

Dynamic Performance of Fibre-Reinforced Polymer Structures

Final Project Workshop – 22 June 2018

Our free-to-attend event is aimed at practitioners, academics, and PhD and postdoctoral researchers interested in design and dynamic performance of civil engineering structures (in particular bridges) made of FRP composites. Attend the Warwick University workshop to:

- gain an insight into dynamic properties of FRP structures and how they compare with those of structures made of traditional construction materials
- hear about vibration serviceability challenges and potential ways to approach them
- visit and experience a new laboratory FRP bridge
- share your views on, and experience of FRP composites in structural engineering.

Venue: Radcliffe House, University of Warwick, Coventry, CV4 7SH

9:20 – 9:50 Welcome Tea and Coffee

9:50 – 10:00 Introduction and Project Objectives

Stana Živanović, University of Warwick

Part I: FRP Structures

10:00 – 10:25 FRPs in Structural Engineering – Rise to Prominence and Design Guidelines

Toby Mottram, University of Warwick

10:25– 10:50 A Designer's View: Challenges in Design against Dynamic Loading

Lee Canning, Jacobs

10:50 – 11:15 FE Modelling of FRP Structures: Influence of Uncertainties

Justin Russell, University of Warwick

11:15 – 11:45 Coffee Break

Part II: Field and Lab Work

11:45 – 12:10 Dynamics of FRP Bridges: Testing and Modal Properties

Xiaojun Wei, University of Warwick

12:10 – 12:35 Warwick FRP Bridge: Design and Performance

Justin Russell and Stana Živanović, University of Warwick

12:35 – 13:30 Lunch

13:30 – 15:00 Laboratory Visit and Demos on FRP bridge

Part III: Vibration Serviceability: Challenges and Way Forward

15:00 – 15:25 Vibration Effects due to Train Buffeting

Justin Russell, University of Warwick

15:25 – 15:50 Vibration Response to Human-Induced Dynamic Loading

Stana Živanović, University of Warwick

15:50 – 16:30 Discussion (All)

The workshop is a part of EPSRC-funded project **Characterising dynamic performance of FRP structures for resilience and sustainability** (EP/M021505/1) - <https://warwick.ac.uk/fac/sci/eng/frpdynamics/>