Civil Engineering Research Group

Invitation to Seminar

• Deep Learning for Structural Health Monitoring

In recent years, Structural Health Monitoring (SHM) system has attracted great attention for structure maintenance due to its capability in providing efficient monitoring strategy. This trend can be seen in the number of SHM system implemented to monitor wide range of application including bridges, dams, wind turbines, aerospace, and machineries all over the world. However, despite the large amount of data being generated by these systems, interpreting the data is still a challenging task. This research is aimed to develop a damage detection method by utilising a system that can automatically learn from data through advance statistical computing method to discriminate between intact and damaged state of a structure. Hence, the method might significantly reduce the requirement of domain expertise. To validate the method, experimental data is collected from a laboratory-scaled bridge.

Arya Panji Pamuncak PhD student, Civil Engineering, University of Warwick

The speaker graduated from University of Indonesia, this was followed by Master degree from University of Southampton. The speaker has several years working experience within the Indonesian Ministry of Public Works and Public Housing working on monitoring system of Suramadu Bridge. His doctoral research (start 2017) is funded by Indonesian Endowment Fund for Education and is supervised by Dr Irwanda Laory.

• Turbulent mixing in vegetated estuaries: A study on longitudinal mixing with the effects of currents and waves

Pollutants enter the water bodies in numerous ways, and spreads in water due to different physical characteristics, including turbulent diffusion and shear dispersion. Methods have been developed to quantify the ability for a dissolved pollutant to spread in a river, and the ability to spread faster (longitudinal and transverse) depends on the river characteristics, including the water velocity, bed characteristics, and the water depth.
Here in the University of Warwick, we are experimenting a new method which can be used for quantifying the mixing in estuaries, where both waves and currents co-exist. The new method is being applied for different wave and flow conditions, together with the traditional method, to compare the two methodologies, and to compare how the mixing is affected by different flow conditions.

M. G. Nipuni Odara PhD student, Civil Engineering, University of Warwick

Nipuni is a Civil Engineering graduate from Sri Lanka. Coming from a fishery-based hometown, located in the southern coast, Nipuni is interested in minimizing the impacts of climate change and water pollution, in beautiful coastal environments. She has completed her Master of Sustainability Science degree in The University of Tokyo, and her dissertation was on “The impacts of Climate Change on small-scale fishery harbours and the fishing communities”. She started her PhD at Warwick in 2017 and her project is supervised by Dr Jonathan Pearson.

Wednesday 11 March 2020, 2.00pm-2.50pm

Room A401 Engineering Building

The seminar is open to all.
For more information, contact Dr Rezania (m.rezania@warwick.ac.uk).