

PROGRAMME
US-Nigeria International Workshop



The National Science Foundation (NSF), USA

and



National Universities Commission (NUC), Nigeria

**INNOVATIVE DESIGN APPROACHES TO SUSTAINABLE
BUILDINGS**

November 29 – December 1, 2010

Virtual Library Building, NUC, Abuja, NIGERIA

Supported by:



ASCE Global Center of Excellence in Computing

American Society of Civil Engineers a better world by design

Day One – November 29, 2010

OPENING CEREMONY

- 08.00-09.00 REGISTRATION
09.00-09.10 Welcome Address: *Professor Julius Okojie (Executive Secretary, NUC)*
09.10-09.20 Workshop Overview and Goals: *Professor Chimay Anumba (Penn State University, USA) and Professor Tomasz Arciszewski (George Mason University, USA)*
09.20-09.30 Opening Remarks: *Nigerian Vice-President or Minister for Science & Technology*

SESSION 1: INNOVATION

- 09.30-09.50 Innovation and Inventive Engineering: Keys to Sustainable Design
Professor Tomasz Arciszewski (George Mason University, USA)
09.50-10.10 The State of Innovation in the Nigerian Industry
Professor Ibidapo-Obe (President, Nigerian Academy of Science)
10.10-10.30 Innovations in Building Information Capture and Representation
Professor James Garrett (Carnegie Mellon University)
10.30-11.00 **COFFEE BREAK**
11.00-12.00 Breakout Session 1: Enablers and Barriers to Innovation in Sustainable Building Design
12.00-12.30 Plenary Discussion (*Facilitator: Dr Thaddeus Ityokumbul, Pennsylvania State University, USA*)
12.30-14.00 **LUNCH**

SESSION 2: SUSTAINABLE BUILDINGS

- 14.00-14.20 The Role of Renewable Energy Technology in Sustainable Buildings
Dr Kalu Uduma (Alpha Solar LLC)
14.20-14.40 Sustainability and Buildings in the Nigerian Context
Professor Valentine Ekechukwu (National Universities Commission, Nigeria)
14.40-15.00 Energy Efficient Buildings – The DOE Hub Example
Professor Chimay Anumba (Pennsylvania State University, USA)
15.00-15.20 Green Design and Construction
Dr Elma Durmisevic (University of Twente, The Netherlands)
15.20-15.50 **TEA BREAK**
15.50-16.50 Breakout Session 2: Towards Sustainable Buildings
16.50-17.15 Plenary Discussion (*Facilitator: Dr Tanyel Bulbul, Virginia Tech, USA*)

Day Two - November 30, 2010

08.00-09.00 REGISTRATION

SESSION 3: EDUCATION SUPPORT FOR DESIGN OF SUSTAINABLE BUILDINGS

- 09.00-09.10 Recap of Day One: *Professor Kim Roddis (George Washington University, USA)*
- 09.10-09.30 The Role of Nigerian Universities in Bridging the Digital Divide
Professor Aize Obayan (Vice Chancellor, Covenant University, Nigeria)
- 09.30-09.50 Trends in Engineering Education for Innovative Design and Sustainability
Professor J. P. Mohsen (University of Louisville; Past President, ASEE)
- 09.50-10.10 Computing Education and Innovative Design of Sustainable Buildings
Professor Ian Smith, EPFL, Switzerland
- 10.10-10.30 Use of Technology in Engineering Education: a BIM Example
Professor Raymond Issa (University of Florida, USA)
- 10.30-11.00 **COFFEE BREAK**
- 11.00-12.00 Breakout Session 3: Formulating a Computing and IT Education Strategy for Innovative Design Approaches to Sustainable Buildings
- 12.00-12.30 Plenary Discussion (*Facilitator: Dr Hazar Dib, Purdue University, USA*)
- 12.30-14.00 **LUNCH**

SESSION 4: ASCE GLOBAL CENTER AND NUC PRESENTATIONS

- 14.00-15.15 The ASCE Global Center of Excellence for Computing in Civil Engineering
Professor Tomasz Arciszewski (George Mason University) and Professor Ian Smith (EPFL, Switzerland)
- 15.15-15.45 **TEA BREAK**
- 15.45-17.00 National Universities Commission – Collaboration Opportunities
Professor Valentine Ekechukwu and Mrs Uwani Yahya (National Universities Commission, Nigeria)

Day Three - December 1, 2010

SESSION 5: COLLABORATIVE RESEARCH PLANNING (CLOSED SESSION WITH NUC)

- 08.45-09.00 Recap of Day Two: *Professor Kim Roddis (George Washington University, USA)*
- 09.00-10.00 Plenary Discussion: Identification of Collaborative Research Topics and Collaboration Mechanisms (*Facilitators: Mrs Uwani Yahya, National Universities Commission, Nigeria; and Mr Mike Sanio, ASCE, USA*)
- 10.00-10.30 **COFFEE BREAK**
- 10.30-11.30 Plenary Discussion: Development of Action Plan for Joint Research Proposals (*Facilitator: Dr Esther Obonyo, University of Florida, USA*)
- 11.30-12.00 **WORKSHOP CLOSURE** (*Prof. Chimay Anumba & Mrs Uwani Yahya*)
- 12.00-13.00 **LUNCH**
- 13.00-17.00 **TOURS OF NIGERIAN PROJECTS AND FACILITIES RELEVANT TO INNOVATIVE DESIGN OF SUSTAINABLE BUILDINGS**
- 19.00 **DINNER AND GALA NIGHT**

Day Four - December 2, 2010

08.30-17.00 **OPTIONAL EXPLORATION OF BILATERAL OPPORTUNITIES WITH LOCAL UNIVERSITIES AND GOVERNMENT DEPARTMENTS**

DEPARTURE OF US DELEGATION

WORKSHOP STEERING COMMITTEE

- Professor Chimay Anumba
- Professor Tomasz Arciszewski
- Mr Michael Sanio
- Professor Valentine Ekechukwu
- Professor Aize Obayan
- Mrs Uwani Yahya