



# Training in Reducing Uncertainty in Structural Safety (TRUSS) Workshop

10.10 - 17.30, 29<sup>th</sup> August 2018

UCD Sutherland School of Law, Belfield, Dublin 4, Ireland



**Motivation:** Insufficient maintenance/monitoring can lead to an unacceptable risk of collapse and to a tragic failure as the Morandi bridge in Genoa, Italy. An accurate assessment of the safety of a structure is a difficult task due to uncertainties associated with the aging and response of the structure, the operational and environmental loads, and their interaction. The project TRUSS (*Training in Reducing Uncertainty in Structural Safety*) has recruited 14 Early Stage Researchers (ESRs) to carry out research towards improving the structural assessment of buildings, energy, marine, and transport infrastructure. This research has been enhanced by an advanced program of scientific and professional training delivered via a collaboration between 6 Universities, 1 research institute and 11 companies from 5 European countries. TRUSS workshop reports on knowledge gained in structural behaviour, structural health monitoring, damage detection, and infrastructure management that will contribute to deal with the challenges of an aging European infrastructure.

## Agenda:

8.00	Registration-Front Desk
10:10 –10:25	<b>“The TRUSS ITN project (2015-2019): a Marie Skłodowska-Curie innovative training network on reducing uncertainty in structural safety”</b> by Project Coordinator, Arturo González, Room L248
10:25 –10:40	<b>“Fatigue testing of reinforced concrete beams instrumented with distributed optical fiber sensors (DOFS)”</b> by ESR11, Antonio Barrias, Room L248
10:40 –10:55	<b>“Automated bridge deck evaluation through UAV derived point cloud”</b> by ESR14, Siyuan Chen, Room L248
11:00 –11:30	Coffee Break
11:30 –11:45	<b>“On the effectiveness and uncertainty of inspection methods for fatigue crack management”</b> by ESR5, Guang Zou, Room L248
11:45 –12:00	<b>“On the application of Gaussian process regression for structural analysis”</b> by ESR4, Rui Teixeira, Room L248
12:00 –12:15	<b>“Statistical reliability of the screw pullout test in the assessment of in-situ concrete strength”</b> by ESR2, Shah Nur Alam Sourav, Room L248
12:15 –12:30	<b>“A comparative study on different BFRP Rebar design methodologies”</b> by ESR1, Sofia Antonopoulou, Room L248
12:30 –12:45	<b>“A big data approach for investigating the performance of the road infrastructure”</b> by ESR13, Federico Perrotta, Room L248
12:50 –14:00	Lunch Break
15:10 –15:25	<b>“Vibration tests of an underwater free-standing 2-rack system”</b> by ESR3, Alberto González, Room L246
15:25 –15:40	<b>“Reduction of uncertainties associated to the dynamic response of a ship unloader”</b> by ESR6, Giulia Milana, Room L246
15:40 –15:55	<b>“Sensitivity of SHM sensors to bridge stiffness”</b> by ESR12, Daniel Martinez, Room L246
16:00 –16:30	Coffee Break
16:30 –16:45	<b>“Nothing on the road axle detection system using direct strain measurements – a case study”</b> by ESR7, Farhad Huseynov, Room L247
16:45 –17:00	<b>“Finding the influence line for a bridge based on random traffic and field measurements on site”</b> by ESR8, Barbara Heitner, Room L247
17:00 –17:15	<b>“A machine learning classifier for condition monitoring and damage detection of bridge infrastructure”</b> by ESR9, Matteo Vagnoli, Room L247
17:15 –17:30	<b>“Vibration-based, output-only damage identification of bridge under vehicle induced excitation”</b> by ESR10, John James Moughty, Room L247



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[www.trussitn.eu](http://www.trussitn.eu)