

Transport Research Institute, Edinburgh Napier University

2013 HIGHLIGHTS

For the second year running, TRI has won the contract to organise the Scottish Transport Applications and Research (STAR) Conference on behalf of Transport Scotland, the national transport agency of the Scottish Government. The STAR Conference is the biggest annual transport event in Scotland and will be held on 21 May 2014 at 'The Lighthouse' in Glasgow City Centre. For more information, please visit: www.starconference.org.uk

TRI made significant contribution to the 6th International Symposium for Travel Demand Management (TDM), which was held on 21-23 August 2013 in Dalian, China. The meeting, which was attended by more than 60 members of academic institutions from a large number of countries including researchers from Europe, Australia and Asia, discussed innovative TDM policies, modelling techniques and evaluation approaches. Professor Wafaa Saleh, as the Chair of the Symposium Committee, together with a group of TRI members attended the Symposium, representing TRI and Edinburgh Napier University.

A one week training course - Multimodal Transport Economics relating to Motorways of the Sea was organised by TRI at Merchiston Campus from 22nd to 26th April 2013. This course, including a visiting trip to see the DFDS Ferry Terminal operation at Rosyth, forms part of the European Union TEN-T funded project 'TrainMoS' – 'Training the Human Element for Efficient Freight Transport with Maritime Links'.

TRI's international collaboration has been further promoted with a newly secured Marie Curie award for a project entitled "EU-China Research Network on Integrated Container Supply Chains" (ENRICH). The four year project aims to address recent and future changes in operational, environmental, economic, technical and managerial practices in different segments of the rail, road, air and sea transport industries from an overall container supply chain perspective. The funding will support TRI members spending 30 research months in China to work with researchers from Beijing Jiaotong University and Wuhan University of Technology.

At the end of 2013, Professor Kevin Cullinane, the Director of TRI, agreed to take up a post at Gothenburg University starting in March 2014. In February 2014 Professor Keith Dickinson agreed to take the role of Interim Director of TRI on a part time basis. Keith has had a long association with TRI, having been involved since its inception. Keith has also been a member of the TRI Advisory Board since 2003. His main activities as Interim Director will include:

- The search for a new Director of TRI
- Developing the strategic direction of TRI.

STAFF NEWS

Dr Jason Monios successfully defended his second PhD thesis exam, and has been promoted to Senior Research Fellow.

In April Dong-Wook Song joined TRI, as Professor of Transport and Logistics, from the School of Management and Languages at Heriot-Watt University.

Ravindra Kumar joined TRI as a Research Fellow to work on sustainable transportation research projects.

Dr Christine Whittle was appointed as a part-time Research Assistant from February to December 2013. She worked on ELTIS Plus and Transport Learning, and Ecomobility Shift projects.

Academic visitors who spent time at TRI during 2013 include: Robert Ziolkowski from the Bialystok University of Technology in Poland; Parimita Mohanty from The Energy & Resources Institute (TERI), India; Lorena Ocana from the Universidad San Francisco de Quito, Ecuador; Ruggiero Lovreglio from the Politecnico di Bari, Italy; Su Hwan Kim from the Korea University, Republic of Korea; Stephan Sighart from the Regensburg University of Applied Sciences in Germany.

STAFF ACTIVITIES 2013

Professor Kevin Cullinane was appointed as a member of the International Scientific Committee of the International Association of Maritime Economists Annual Conference in Marseille, France (where he was also one of the judges for the Palgrave-Macmillan *Maritime Economics Logistics* Prize for best PhD) and the 10th International Conference on Marine Navigation and Safety of Sea Transportation (TransNav) in Gdynia, Poland. He was also a member of the Advisory Board of the 1st International Conference on Humanitarian Logistics in Raipur, India. He continued his roles as a member of: the Lighthouse Scientific Advisory Board in Gothenburg, Sweden; the Advisory Committee of the Department of Commerce, Finance and Shipping at the Cyprus University of Technology; the Academic Advisory Council of the Athens Laboratory of Business Administration; and the Council of the International Association of Maritime Economists. During the year, Prof. Cullinane was appointed as a member of the Editorial Board of the Emerald Book Series on *Advances in Airline Economics*. He continued as associate editor of *Transportation Research A: Policy & Practice* and the

International Journal of Applied Logistics. He was also a member of the international advisory panel for the *Journal of Logistics and Sustainable Transport* and an advisory board member for another 7 transportation journals.

