Foreword

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I wish to thank the Institution of Civil Engineers for the honour of featuring Stonecutters Bridge in a themed issue of the prestigious *Bridge Engineering* journal.

Stonecutters Bridge was opened to traffic on 20 December 2009 and has become a new member in the portfolio of long-span bridges of Highways Department of the Hong Kong Special Administrative Region Government. The bridge is the key component of Route 8 connecting the Hong Kong International Airport with the North East New Territories. The main span of the bridge crossing the Rambler Channel is 1018 m in length and is the second longest amongst cable-stayed bridges in the world.

The bridge site is unique in that the Rambler Channel is the gateway to the busy Kwai Tsing Container Terminals. The bridge is also visible from key parts of the urban area with the hustle and bustle of the Victoria Harbour and the natural beauty of the West Lamma Channel as the backdrop. Highways Department recognised this special setting and conducted an international design competition in 2000 to acquire a world-class design concept that will promote the image of Hong Kong as a vibrant centre of international finance, trade and tourism.

Stonecutters Bridge is also notable for technical excellence that defines the state of the art in bridge engineering. The bridge is situated in an exposed marine environment and may be subject to strong wind during typhoons. To cope with this challenge, extensive wind tunnel testing was performed in major laboratories in the world to assess the aerodynamic behaviour. These efforts facilitated the development of design features that significantly improve aerodynamic performance, including streamlined twin-box decks that reduce the wind loading, guide vanes installed at the deck soffit for reducing vibration caused by vortices shedding and the dimpled patterns on stay cables for mitigating rain-wind induced vibration. The highly advanced and innovative design, as well as the location at the gateway to the busy Kwai Tsing Container Terminals, also gave rise to unprecedented challenges during construction.

The completion of Stonecutters Bridge despite the challenges in design and construction is a tribute to all project participants. Their collaborative efforts in overcoming these challenges are recorded in the excellent series of paper in this themed issue which will help promote wider recognition within the bridge community of the dedication of all concerned in making the project a success.