

"Resilience thinking" in transport planning: Transport, air quality, health and resilience

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Abstract

Resilience has been discussed in ecology for over forty years. While some aspects of resilience have received attention in transport planning, there is no unified definition of resilience in transportation. To define resilience in transportation, I trace back to the origin of resilience in ecology with a view of revealing the essence of resilience thinking and its relevance to transport planning. Based on the fundamental concepts of engineering resilience and ecological resilience, I define "comprehensive resilience in transportation" as the quality that leads to recovery, reliability and sustainability. Observing that previous work in resilience analysis in transportation has focussed on addressing engineering resilience rather than ecological resilience, I conclude that transformability has been generally overlooked and needs to be incorporated in the analysis framework for comprehensive resilience in transportation. In this seminar, I will present three case studies we carried out as a starting point to enhance comprehensive resilience in transportation by looking at the integrated relationships of transport, air quality and health.

Biography

Dr Judith Wang joined the University of Leeds in 2013 as Associate Professor in Transport Engineering in a joint appointment with the School of Civil Engineering (SoC) and Institute for Transport Studies (ITS). She received her MSc(Eng) in Transport Planning and Engineering from ITS in 1993 and PhD from Hong Kong University of Science and Technology in 2004. She plays a key role as a bridge between SoC and ITS within the University of Leeds as well as internationally between the Southwest Jiaotong-Leeds Joint School in China and the University of Leeds in her role as the Programme Director of Civil Engineering with Transport. Dr Wang has over 25 years of international experience in transport planning, with substantial experience not only in academia but also in the transport industry. Prior to moving to the UK, she worked in Hong Kong, New Zealand and France. Her key work experience in Hong Kong include operations planning of the Mass Transit Railway in Hong Kong and strategic planning for the new Hong Kong International Airport opened in 1998. In New Zealand, she had worked for the University of Auckland for more than eight years, as a Lecturer in the Department of Civil Engineering, a Research Fellow in the Energy Centre and a Senior Research Fellow in the Department of Engineering Science. In 2007, she visited Ecole des Mines de Nantes as a Visiting Lecturer for five months and later on this year she will be visiting Tokyo Institute of Technology for two months with an Invitational Fellowship.

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