Professor Alfred Baird represents TRI on the Committee of the Scottish Transport Studies Group (STSG), is a member of the Project Review Panel for the Norwegian Research Council, and a member of the Peer Review College of the Danish Council for Strategic Research. In 2013 he received several further appointments: by the Scottish Transport Minister as a member of the Scottish Government's Expert Ferry Group; as a Member of the Scientific Committee and session chair of the DEVPORT conference (maritime transport and regional development), to be held in Le Havre in June 2014; as Theme Editor for Ports & Terminals for the Arctic Website run by the Centre for High North Logistics, Kirkenes, Norway; and as a Member of the Judging Panel for an international post-graduate student competition to design Safe Affordable Ferries for Bangladesh, sponsored by the Worldwide Ferry Safety Association based in New York & Inter ferry in Canada. He is External Examiner for BSc Shipping & Transport Courses at the Hamburg School of Shipping & Transport, and for BSc Shipping & Transport Courses at Business College Athens and London Metropolitan University.

Professor Margaret Grieco continued as a member of the management committee on COST Action TN1201, and as a reviewer of the Slovenian Research Agency Public Call Research Programme (ARRS). She was also a funding review panel member of the Swiss National Science Foundation (SNSF) on International Co-operation, and was Series Editor for Ashgate Publications in the Transport and Society book series. She examined two PhD theses submitted by candidates from the University of Leeds and Edinburgh Napier University.

Dr Kathryn Stewart took up appointment to the UTSG executive committee and will be treasurer from Jan 2014. She has continued as programme committee member for the STAR-conference, and has joined the organising committee for the International Symposium of Travel Demand Management.

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Dr Michael Carreno continues to act as an external expert advisor to the EPSRC REFLECT research project (A feasibility study in experienced utility and travel behavior) and was invited to join the ongoing COST Action - Modelling Public Transport Passenger Flows in the Era of Intelligent Transport Systems to provide a complimentary psychological perspective on the role of ITS in satisfying travellers' needs for public transport use and modal choice.

Dr Yuhong Wang, in collaboration with Prof Kevin Cullinane, has won funding from the EU FP7 Marie Curie International Research Staff Exchange Scheme for a project entitled "EU-China Research Network on Integrated Container Supply Chains" (ENRICH). In 2013, He was appointed as an external consultant to HTRANS to analyse the environmental benefits of moving whisky spirit by rail from Elgin to Grangemouth. Dr Yuhong Wang also continued as reviewer for several peer-reviewed transportation journals.

Dr Achille Fonzone is Member of the Management Committee, Leader of WG3 "Experimental approach to transit modelling", Manager of the Short Term Scientific Mission, Director of Training Schools of the COST Action TU1004 "Modelling public transport passenger flows in the era of ITS". He was the Editor of the special issue of Journal of Intelligent Transport System on "Modelling passenger flows of public transit and alternative collective transport systems in the era of Intelligent Transportation Systems".

Dr Jason Monios continued as a reviewer for seven international journals, examined a PhD thesis for the University of Tasmania on the role of regional ports in economic development, and was runner-up for the RTBM prize for the best paper on port strategy at the annual IAME conference.

PROJECTS ACTIVE IN 2013

Projects that TRI researchers participated in during 2013 are listed below, with details of funding bodies and collaborating partners.

*projects that started in 2013

SUSTAINABLE ENERGY AND TRANSPORT

Decentralised Off-grid Electricity Generation in Developing Countries: Business Models for Off-grid Electricity Supply (EPSRC, from October 2009 to October 2014)
Professor Tariq Muneer

This project aims to develop innovative solutions to the problem of lack of access to electricity supplies in developing countries through interdisciplinary research involving UK and South Asian (Indian) universities, NGOs, government agencies, financing institutions, and other stakeholders. The project takes a systematic view of the problem by considering local resource availability, appropriate technology choices,

institutional arrangements and the financing options available.

