

Nottingham Centre for Geomechanics (NCG) Centrifuge

Managers: Alec Marshall - alec.marshall@nottingham.ac.uk
Charles Heron – charles.heron@nottingham.ac.uk

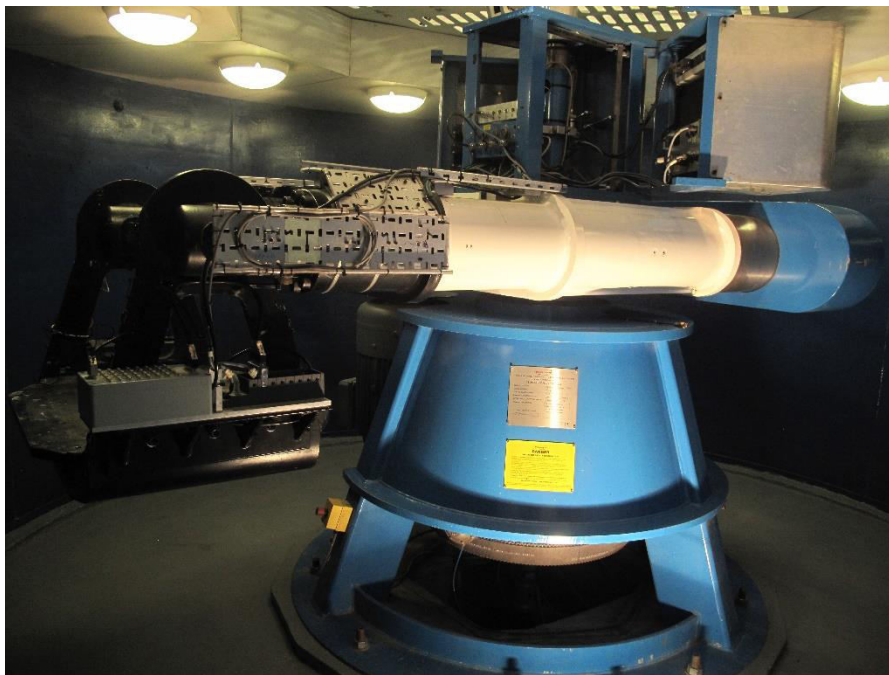
Website: <https://www.nottingham.ac.uk/research/groups/nottingham-centre-for-geomechanics/research/centrifuge-modelling/centrifuge-modelling.aspx>

Owner: University of Nottingham

Location: Nottingham, UK

Introduction

The Nottingham Centre for Geomechanics (NCG) centrifuge centre is used to study a wide range of civil and geotechnical engineering scenarios (e.g. tunnelling and deep excavations, shallow and deep foundations, slope stability), or soil-structure interactions (e.g. tunnel/excavation-building/pipeline interactions, cyclic loading of pile/monopile foundations). Problems of more fundamental soil mechanics interest are also studied (e.g. cone penetration testing). Reduced-scale models are developed within in-house design and manufacture facilities within the Faculty of Engineering, with research staff working collaboratively with experienced technicians. The NCG has specialist control and instrumentation technicians, providing capabilities to develop novel and sophisticated models of complex processes.



The NCG Geotechnical Centrifuge.

Key Technical Specifications

Beam Centrifuge	
Manufacturer	Broadbent GT50/1.7
Year established	2005
Radius to base of soil container	2.0 m
Capacity	50 g-ton (0.5 tons @100g, max G-level: 150g)
Bucket area	0.8 m x 0.6 m
Major equipment	3DOF Robotic loading system Automatic sand pourer