COST Action TU1003 Seminar
Megaproject Risk Assessment and Simulation

Time: 09:00-16:00 BST, Friday 30th May 2014
Venue: Cedar Suite, Heriot-Watt University, Riccarton, EH14 4AS, Edinburgh, UK

Chair of the Action
Prof. Naomi Brookes
School of Civil Engineering, University of Leeds, UK

Seminar Organisers
Dr George Z. Chen, Prof. Stephen O. Ogunlana
School of the Built Environment, Heriot-Watt University, Edinburgh, UK
Email: zhen.chen@hw.ac.uk
Tel: +44 (0)131 451 4635

About the Seminar
The COST Action TU1003 MEGAPROJECT\(^1\), which focuses on the effective design and delivery of megaprojects in the European Union, was established in 2011 to connect multi-disciplinary researchers from across 24 COST countries to tackle the issues of megaproject design and delivery. The Action aims to produce immediate guidelines to influence practice and a framework to guide future decisions on resourcing EU research in megaproject design and delivery. The MEGAPROJECT COST Action operates a working group on 'Risk in the Front End'.

The goal of the COST Action TU1003 Seminar on Megaproject Risk Assessment and Simulation is to further reflect the latest progresses in research and practice in megaproject risk management so as to advance the scholarship of academics and professionals who dedicate themselves in this subject field, and to contribute to the study of this important subject for better risk management in megaprojects.

The seminar provides a unique opportunity for participants to exchange knowledge, information and experience in the key disciplines of risk management in megaprojects, and to identify critical problems that further research should tackle. There are two sessions in the seminar:

- In the session on practice, presentations focus on the practice of risk management in megaprojects, and invited speakers are from European Commission, The Crown Estate, Turner & Townsend Infrastructure, Bircham Dyson Bell, Capital Value & Risk Limited, Aston Business School, Jacobs & IRM, and Heriot-Watt University.

- In the session on research, presentations focus on the research into megaproject risk management models using techniques such as analytic network process, system dynamics, and machine learning, etc., and invited speakers are from Heriot-Watt University, The Symmetric Partnership LLP, and University of Belgrade.

\(^1\) Action website: www.mega-project.eu
COST Action TU1003 Seminar
Megaproject Risk Assessment and Simulation

Time: 09:00-16:00 BST, Friday 30th May 2014
Venue: Cedar Suite, Heriot-Watt University, Riccarton, EH14 4AS, Edinburgh, UK

AGENDA

09:00  Morning tea
09:45  Introduction by the organiser
10:00  Major Projects in Cohesion Policy
       Ms Camelia M. Kovács, Directorate G, European Commission
10:30  Managing the UK Offshore Wind Programme
       Mr Pierre Puyrigaud, Development Manager, The Crown Estate
10:00  Some Key Aspects in Managing Risks When Delivering Transport Megaprojects
       Mr Anthony Francis, Public Transport Consultant, Bircham Dyson Bell, UK
11:00  A9 Dualling Perth to Inverness: Overview of Programme & Risk Management
       Mr Glyn Harrison, Director, Capital Value & Risk Limited, UK
11:15  Strategic Risk Management in Major Water Infrastructure Projects
       Mr Steve Whalley, Associate Director, Turner & Townsend Infrastructure, UK
11:45  Risk Management in Mega Oil Pipeline Construction Projects
       Prof. Prasanta Kumar Dey, Aston Business School, UK
12:00  Buffet lunch
12:30  Responses to Emergency Incident under University Strategic Risk Assessment Framework
       Ms Lorraine Loy, Head of Risk and Audit Management, Heriot-Watt University
13:00  Trends and Developments in Portfolio, Program and Project Risk Management: Sharing Knowledge
       Dr James Kimmance, Head of Risk, Jacobs / Chairperson, IRM Construction SIG, UK
13:45  Multicriteria Risk Assessment for Megaprojects
       Dr George Z. Chen, Lecturer in Facilities Management, Heriot-Watt University
14:15  Using System Dynamics Simulation to Assess Risk
       Mr Douglas McKelvie, Partner, The Symmetric Partnership LLP, UK
14:30  A Dynamic Systems Approach to Megaproject Risk Assessment and Simulation
       Mr Prince Boateng, PhD Candidate, Heriot-Watt University
15:15  Towards An Early Warning Model for Prediction of Megaproject Performance
       Mr Miljan Mikic, Lecturer, University of Belgrade, Serbia
15:45  Discussion and Closure by the organiser
16:00  Afternoon tea
POSTER PRESENTATIONS