***Mainstream Innovation** (ERDF "SEEKIT" Programme, from April 2013 to March 2014)
Professor Tariq Muneer

Edinburgh Napier University is a partner with ten other Scottish higher education institutions in this collaborative project, which aims to embed sustainable building design and refurbishment into practice. The project will assist Scottish small and medium sized enterprises (SMEs) to develop and test sustainable building innovations, making use of testing facilities at all the project partners' institutions.

***Evaluation of cycling projects under the Scottish Government's Climate Challenge Fund** (ClimateXChange, from January to March 2013)
Mr Richard Llewellyn, Dr Kathryn Stewart, Dr Jonathan Cowie, Dr Michael Carreno and Susan Tully

On behalf of ClimateXChange, TRI undertook a study to evaluate the success of cycling projects under the Scottish Government's Climate Challenge Fund (CCF). The study reviewed nineteen CCF projects directly or indirectly related to cycling, along with a literature review of international best practice in cycling projects. A number of key performance indicators were reviewed including the level of impact each project had, the longevity of change, how objectives had been met and whether the project brought about any supplementary benefits to society, for example improved health. The study concluded with a series of recommendations for the selection of projects in future and suggested best practice for the creation and monitoring of project objectives relating to carbon reduction.

ECONOMICS, PLANNING AND POLICY

EcoMobility SHIFT (EU IEE STEER, from June 2010 to May 2013)
Dr Michael Carreno
www.ecomobility.org

The project created a labelling scheme based on a set of criteria to assess and help improve the sustainability of local governments' transport policies. Underlying the labelling scheme is a Quality Management System to help cities to analyse, understand and improve their transport and mobility decisions so that they can continually improve their performance against the criteria and work towards the highest standards of EcoMobility. TRI led Work Package 3, which developed the labelling and quality management scheme for the project, and trained other partners in its use. In 2012, the scheme was piloted in various municipalities across the EU including Dundee in Scotland, and was subsequently amended based on feedback of these trials.

CHAMP (EU IEE STEER, from October 2011 to September 2014)

Dr Kathryn Stewart and Catriona O'Dolan
www.champ-cycling.eu

CHAMP aims to facilitate the exchange of best practices, experiences and lessons learned (good and bad ones!) within a group of "best in class" cycling cities. The 7 partner cities have undertaken the implementation phase of the project and have all implemented and assessed 2 innovative measures. Each city also hosted an exchange workshop for both CHAMP consortium members and externals. TRI is analysing the outputs of the project and leading the work-package on strategic conclusions. The CHAMP project will host its final conference in Ghent in September 2014.

Transport Learning (EU IEE STEER, from June 2011 to November 2013)

Dr Michael Carreno and Catriona O'Dolan
(Project Lead Partner: Technical University Dresden, Germany)
www.transportlearning.net

Transport Learning aimed to create knowledge and capacity on sustainable transport policies and measures in municipalities and energy/management agencies of Europe's convergence regions, and to strengthen market activities on sustainable transport, by integrating it within the business portfolio of energy/management agencies. In order to achieve this, the project created and implemented training and site visits, and has developed web based self-learning resources on eight key transport subjects. TRI was one of the trainers, specialising in parking management, as well as working on quality control and evaluation of the project.

MOBILITY MANAGEMENT AND TRAVEL PLANNING

COMPASS (EU FP7, from November 2011 to November 2013)

Professor Christiane Bielefeldt, Helen Condie, Dr Michael Carreno, Dr Kathryn Stewart, Dr James Cooper and Dr Achille Fonzone
www.fp7-compass.eu

TRI was coordinator of the EC-funded COMPASS project, which successfully concluded in 2013. COMPASS looked at what travellers require from the transport system at the present time and what they will require in the future, based on an investigation of key socio-economic trends. COMPASS then analysed how solutions based on ICT (information and computer technology) and ITS (intelligent transport systems) applications can meet the future demands and identified and assessed how these solutions can contribute to the de-carbonisation of transport activities. The central question on the contribution of ICT solutions to achieve reduced CO2 emissions was addressed in COMPASS through the development of the Handbook of ICT solutions, the realisation of eleven case studies on the implementation of specific ICT

solutions in different European regions, and the European assessment of ICT solutions through scenarios analysis.

