



### **Abstract**

The concept of the Grand Canal Square Theatre and Commercial Development was to build a powerful cultural presence expressed in dynamic volumes sculpted to project a fluid and transparent public dialogue within cultural, commercial and residential surroundings. The landmark 2100 seat Grand Canal Theatre is a landmark that creates a focus for its urban context and will open to the public on 18<sup>th</sup> March 2010.

The design and construction of the theatre was a challenging task for the design team as well as the contractor. Steel to concrete connection details had to allow for the potentially large deviation between steel fabrication and in-situ concrete construction tolerances, resulting in the use of a saw-tooth connection for the first time in building engineering.

The co-ordination between M&E and primary structure as well as the communication between the design team partners located in Dublin, Zurich, New York, London and Winchester required a lean communication based on a joint CAD model.

This presentation gives an overview of the project and a deeper introduction in the design of the concrete to steel details, the dynamic optimisation and testing of the balcony tiers and the exchange and coordination between the various disciplines.

### **Speakers**

#### **Dr Holger Falter, Arup Consulting Engineers**

Holger studied structural engineering at the University of Stuttgart. After completing his *Diplom* degree, he continued his studies at the University of Stuttgart and the Politecnico di Milan in Italy. In 1998 he received his Ph.D. in Engineering at the University of Stuttgart. In 1998 he joined Arup in their Berlin office than transferred to the London office and is now working for Arup in Dublin since 2007. Holger has been a structural engineering lecturer at University College Dublin, since 2006.

#### **Salam Al-Sabah, Arup Consulting Engineers**

Salam graduated as a structural engineer from the University of Baghdad in 1979 (BSc) and 1984 (MSc). He has worked on a variety of projects in Ireland, Europe and the Middle East as well as teaching structural engineering in both Irish and Iraqi universities. Among his recent projects include the Grand Canal Square theatre, the Grand Canal Square Hotel and the new Air Traffic Control Tower, Dublin Airport.

### **Location**

**6.30 pm Tuesday 2<sup>nd</sup> March, Room 259, DIT Bolton Street , Dublin 1**  
(Tea/coffee reception at 6pm)