1. Megaproject Analytics
2. Megaproject Dynamics
3. Post-disaster Damage and Needs Assessment
ATTENDEES

Speakers

Mr Prince Boateng  PhD Candidate, Heriot-Watt University, UK
Dr George Z. Chen  Lecturer in Facilities Management, Heriot-Watt University, UK
Prof. Prasanta Kumar Dey  Professor in Operations Management, Aston Business School, UK
Mr Anthony Francis  Public Transport Consultant, Bircham Dyson Bell, UK
Mr Glynn Harrison  Director, Capital Value & Risk Limited, UK
Dr James Kimmance  Head of Risk, Jacobs / Chairperson, IRM Construction SIG, UK
Ms Camelia M. Kovacs  Programme Manager, Major Projects Team, European Commission, Belgium
Ms Lorraine Loy  Head of Risk and Audit Management, Heriot-Watt University
Mr Douglas McKelvie  Partner, The Symmetric Partnership LLP, UK
Mr Miljan Mikic  Assistant Lecturer, University of Belgrade, Serbia
Mr Pierre Puigyraud  Development Manager, The Crown Estate, UK
Mr Steve Whalley  Associate Director, Turner & Townsend Infrastructure, UK

Professionals

Mr Nick Aldridge  Manager, Risk Infrastructure & Optimisation, The Royal Bank of Scotland plc, UK
Mrs Kay Ballantyne  Project Risk Manager, SSE Energy Supply Limited, UK
Mr Geoffrey Bell  Senior Advisor – Estimating, Schedule & Risk, Talisman Energy Limited, UK
Ms Tracy Barschtschyk  Scottish Procurement and Commercial Directorate, Scottish Government, UK
Mr Tim Cummins  CEO, International Association for Contract & Commercial Management (IACCM), UK
Mr Gordon S.R. Duncan  Project Support Manager, Heriot-Watt University, UK
Mr Neil Dutton  IT Project Manager, NHS National Services Scotland, UK
Mr David Ferguson  Change Risk Specialist, Virgin Money, UK
Mr Giorgio Giancane  Director of Operations, SICES Construction Division, Italy
Mr Neil Hall  Project Co-ordinator, NHS National Services Scotland, UK
Mr Donald Henderson  Project Manager, NHS National Services Scotland, UK
Mr Ian McGowan  Corporate Risk Specialist, Scottish Water, UK
Ms Anne Ogilvie  Business Services (Risk), The Royal Bank of Scotland plc, UK
Mr John Parry  White Young Green, UK
Mr Peter Ranger  Regional Director, White Young Green, UK
Mr Steve Salvini  Project Support Manager, Heriot-Watt University, UK
Mr Punjaban Singh  Risk Adviser, Balfour Beatty Construction Services, UK
Mr William Tiercelin  Project Controls Specialist, EDP Renewables, UK
Mr Fraser Weir  Project Controls Specialist, Repsol Nuevas Energias UK

Members of the MEGAPROJECT COST Action

Dr Rafaela Alfalla-Luque  Associate Professor, University of Seville, Spain
Dr Ivana Burcar Dunovic  Assistant Professor, University of Zagreb, Croatia
Dr Ana Irimia-Dieguez  Associate Professor, University of Seville, Spain
Ms Agnieszka Lukasiewicz  Management Systems & Telematics Officer, Road & Bridge Research Institute, Poland
Ms Marisa Pedro  Early Stage Researcher, Instituto Superior Technico Lisbon, Portugal
Mr Ehsan K.M. Rad  PhD Candidate, Herriot-Watt University, UK
Mr Tristan Sainati  Early Stage Researcher, University of Lincoln, UK
Ms Daniela Yordanova  Assistant Professor, University of Ruse, Bulgaria

Academics

Mr Ibrahim Al Ruqeishi  Postgraduate, School of the Built Environment (SBE), Heriot-Watt University, UK
Mr Konstantinos Apostolou  Postgraduate, SBE, Heriot-Watt University, UK
Mr Jeremy Garnett  Lecturer, University of the West of Scotland, UK
Mr Thomas Hammell  Risk Management Student, Glasgow Caledonian University, UK
Mr Ifeyinwa Rita Kanu  PhD Candidate, Herriot-Watt University, UK
Ms Siying Liu  Postgraduate, SBE, Heriot-Watt University, UK
Miss Eirini Palaiologou  Postgraduate, SBE, Heriot-Watt University, UK
Mr Harijanto Setiawan  PhD Candidate, SBE, Heriot-Watt University, UK
Mr Geoff Wood  PhD Candidate, Business School, University of Edinburgh, UK
JOINING INSTRUCTIONS

Local transport
The Riccarton Campus of Heriot-Watt University is about 6 miles from the Edinburgh city centre. It’s well served by frequent local bus services and is also easy to access by car. Please refer to the road map to the Campus for details.