ELTIS PLUS (EU contract, from May 2010 to April 2013)
Dr Michael Carreno and Catriona O'Dolan
 (Project Lead Partner: FGM-AMOR, Austria)
www.eltis.org

ELTIS PLUS entailed two inter-related activities: the management of the European Local Transport Information Service website and the promotion of the uptake of Sustainable Urban Mobility Plans (SUMP) across all member states. During the contract period the ELTIS website was fully overhauled and re-launched to make it more attractive to use; and, through a large number of local training and awareness raising events as well as by the production of promotional and training material, the concept and content of SUMP is being promoted. TRI was responsible for monitoring and the evaluation of the project; had a key role in developing training material on SUMP; and was topic expert for a significant part of the ELTIS website case study section, as well as quality control of the project website content and outputs.

Investigation and Modelling of Travel Behaviour in Saudi Arabia: A Disaggregate Approach (Tabuk University, from April 2012 to July 2014)
Professor Wafaa Saleh and Dr Ravindra Kumar

A Saudi city such as Tabuk has typical travel characteristics to fulfil travel demands. It should be noted here that for cultural reasons women don't drive in the kingdom. Moreover, workplaces as well as schools for men are separate from work places for women. Hence, this current investigation is very important in order to identify the particular factors and issues which control travel behaviour and choices. The project investigates and models travel behaviour and attitudes of households of Tabuk city in Saudi Arabia.

***Identification, assessment and enhancement of accident data collection and analysis in Kingdom of Saudi Arabia** (Tabuk University, from December 2013 to October 2014)
Professor Wafaa Saleh and Dr Ravindra Kumar

It has been estimated that the annual cost of traffic accidents in the Kingdom of Saudi Arabia (KSA) exceeds 6 billion US dollars, in addition to other social, health, and economic impacts, such as disability, rehabilitation, and unemployment due to traffic accident injuries. Tabuk city has high accident rate. There are not many studies, if any in Tabuk or elsewhere in the KSA on the investigation and development of a framework for accident reduction. The main aim of this project is to propose a framework to study, assess and enhance accident data collection and analysis in the Kingdom of Saudi Arabia (KSA). The proposed framework will improve the data collection and analysis process and,

if implemented, will identify the hot spot location along with accident severity.

ISEMOA (EU FP7, from August 2010 to September 2013)
Dr Michael Carreno and Catriona O'Dolan,
 (Project Lead Partner: FGM-AMOR, Austria)
www.isemoa.eu

ISEMOA has developed a quality management scheme for the improvement of the accessibility of the whole door-to-door mobility-chain in European municipalities, cities, and regions. The scheme is made up of a standardised quality management process with which a municipality, city or region can assess (together with an external auditor) the state of accessibility in public space and public transport in their areas, and on that basis develop strategies and measures to improve its quality, thus encouraging more people – especially those with reduced mobility – to cycle, walk and take public transport. TRI was involved in the development of the audit scheme, and responsible for the evaluation of the project's wider impacts and quality assurance of all the project's deliverables and outputs.

ORIGAMI (EC FP7, from February 2011 to January 2013)
Professor Christiane Bielefeldt, Helen Condie, and Dr Michael Carreno
www.origami-project.eu

TRI was coordinator of the EC-funded ORIGAMI project, which successfully concluded in 2013. ORIGAMI addressed the potential for greater efficiency and reduced environmental impact of passenger transport by promoting integration, co-operation and, where appropriate, competition in the provision of connections. The general focus of ORIGAMI was on all those long-distance journeys which might benefit from more effective co-operation and/or interconnection between modes and services, and on those situations where this is currently hindered by institutional barriers, lack of investment, or failure to innovate and which could benefit from a more enlightened approach. One particular focus of the project was the identification of technical solutions for improved co-modality and, in particular, intermodality, and the project has investigated into examples of how good solutions found in one mode can be transferred to other modes.

