



18TH YOUNG GEOTECHNICAL
ENGINEERS SYMPOSIUM

22–23 June 2026

Imperial College London



PROGRAMME

IMPERIAL

BGA
• THE BRITISH •
GEOTECHNICAL
ASSOCIATION

Welcome to YGES 2026!

Dear Colleagues,

On behalf of the Organising Committee, it is our pleasure to welcome you to the 18th Young Geotechnical Engineers Symposium (YGES 2026) at Imperial College London.

YGES provides a unique forum for early-career geotechnical engineers, researchers, and postgraduate students to present their work, exchange ideas, and develop professional connections within the geotechnical community.

This year's symposium brings together participants from academia and industry to discuss a broad range of topics, including experimental geotechnics, numerical modelling, soil–structure interaction, offshore renewables and data-driven methods.

We would like to thank all authors for their contributions, the session chairs for their support and constructive feedback, our keynote speakers for sharing their expertise, and the reviewers and volunteers who made this event possible.

We hope you enjoy the symposium and take full advantage of the opportunity to learn, discuss, and build lasting professional relationships.

We wish you a stimulating and enjoyable symposium.

The YGES 2026 Organising Committee

Committees

Organising Committee

Katerina Tsiampousi, Imperial College London

Francesca Palmieri, Imperial College London

Dariel Hernandez Delfin, Imperial College London

Hao Wang, Imperial College London

Si Suo, Imperial College London

Session Chairs

Angela Casarella, Imperial College London

Catherine O'Sullivan, Imperial College London

Domniki Asimaki, Imperial College London

Marcelo Sanchez, Imperial College London

Pishun Tantivangphaisal, Imperial College London

Richard Jardine, Imperial College London

Volunteers

Maryam Sadat Maddah Sadatieh, Imperial College London

Pedja Tosovic, Imperial College London

Abstract Review and Feedback

All submitted abstracts were reviewed by members of the Organising Committee.

In keeping with the educational and supportive spirit of YGES, session chairs have also been invited to provide constructive feedback to presenters throughout the symposium with the objective of encouraging discussion and supporting professional development.

Our Keynote Speakers



Dr. Natalie Wride
British Geological Survey
Keynote Lecture:

Engineering Fundamentals: Back to Basics for Not-So-Basic Cases

Dr Natalie Wride is a Chartered Principal Geotechnical Engineer at the British Geological Survey and a Registered Ground Engineering Professional.

Following the completion of her PhD on the cyclic loading of soft soils, she has developed extensive expertise in advanced numerical modelling and ground-structure interaction problems.

Natalie has worked on major infrastructure projects in the UK, Middle East and Australia, including HS2, High Speed Two and the Humber Bridge. More recently, her work has focused on the application of the Observational Method and near real-time back analysis. Her contributions have been recognised through several professional awards, including the Ground Engineering Rising Star Award and the Ground Engineering Award for the application of the Observational Method. In 2026, she was named among Ground Engineering Magazine's Top 20 Women in Ground Engineering.



Dr. Ken Vinck
Imperial College London
Keynote Lecture:

Chalk Characterisation for Driven Pile Behaviour at Chalk Sites

Dr Ken Vinck is an Assistant Professor in Geotechnics at Imperial College London. With seven years invested in geotechnical practice, he advanced his studies at Imperial College London, securing both an MSc and a PhD. After his

doctoral achievements, Dr Vinck dedicated a year at Imperial as a post-doctoral researcher, subsequently joining as a Lecturer in 2022.

At the heart of his research is a passion for experimental geotechnics, with a pronounced focus on advanced laboratory testing and site characterisation – all aimed at enhancing offshore foundation system designs. His roles include key contributions to the lab testing components of the ALPACA project, for which he was awarded the BGA medal in 2022. Dr Ken Vinck is presenting the investigation entitled "Chalk characterisation for driven pile behaviour at chalk sites."