The easiest way to plan your journey to the campus is to use the Traveline Scotland Journey Planner, which uses up-to-date public transport timetables. More information about local transport is given below and available online at Maps & Directions to the Riccarton Campus of Heriot-Watt University

Local weather
BBC Weather Edinburgh http://www.bbc.co.uk/weather/2650225

Seminar venue
The seminar takes place at Cedar Suite on the Riccarton Campus of Heriot-Watt University. The Cedar Suite is located within the first floor of the Edinburgh Conference Centre (ECC)\(^2\). Please refer to ECC map for details. Please enter the ECC from the Main Reception of the University, and get further direction or follow direction board from there to the seminar room. Either Bus 25 or Bus 45 has its Riccarton stop outside the Main Reception of the University. For Bus 34, its Riccarton stop is about 100 metres away from the Main Reception of the University.

\(^2\) Edinburgh Conference Centre (ECC), Heriot-Watt University, Edinburgh, EH14 4AS, UK
Tel: +44 (0)131 451 3115  E-mail: info@edinburgh-conference.com  URL: www.edinburgh-conference.com
HOTEL ACCOMMODATION

Novotel 0131 446 5600, 2.5 miles from the Riccarton campus of Heriot-Watt University
15 Lochside Avenue
EDINBURGH, EH12 9DJ

Marriott Dalmahoy 0131 333 1845, 3.5 miles
Kirknewton
Edinburgh, EH27 8EB

Marriott Edinburgh 0131 334 9191, 3.5 miles
111 Glasgow Road
Edinburgh, EH12 8NF

Premier Inn Edinburgh Airport (Newbridge) 0871 527 9284, 5 miles
5 Hallbarns Crescent
Newbridge, Edinburgh
EH28 8TH

Holiday Inn Express Edinburgh Airport 0131 333 4331, 5 miles
Edinburgh International Airport
101 Inglisston Road
Edinburgh, EH28 8AU

Hilton Edinburgh Airport 0131 519 4400, 5 miles
Edinburgh International Airport
Edinburgh, EH28 8LL

Quality Hotel @ Edinburgh Airport 0870 742 9766, 5 miles
101 Inglisston Road, Ingliston, Newbridge
Edinburgh, EH28 8AU

Norton House Hotel 0131 333 6447, 5.5 miles
Ingliston
Edinburgh, EH28 8LX

Travel Lodge See Website for Details.
Various locations throughout Edinburgh

Other options at VisitScotland. 5 miles

Note:
Roads surrounding airport and city bypass are very busy during peak travel periods delegates should be advised to leave plenty of time for their journey.
Getting to Heriot-Watt University

BY CAR
Heriot-Watt University's Edinburgh Campus is easily accessible by car, both from the centre of Edinburgh (6 miles) and from all major routes leading to the city. The University is half a mile from the Calder Junction of the A720 City of Edinburgh By-Pass and the A71 (there are signs for Heriot-Watt University on the approach to Calder Junction).

On the M8, from Glasgow, turn right at Hermiston Gait roundabout following the signs for the A71.

The A720 is a dual carriageway which skirts Edinburgh and can be accessed from all the major routes entering and leaving the city: A90 (North), M8 and M9 (West), A702 (South and M6), A7 and A68 (Borders and South), A1 (South and East).

VISITOR PARKING
All visitors must use Visitors Car Park A or B on entering the campus. Car Park C is for visitors to Edinburgh Conference Centre.

BLUE BADGE HOLDERS ONLY
An accessible car park is located at Gait 10 next to the Centre for Sport and Exercise. Additional accessible parking spaces are available throughout the Edinburgh Campus. Disabled visitors should make arrangements in advance to ensure an appropriately allocated parking space is made available.

BY TAXI
CENTRAL RADIO TAXIS telephone 0131 229 2468 (24 hrs)
www.taxis-edinburgh.co.uk

There are a number of taxi services in the centre of Edinburgh including those at Waverley station (rail) and St Andrew Square (bus station). The journey to Heriot-Watt University takes about 20-30 minutes. At the Edinburgh Campus, taxis can be requested from the reception desk in the James Watt Centre.

BY BUS
CITYLINK telephone 0871 66 33 33
www.citylink.co.uk

NATIONAL EXPRESS telephone 0871 81 81 81
www.nationalexpress.com

All national coach services to Edinburgh arrive at St Andrew Square bus station, situated at the east end of Princes Street.

BY LOCAL BUS
LOTHIAN BUSES telephone 0131 555 6363 (24 hrs)
www.lothianbuses.com

The journey to Heriot-Watt University by bus takes approximately 30-40 minutes from the city centre, depending on the time that you are travelling. Lothian Buses offers services 25, X25, 34, 45 and N25 (night bus) to Heriot-Watt University.