TAXI STUDIES AND DEMAND-RESPONSIVE TRANSPORT

Atlanta Taxi Market Model (Central Atlanta Progress, from June 2012 to July 2013)
Dr James Cooper

The Atlanta taxi market model formed a part of a wider market review undertaken by Nelson Nygaard Consulting Associates and the Transport Research Institute on behalf of the City of Atlanta and Central Atlanta Progress. The work undertook a detailed review of the provision of taxi service in Atlanta, GA, addressing quality, supply, cost and use. The Transport Research Institute

developed a new model of taxi cost based on the operating costs observed and reported within the taxi industry. The study also recommended the development of a new structure of supply and made a recommendation for a new taxi code and taxi model process. Study recommendations have since been applied and implemented in Atlanta.

City of Chicago Taxi Study (City of Chicago, from December 2012 to August 2013)
Dr James Cooper

Fare review undertaken for the city of Chicago. TRI role was to develop a taxi cost model using existing, live, and predicted data. Dr James Cooper took the role of project leadership on taxi cost modelling.

City of Toronto Taxi Study (City of Toronto, from December 2012 to March 2013)
Dr James Cooper
www.torontotaxistudy.com

The work provided a detailed market review for the City of Toronto in respect of the market demand for taxis and the analysis of current services. The analysis undertook a cost and demand model based on observed and measured use, electronic data analysis and data mining using electronic data from the taxi regulator. Three areas were reported on, the baseline assessment of the market structure, market equilibrium and patterns of demand; market growth; and the entry of accessible vehicles in the market. Recommendations related to the growth of the market, and the adoption of a common accessibility standard, applied using a single license type. Findings have been accepted and are incorporated in the city strategic taxi policy review.

***Seattle Taxi Demand Study** (City of Seattle and King County, from April to August 2013)
Dr James Cooper

The work addresses a new market for the provision of taxis and taxi like services and follows from the development of new technologies in the taxi market, specifically around smartphone applications. The work included the undertaking of a wide ranging public attitudes survey, electronic data analysis and secret shopper reviews of the Seattle and King County markets. The study also developed a market analysis tool addressing multiple operator types, new smartphone apps and new forms of service based on for profit ridesharing. The findings relate to the quality of services and their availability, including the identification of areas where services failed to meet public expectations, including recommendations on approaches to reduce negative impacts, and have been adopted in the development of taxi policy.

Glasgow Taxi Cost Model Review

(Glasgow City Council, from September 2012 to August 2013)

Dr James Cooper

The work provided a comprehensive review of the taxi cost model applied by Glasgow. A cost model is a recognized method of defining taxi tariffs, from which taxi fares are defined. The model exists to provide a standard and consistent method of deterring costs, and has been developed in the work to reflect operating costs from the ground up. The work resulted in a revision to the previous formula applied by the city and the update of fare methods. The resulting recommendations have been adopted by the city and are in the process of application.

*San Diego Taxi Fare Standardization Study

(Metropolitan Transit System of San Diego, from September 2013 to April 2014)

Dr James Cooper

The work addresses the potential for a standardized fare in the San Diego Taxi Industry. The work undertook a review of market conditions, fare and costs. The study undertook three surveys, of public users, of trade and industry and stakeholders with an interest in the provision of taxi services. The work also developed as detailed cost model and market model identifying the impacts of changes in the taxi fare structures, recommending a method for assessing changes in costs and a recommended standardized fare. The study recommendations have been accepted by the MTS and are being presented for application.