Programme at a Glance

Day 1

9:00 – 9:30	Opening of the registration
9:15 – 9:30	Welcome ceremony
9:30 – 11:00	Plenary Session 1
11:00 – 11:30	Coffee break
11:30 – 13:00	Plenary Session 2
13:00 – 14:00	Lunch
14:00 – 15:30	Plenary Session 3
15:30 – 16:00	Coffee break
16:00 – 17:00	Plenary Session 4
17:00 – 17:30	Keynote Lecture by Dr. Natalie Wride
18:30 – 21:00	Symposium dinner

Day 2

9:30 – 10:00	Keynote Lecture by Dr. Ken Vinck
10:00 – 11:00	Plenary Session 5
11:00 – 11:30	Coffee break
11:30 – 13:00	Plenary Session 6
13:00 – 14:00	Lunch
14:00 – 14:45	Plenary Session 7
14:45 – 15:15	Group photo
15:15 – 15:30	Closing Ceremony

Plenary Session 1

Technical Theme: Fundamental of Soil Behaviour

Chaired by Catherine O'Sullivan

9:30 – 9:45

Behaviour of granular metamaterials for soil reinforcement application

S. Irvine, V. Angelidakis

9:45 – 10:00

Rate of primary consolidation behaviour of kaolinite under chemically active pore fluids

K. Adebayo, K. Vinck, A. Casarella, and C. O' Sullivan

10:00 – 10:15

Thermal volumetric behaviour of clays

A. Khare, T. Le, T. A. V. Gaspar and L. Zdravković

10:15 – 10:30

Rethinking glacial till: brittle and contractive response under critical state testing

L. Souza, F. W. Barra and Tom Shire

10:30 – 10:45

Simulating the water retention curves for hydrophobic granular soils

T. Zhao, M. Sutman and C. Beckett

10:45 – 11:00

A low-cost automated apparatus for measuring water entry pressure

Q. Zhang and G. El Mountassir

Plenary Session 2

Technical Theme: Offshore Geotechnics

Chaired by Pishun Tantivangphaisal

11:30 – 11:45

Drilled and grouted pile/anchor design for offshore renewable energy: interface shear behaviour from direct shear box tests
O. Deniz, H. Burd

11:45 – 12:00

Numerical modelling of shared anchor piles for floating offshore wind turbines
A.R. Bin Bahri, L. Cui and S. Bhattacharya

12:00 – 12:15

Monotonic lateral loading of monopiles in sandy soils, considering drainage effects
R.W.L Chia, C.M. Martin, O. Adamidis, H.J. Burd

12:15 – 12:30

Development of practical geotechnical design tools for offshore wind turbine foundations subject to cyclic loads
C. Hin, Chin. and P. Tantivangphaisal.

12:30 – 12:45

Calibration of Low-Cost Soil Moisture Sensors for Accurate Measurement of Water Content in High Plasticity Clay
X. Z. Wu, Joel A. Smethurst and K. M. Briggs

12:45 – 13:00

Long-term deformation mechanisms of monopile foundation in sand under cyclic lateral loading of different symmetries
L.L.K. Hung-Lo-Sang, J. Wang, C.M. Heron, A. Pettey and A.M. Marshall

Plenary Session 3

Technical Theme: Soil-Structure Interaction

Chaired by Richard Jardine

14:00 – 14:15

A state variable formulation of LeBlanc's model for cyclic loading

M. E. Rasmussen, B. W. Byrne and H. J. Burd

14:15 – 14:30

An experimental framework for assessing soil reactions acting on laterally loaded monopile segments

J. M. Han, H. Burd, V. Nardelli, and M. Saberi

14:30 – 14:45

First principles approach for calculating axial and bending loads from strain measurements in laterally loaded piles

F. Van der Berg, K. Briggs, W. Powrie, and J. Smethurst

14:45 – 15:00

Investigating re-entrant corners in braced excavations

A. Chai, C. E. Augarde, W. M. Coombs and M. Ouyang

15:00 – 15:15

Numerical modelling of scour effects on pile group supported bridges

A. Al-Karawi, L. J. Prendergast and N. Thom

15:15 – 15:30

Numerical modelling and validations on artificial ground freezing under groundwater flow condition

G. Go

Plenary Session 4

Technical Theme: Data-Driven and AI-Based Approaches
Chaired by Dariel Hernandez Delfin