The 25 is the most frequent bus to the Edinburgh Campus, leaving the city centre every 15 minutes during the day, and every 30 minutes after 20.00. During peak times in the morning and evening, Monday to Friday, the X25 runs to the Edinburgh Campus every 15-20 minutes.

The 25 departs from Princes Street, via Haymarket, Gorgie Road and Sighthill. The X25 has a limited stop route beginning at Waterloo Place via Princes Street, Lothian Road and running non-stop to Sighthill before arriving at Heriot-Watt University.

The 25 runs until around midnight, after which time Lothian Buses operate the N25, a night bus service which runs every 30 minutes to the Edinburgh Campus from Waverley train station via Princes Street, Haymarket, Balgreen and Sighthill.

The 34 departs from Princes Street via Lothian Road, Fountainbridge, Slateford Road and Sighthill.

The 45 leaves from Hanover Street via The Mound, Tollcross, Bruntsfield, Merchiston and Craiglockhart. This service operates every 30 minutes, Monday to Friday, from approximately 07.00 to 19.00.

Bus service schedules and prices are subject to change. Enquiries should be made directly to Lothian Buses.

PARK & RIDE
TRAVELINE SCOTLAND telephone 0871 200 22 33
www.stagecoachbus.com

The Airdirect 747 service runs Monday to Friday from Edinburgh Waverley to the Gyle Centre, South Gyle, and Hermiston Park and Ride to the Edinburgh Campus. Peak time service only.

EDINBURGH AIRPORT telephone 0844 481 8989
www.edinburghairport.com

Edinburgh International Airport is served by scheduled national and international flights. The airport is on the west side of the city, just three miles from the campus. The journey by taxi takes about 10 minutes.

AIRLINK telephone 0131 555 6363
www.flybybus.com

By bus, the express Airlink service links the airport and the city centre and takes approximately 30 minutes. The service terminates at Waverley Bridge, near to Waverley station and bus station and is just off the city’s main street, Princes Street.

The service runs seven days a week from approximately 04.50 to approximately 00.22.

BY RAIL
NATIONAL RAIL ENQUIRIES telephone 08457 48 49 50
www.nationalrail.co.uk

The mainline rail network serves the centre of Edinburgh well. Edinburgh Waverley is at the east end of Princes Street and Haymarket Station is at the west end. Cramond Station, one mile from the University, offers a frequent service to Edinburgh Waverley and a service to Glasgow Central Station.

The 25 departs from Princes Street, via Haymarket, Gorgie Road and Sighthill. The X25 has a limited stop route beginning at Waterloo Place via Princes Street, Lothian Road and running non-stop to Sighthill before arriving at Heriot-Watt University.

The 25 runs until around midnight, after which time Lothian Buses operate the N25, a night bus service which runs every 30 minutes to the Edinburgh Campus from Waverley train station via Princes Street, Haymarket, Balgreen and Sighthill.

The 34 departs from Princes Street via Lothian Road, Fountainbridge, Slateford Road and Sighthill.

The 45 leaves from Hanover Street via The Mound, Tollcross, Bruntsfield, Merchiston and Craiglockhart. This service operates every 30 minutes, Monday to Friday, from approximately 07.00 to 19.00.

Bus service schedules and prices are subject to change. Enquiries should be made directly to Lothian Buses.

PARK & RIDE
TRAVELINE SCOTLAND telephone 0871 200 22 33
www.stagecoachbus.com

The Airdirect 747 service runs Monday to Friday from Edinburgh Waverley to the Gyle Centre, South Gyle, and Hermiston Park and Ride to the Edinburgh Campus. Peak time service only.

EDINBURGH AIRPORT telephone 0844 481 8989
www.edinburghairport.com

Edinburgh International Airport is served by scheduled national and international flights. The airport is on the west side of the city, just three miles from the campus. The journey by taxi takes about 10 minutes.

AIRLINK telephone 0131 555 6363
www.flybybus.com

By bus, the express Airlink service links the airport and the city centre and takes approximately 30 minutes. The service terminates at Waverley Bridge, near to Waverley station and bus station and is just off the city’s main street, Princes Street.

The service runs seven days a week from approximately 04.50 to approximately 00.22.

BY RAIL
NATIONAL RAIL ENQUIRIES telephone 08457 48 49 50
www.nationalrail.co.uk

The mainline rail network serves the centre of Edinburgh well. Edinburgh Waverley is at the east end of Princes Street and Haymarket Station is at the west end. Cramond Station, one mile from the University, offers a frequent service to Edinburgh Waverley and a service to Glasgow Central Station.