MARITIME TRANSPORT & LOGISTICS

*An analysis of empty repositioning costs for Scottish shippers

(SEStran, from April 2013 to July 2014)

Dr Jason Monios and Dr Yuhong Wang

Due to the imbalance of trade, Scottish exporters have to pay shipping lines to bring empty maritime boxes to Scotland. This is a direct cost to Scottish shippers and by extension the Scottish economy. All industry and government stakeholders have an interest in solving this problem. This project is a consultancy appointment to establish the current situation and explore innovative solutions through desktop research and stakeholder interviews.

*Bulk Freight Shipping Study in Scotland

(SEStran, from April 2013 to July 2014)

Dr Yuhong Wang and Dr Jason Monios

A consultancy project commissioned by SEStran to undertake a study of bulk freight shipping in Scotland with objectives to develop a baseline of the existing bulk sea freight market, analyse the underlying economics of the bulk shipping market and its future prospects, examine the case for any public sector intervention in the market, and make recommendations for potential actions to be included in future transport strategy development.

*ENRICH (EU FP7 Marie Curie Action, from October 2013 to September 2017)

Dr Yuhong Wang, Prof. Dong-Wook Song, Prof. Alfred Baird and Dr Jason Monios

ENRICH (EC-ChiNa Research Network on Integrated Container Supply Chains) is a research staff exchange project to set up long-term research cooperation with four European and two Chinese universities. This project specifically aims to address long-lasting changes in operational, environmental, economic, technical and managerial practices in different segments of the rail, road, air and sea transport industries from an overall container supply chain perspective.

Food Port (SEStran, from January 2011 to February 2014)

Dr Yuhong Wang

www.food-port.eu

The Food Port project aims to optimise and coordinate food logistic chains in the North Sea Region by improving the accessibility and transport logistics system of different food clusters in the region. TRI was contracted by SEStran to analyse current food production and consumption patterns, logistics supply chains and trade structures, thereby revealing the importance of the food & drink industry to the Scottish economy and particularly to the regional economies in the SEStran area.

*GreCOR – Green Corridor (EU Interreg IVB North Sea Region Programme, from January 2012 to December 2014)

Dr Jason Monios

www.grecor.eu

The Green Corridor project promotes the development of a co-modal transport corridor in the North Sea Region. Important in this collaborative approach is the focus on secondary networks, logistics hubs and the regional hinterland around the corridor. The role of TRI is to develop a business model for an extended logistics hub which can lower transport and logistics costs for users, particularly through the collaboration between smaller shippers. GreCOR works in close collaboration with public and private stakeholders, and its overall aim is to improve knowledge about the logistic needs and conditions and develop and implement the first green corridor in the North Sea Region in a strategic policy setting. GreCOR has 14 partners and a total budget of €3.7million.

KNOW-ME (EC FP7, from June 2011 to June 2014)

Professor Kevin Cullinane and Dr Damian Stantchev

www.know-me.org

The KNOWME project, led by TRI, covers the main issues addressed by the European Commission in the "Maritime Transport Strategy 2009-2018" and is specifically concerned with the 'human factor' in the maritime industry. In line with these issues, the project seeks to address the skills shortages in the maritime industry by proposing measures that enhance the

attractiveness of maritime professions, improving the image of shipping and careers at sea, facilitating lifelong career prospects and labour mobility in the maritime industries, improving working and living conditions on board ships, enhancing cooperation between European maritime education and training institutions and creating a network of excellence in Europe.

*Lifting the Spirit – Whisky by Rail

(HITRAN, from October to December 2013)

Dr Yuhong Wang and Dr Sharon Cullinane

A consultancy project commissioned by HITRANS to analyse the environmental benefits of moving whisky spirit by rail from Elgin to Grangemouth. This study employed the methodology of Mode Shift Benefit analysis by taking into consideration the costs of congestion, accidents, noise, climate change, air pollution, infrastructure and other cost. Results show a significant saving of 520 tonnes of CO2 and £208,000 of marginal social benefits accruing to society.