- 16:00 – 16:15** *Predicting PFAS transport through landfill composite liner using physics-informed neural networks*
Y. Tan and Y. Feng
- 16:15 – 16:30** *Applying surrogate models to predict tunnelling-induced building settlements*
J. Liu, A. Tsiampousi, A. Ruiz López and D.M.G. Taborda
- 16:30 – 16:45** *Prediction of thermo-active pile group response from single-pile surrogate models*
J. Sánchez Fernández, A. Ruiz López and D.M.G. Taborda
- 16:45 – 17:00** *GPU-accelerated 3D finite element analysis of monopile foundations with SANISAND-MS*
M.R.F. Bowman, H. J. Burd and W. Armour

Plenary Session 5

Technical Theme: Experimental Characterisation and Site Investigation

Chaired by Angela Casarella

10:00 – 10:15

Heat transfer in saturated sand: insights from centrifuge experiments

D.M.P.J., E.T. Bowman and T.A.V. Gaspar

10:15 – 10:30

Investigating climate-induced failure mechanisms in UK coastal cliffs

P. J. Schoeman, T. A. V. Gaspar, L. Zdravkovic, J. Standing

10:30 – 10:45

Particle crushing in glauconitic sand under cyclic CPTu loading

A. Rodríguez Piedrabuena, D. A. de Lange, M. Mento and M. Konstantinou

10:45 – 11:00

Extending the capabilities of suction monitored unconfined compression apparatus with digital image correlation

B. Nagy, G. El Mountassir and A. Tarantino

Plenary Session 6

*Technical Theme: Numerical Methods and Computational Geomechanics
Chaired by Domniki Asimaki*

- 11:30 – 11:45** *Revisiting shear history in DEM: limitations of accumulating shear displacement compared with accumulating shear force*
Y. H. Leung, D. Hernandez-Delfin, D. M. G. Taborda, Catherine O’Sullivan
- 11:45 – 12:00** *Implicit sub-stepping scheme for Critical State soil models*
H. Bui and J. Ninic
- 12:00 – 12:15** *Salinity effects on the behaviour of swelling clays: a double-structure approach to Chemo-Hydro-Mechanical (CHM) coupling*
H.M. Lai, L. Zdravkovic, D. M. Potts and M. Kirby
- 12:15 – 12:30** *Automated calibration of coarse-grained DEM models for large displacement simulations.*
A. Tottle, L. Cui and J. Sagaseta
- 12:30 – 12:45** *Comparison of mualem and burdine hydraulic conductivity models in a 1-D unsaturated soil column simulation*
Q.H.X. Kong, C. O’Sullivan, K. Tsiampousi and H. Wang
- 12:45 – 13:00** *An assessment of different methods for quantifying the thermal performance of thermo-active foundations*
A. Provost, P. Sapin and D. M. G. Taborda

Plenary Session 7

Technical Theme: Sustainability and Engineering Applications

Chaired by Marcelo Sanchez

14:00 – 14:15

Sustainable reuse of historic masonry as engineered fill in the fore gill bridge rebuild

C. Walker and M.L. Walker

14:15 – 14:30

Short-term structural response of a model shaft liner during shaft breakout in clay

M. Ucur, S. Divall and S.E. Stallebrass

14:30 – 14:45

Reducing Tunnel Volume Loss Using Data Processing Techniques

R. Limbu, S. Divall and S.E. Stallebrass

PRACTICAL INFORMATION

Venue

Imperial College London

South Kensington Campus

Skempton Building - Room SKEM 201

Symposium Dinner – The Old Ship, Hammersmith

Date: Monday 22 June 2026

Time: 18:30 – 21:00

Venue: The Old Ship

Address: 25 Upper Mall, Hammersmith, London W6 9TD

Situated on the banks of the River Thames, The Old Ship is one of Hammersmith's most iconic riverside pubs, offering beautiful river views, seasonal British food, and a relaxed atmosphere for networking and socialising after the symposium.

Getting there: Approximately 30–35 minutes from Imperial College London by public transport.

Proceeding:

Contributions will be included in Proceedings of the 18th Young Geotechnical Engineers Symposium YGES 2026. The proceedings will be published as open access and made available through the Imperial College London Research Repository with a DOI.

ACKNOWLEDGEMENTS

The Organising Committee would like to thank:

- All authors and presenters
- Session chairs
- Keynote speakers
- The British Geotechnical Association
- Imperial College London
- Volunteers who assisted with the organisation of the symposium

for their valuable contribution to the success of YGES 2026.