

**UNIVERSITY OF MACAU
FACULTY OF SCIENCE AND TECHNOLOGY
DEPARTMENT of CIVIL & ENVIRONMENTAL
ENGINEERING**

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**"Recent Research on the Strengthening of
Concrete and Metallic Construction
Materials with FRP Composites"**

by

Prof. Scott Smith

**Associate Professor, Department of Civil Engineering
University of Hong Kong**

Date: 21 February 2011 (Monday)

Time: 2:00pm - 2:45pm

Venue: L109, University of Macau

Abstract

Externally bonded fibre-reinforced polymer (FRP) composites can be used effectively to strengthen and repair existing reinforced concrete (RC) and metallic structures. Of fundamental importance though is an adequate understanding of the strength and behaviour of the bond between the FRP and concrete or metallic substrates. While an abundance of research has been undertaken over the last two decades or so on the bond between FRP and concrete, associated research between FRP and metallic materials is still very much in its infancy by comparison. This presentation will in turn discuss recent research being conducted at The University of Hong Kong related to the strength and behaviour of FRP-to-concrete and FRP-to-

metallic bonded interfaces. More specifically, the enhancement of FRP-to-concrete bond strength using mechanical anchorage is discussed as well as the effect of material and geometric properties on the strength of FRP-to-metallic interfaces.

Biography

Prof. Scott Smith is an Associate Professor in the Department of Civil Engineering at The University of Hong Kong, China. He graduated BE (Civil Engineering) (1994) and PhD in Structural Engineering (1999) from The University of New South Wales, Sydney, Australia. His research interests include the behaviour of RC, metallic and timber structures strengthened with FRP composites; strength, ductility and serviceability of RC structures; and local buckling of steel and FRP in composite steel- or FRP-concrete assemblages. He has published widely in the FRP composites field, co-authored Australia's first design guideline on FRP, and received the Distinguished Young Researcher Award from the International Institute for FRP in Construction (IIFC) in 2010.

ALL ARE WELCOME!