*Oman Ferry Study (Norplan/National Ferries Company, Oman, from February 2013 to October 2013)

Professor Alfred Baird

The Oman Ferry Project sought to investigate the commercial viability of various potential new ferry routes and services linking Oman with neighbouring countries. The project was led by Norwegian consultants Norplan. The aim was to study different types of ferry routes and to analyse different types of ferry for each route. Part of the work included meetings with stakeholders and in-depth analysis of trade and traffic flows in the region. There was close collaboration with ports in the region. TRI input included application of its ferry cost model to analyse route and ship type viability. The positive results of the study are expected to result in development of new ferry services in the region.

*TEN-TaNS (EU Interreg IVB North Sea Programme, from June 2013 to June 2015)

Professor Alfred Baird

<http://www.tentans.eu/>

The 'Trans-European Transport Network and the North Sea Region (TEN-TaNS)' Project was approved in June 2012 and ends in June 2015. Led by the Aberdeenshire Council, TEN-TaNS aims to develop a toolkit to help assess maritime transport projects for EU TEN-T funding support. The TEN-TaNS project will look deeper into the core and comprehensive networks and how the development of these networks can be supported by public authorities and infrastructure providers at a regional level. A special focus will be given to the horizontal issues. Current policy developments will be analysed and the requirements of being part of the TEN-T network in terms of infrastructure and services will be clarified for all transport and intermodal modes and translated to the regional level via a toolbox specifically developed in the TEN-TaNS project. TEN-T and the North Sea Region project will analyse opportunities and

consequences for transport of the new European TEN-T Guidelines, the Connecting Europe Facility, the Clean Power for Transport Initiative and the Europe2020 Strategy. This will be done from a North Sea Region perspective focused on outputs at the regional level. By identifying possible impacts of the various initiatives, a toolbox of regional measures will be developed to optimise the regional impact on TEN-T and freight transport development. In Scotland TRI will be investigating two specific major maritime infrastructure projects and their potential to attract EU TEN-T funding.

TrainMoS – Training for Motorways of the Sea (EU TEN-T Programme, from December 2011 to October 2013)
Professor Alfred Baird and Dr Damian Stantchev
<http://www.onthemosway.eu/trainmos-knowledge-center/>

The TrainMoS Project supported by the EU TEN-T Programme, aims to develop a Motorways of the Sea (MoS) knowledge base at EU university level by testing a MoS knowledge platform (within an ICT infrastructure) through the preparation of seven EU wide pilot actions in seven EU countries (Spain, Portugal, Sweden, Germany, United Kingdom, Italy, and Greece). TrainMoS involves participation of seven universities and their corresponding students who will help create a critical mass to allow for the development and testing of a European academic training programme in all Motorways of the Sea (MoS) related subjects that is intended to meet the needs of the transport industry. Individual pilot actions are being developed under the following headings: Port terminals and hinterland links; Smart cities and intelligent ports; Green ports and inclusive Integrated Coastal Zone Management (ICZM); Multimodality and sustainable logistics; Multimodal transport economics; Safety and security; Logistic Chains and Modal Integration. Each pilot action coordinated by the TrainMoS structure will produce a university course which will be followed by students in the other partner Universities, and with professors coming both from the University as well as professional staff from the stakeholders.

PHD COMPLETIONS IN 2013

The role of intermodal transport in port regionalisation

Jason Monios, supervised by Dr Gordon Wilmsmeier, Professor Alfred Baird and Professor Kevin Cullinane

Investigation into the fitness of the Emirati Technical Vocational Education and Training to the needs of the local construction industries

Omar Hasan Alaidarous, supervised by Professor Naren Gupta and Professor Sam Wamuziri

CURRENT PHD PROJECTS

A Critical Examination of the Life Cycle Assessment of Cement Production

Loubana Elatasi, supervised by Professor Tariq Muneer and John Wood

Analysing and Modelling Motorways of the Sea in Spain

Xavier Gese Aperte, supervised by Professor Alfred Baird and Professor Kevin Cullinane

Automatic Monitoring of Vegetation along Railways

Roger Nyberg, supervised by Professor Naren Gupta and Professor Mark Dougherty

Cleaning and restoring old masonry building – investigation of physical and chemical characteristics of masonry stones and clay bricks during cleaning

