

**July 18, 2022 – 2:30pm-5:30pm**

**July 20, 2022 – 10:00am-1:00pm**

**July 21, 2022 – 11:00am-1:00pm**

## **Prof. Gopal Madabhushi**

*Professor, Department of Engineering, University of  
Cambridge, UK*

# **Pile foundations under seismic loading**

Pile foundations are the most common deep foundations used around the world to transfer super-structure loads into competent soil strata, particularly when poor soil strata exist at the ground surface. Many buildings in the seismic regions of the world are supported on pile foundations and therefore experience strong seismic loading particularly if the ground suffers liquefaction. It is often very difficult to investigate the performance of pile foundations under such conditions. In this course, we will cover the use of dynamic centrifuge modelling to investigate the seismic behaviour of pile foundations, particularly when soil liquefaction occurs. By using the experimental data from centrifuge tests, we will discover the failure mechanisms that can occur in single piles and in pile groups. We will look at the load the load transfer mechanisms that can occur once liquefaction of soil sets in and also the settlement of piles following soil liquefaction. We will estimate the amount of settlement that pile foundations can suffer. Overall, this course should give you an overview of the design of pile foundations in liquefiable soils.

Program:

[https://phd.uniroma1.it/web/course---pile-foundations-under-seismic-loading\\_ns3768EN\\_EN.aspx](https://phd.uniroma1.it/web/course---pile-foundations-under-seismic-loading_ns3768EN_EN.aspx)

Registration form:

[https://docs.google.com/forms/d/e/1FAIpQLScaEisuyYsJcgyoVhbOB5V0fgkCADoWm5P9GTYKsHlllwGLqw/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLScaEisuyYsJcgyoVhbOB5V0fgkCADoWm5P9GTYKsHlllwGLqw/viewform?usp=sf_link)