

Title: Summary report for NZCS Travel Bursary

Award recipient: Yiqiu Lu, University of Auckland

Conference: *fib* symposium "Concrete - Innovation and Design" in Copenhagen Denmark"

During 18th to 20th May this year, I attended the *fib* symposium "Concrete - Innovation and Design" in Copenhagen Denmark under the sponsorship of New Zealand Concrete Society (NZCS). This conference is organized by *fib* (Fédération internationale du béton / International Federation for Structural Concrete) and held every year. *fib*, formed by 43 national member groups and approximately 1000 individual or corporate members, is a not-for-profit association committed to advancing the technical, economic, aesthetic and environmental performance of concrete structures worldwide. In this annual symposium, there were around 400 people attending this conference from more than 50 different countries. There were totally 215 papers presented during the conference covering the forefront of concrete research as well as the practical use of innovative solutions in new and existing structures. The topics presented in the conference included analysis and design, modelling of concrete, life cycle design, safety and reliability. The keynote speakers were Michael D. Lepech, an assistant professor from Stanford University presenting "The Role of Limit State Selection the Design and Management of Sustainable Reinforced Concrete Infrastructure", Ulf Jönsson, a construction manager from Femern A/S presenting "The development of the Concrete requirements Fehmarnbelt Fixed Link", Thomas Juul Andersen, a team leader from Danish Technological Institute with the title "Digital Fabrication of a Full-Scale Sculptural Concrete Structure" and Christian Munch-Petersen, a civil engineer from EMCON presenting "Large Danish Infrastructure Projects – A matter of political and concrete strength".

I really appreciate NZCS for sponsoring me to attend this conference. The topics in the conference were all very interesting allowing me to gain state-of-the-art knowledge regarding basic theory of concrete structure. It was also a great opportunity for me to present my work done in University of Auckland regarding "testing and modelling of reinforced concrete walls with minimum vertical reinforcement" to colleagues from around the world. The presentation was in the session of "Analysis and Design" and was 15 minutes long. I introduced the poor performance of lightly RC walls in Canterbury Earthquake and the test and modelling results of walls designed in accordance with minimum vertical reinforcement requirement in NZS 3101: 2006. One attendance proposed a question about the effect of splice of reinforcement to the wall behaviour. By doing so, I recognized the difference of concrete research between New Zealand and Europe. In New Zealand, the research of concrete mostly related to seismic design; while in Europe, researchers mainly focus on the basic theory of concrete. Regardless, they are both important topics to concrete research and researchers from both areas should have good networking. Overall, it was a really great experience for sharing and discussing ideas and developments with experts around the world.