for e-materials
- 12:30 - 14:00**    **Lunch**
- 14:00 - 16:05**    **Session 12 [ Plenary session ]**    **Room 109**  
**Design collaboration and online environments**  
*Chair: Omer AKIN*  
  
*Evren AKAR, Bige TUNCER, Jelle ATTEMA, Rudi STOUFFS*  
Design and evaluation of a collaborative virtual space: InfoBase  
  
*Kas OOSTERHUIS, Hans HUBERS, Christian FRIEDRICH, Sven BLOKKER, Michael BITTERMANN, Chris KIEVID*  
Virtual Operation Room [VOR]: A time-based architecture for the augmented body  
  
*Aysu SAGUN, Halime DEMIRKAN*  
Evolutionary collaborative design studios  
  
*Michael MULLINS, Tadeja ZUPANCIC STROJAN, Matevz JUVANCIC*  
Communicating professional design intentions to the lay public on the internet  
  
*Salih OFLUOGLU*  
Interactive building product information in the context of e-commerce world
- 16:05 - 16:20**    **Closing session**