PhD post in Computational Structural Mechanics at Imperial College London, UK: Advanced Modelling of Masonry Arch Bridges

**General Description:** One PhD scholarship with focus on developing advanced modelling strategies for masonry arch bridges is open for applications at Imperial College London. The PhD will be based in the CSM group at the Department of Civil and Environmental Engineering. The research will be integrated within the recently funded EPSRC project: “Exploiting the resilience of masonry arch bridge infrastructure: a 3D multi-level modelling framework” offering the successful applicant the opportunity to contribute to a timely research endeavour in structural engineering. The position offers also a wide range of training and development opportunities in a highly stimulating environment, as well as access to world-leading academics, facilities and networks.

**Project details:** The project is devoted to the development of advanced numerical models for masonry arch bridges, which represent a substantial portion of existing bridges in the UK and abroad. The novel numerical descriptions will be based upon 3D FE mesoscale representations for masonry allowing for the cyclic nature of traffic loading. The models will be implemented in ADAPTIC, an in-house FE code for advanced nonlinear analysis of structures, validated against the physical experiments conducted in the EPSRC project and then used in parametric studies to investigate the main performance characteristics of realistic masonry bridges.

**Supervisors:** Dr Lorenzo Macorini & Prof Bassam Izzuddin.

**Requirements:** a competitive candidate for this role should demonstrate the following:

- A good Upper Second or First Class Degree (or International equivalent) in engineering.
- A Masters level degree qualification.
- A good command of the English language, including report writing skills.
- Solid background in mechanics.
- Good knowledge and experience in programming languages.

**Funding and eligibility:** The studentship will provide funding for 3 years including tuition fees and a tax-free stipend at the standard UKRI London rate, £17,009 for the 2019/20 academic year. In addition, a generous allowance is provided for research consumables, conference attendance and specialist training (including certifications).

Full funding is available to Home and EU students.

**How to apply:** Applicants wishing to be considered for these opportunities should send the following application documents to Dr Lorenzo Macorini (l.macorini@imperial.ac.uk)

- Current CV including details of their academic record
- Covering letter explaining their motivation and suitability
- Contact details of two academic referees

Application via the Imperial College Registry is not necessary at this stage.

**The closing date for applications is the 15th September 2019.** However, applications will continue to be accepted until the position is filled.

For further details, informal discussions and information about the project please contact l.macorini@imperial.ac.uk