Humayun Reza, supervised by Professor Naren Gupta and Dr Ben Zhang

Development of an integrated model for improving contractor selection procedures on major construction projects in Libya

Othoman Elsayah, supervised by Professor Naren Gupta and Dr Ben Zhang

Fuel Cell powered rail based vehicles

Narayanan Khizanathan, supervised by Professor Naren Gupta and Mr Alan Davidson

Intelligent Transport Systems as Applied to Travel Information

Karol Gruszczynski, supervised by Dr Andrew MacIver, Dr Simon Smith and Professor Tom Rye

Investigation of GIS in Monitoring Spatial Trends in Urban Areas and Its Impact on the Performance of the Transport System and the Community

Mohamed Al-Ali, supervised by Professor Wafaa Saleh and Dr Andrew MacIver

Modelling the Effects of Road Tolling in Microsimulation Models

Eva Martinez, supervised by Dr Kathryn Stewart and Professor Wafaa Saleh

Modelling Car Following Behaviour

Joseph Appiah, supervised by Professor Wafaa Saleh and Dr Kathryn Stewart

Modelling the Relationship between Pilgrim Pedestrian Casualties and Land Use Type: A Case Study of Al Madinah Al Monawarah

Raed Alahmadi, supervised by Professor Wafaa Saleh and Dr Kathryn Stewart

Project performance measurement and improvement in municipalities in Saudi Arabia

Saleh Alsulamy, supervised by Professor Naren Gupta and Professor Brian Sloan

Provision of Transport for the Night Time Economy in the United Kingdom with

Particular Reference to the Role of the Taxi Sector

Maira Weir, supervised by Dr Jonathan Cowie and Professor Alfred Baird

Reduction of car dependency through the enhancement of public transport in Riyadh, Saudi Arabia

Al Othman Othman, supervised by Professor Margaret Grieco and Professor Wafaa Saleh

The Potential for "Green" Fiscal Measures to Lessen the Environmental Impact of Private Car Use in Scotland

Sarah Borthwick, supervised by Dr Michael Carreno and Professor Kevin Cullinane

Uncertainty modelling in the whole-life costing of office buildings

Olubukola O Tokede, supervised by Professor Naren Gupta and Professor Sam Wamuziri

PAPERS AND PUBLICATIONS

Aldali, Y., Celik, A.N. & Muneer, T. (2013)

Modeling and experimental verification of solar radiation on a sloped surface, photovoltaic cell temperature, and photovoltaic efficiency. *Journal of Energy Engineering*, 139, pp. 8-11.

Asif, M. & Muneer, T. (2013)

Sustainability assessment of super-insulated timber windows. *Proceedings of the Institution of Civil Engineers - Construction Materials*, 167(1), pp. 3-7.

Baird, A. (2013) Acquisition of UK ports by private equity funds. *Research in Transport Business & Management*, 8, pp. 158-165.

Baird, A. & Pedersen, R. (2013)

Analysis of CO2 emissions for island ferry services. *Journal of Transport Geography*, 32, pp. 77-85.

Baird, A. (2013)

Cockenzie marine terminal: Feasibility and ramifications of the development. Paper presented at the Tranent Probus Meeting, Tranent, 5 December 2013.

Baird, A. (2013)

Demonstration of a Trans-Arctic liner container service. Paper presented at the Arctic Marine Logistics and Infrastructure Forum, Amsterdam, 25-26 November 2013.

Baird, A. (2013)

Efficient ferry services: Lessons from the Strait of Hormuz. Invited keynote speech, Orkney International Science Festival, Kirkwall, 5 September 2013.

Baird, A., Flitsch, V., Herz, N. & Wolff, J. (2013)


Maritime policy in the North Sea region: Application of the cluster approach. In: Xu, J. (Eds.) *Contemporary Marine and Maritime Policy*. New York: Nova Sciences Publishers Inc, pp. 105-118.

Baird, A. (2013)

Private equity in UK ports: Rejoinder to 'an alternative view'. *Research in*

- Transport Business & Management*, 8, pp. 70.
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