

# TC223 Bio-Geotechnical Engineering

## TC223 Online kick-off Meeting

*19<sup>th</sup> May 2026*



**ISSMGE TC223**

**BIO-GEOTECHNICAL ENGINEERING**



# TC223 Bio-Geotechnical Engineering

## *Leadership Team*



**Dr Grainne El Mountassir**  
**Chair of TC223**

**Dr Junliang (Julian) Tao**  
**Vice-Chair of TC223**

**Prof Rafaela Cardoso**  
**Secretary of TC223**

**Dr Michael Gomez**  
**Nominated by Chair**

**Prof Enrique Romero**  
**Nominated by Chair**

University of Strathclyde  
UK

Arizona State University  
USA

IST, Lisbon University  
Portugal

University of Washington  
USA

Universitat Politècnica  
de Catalunya  
Spain



# TC223 Bio-Geotechnical Engineering

## *Objectives*

### Objective 1: Dissemination

Disseminate knowledge and practice in the area of biogeotechnics including for example (but not limited to): rooted soils, biocemented soils, the application of biopolymers and bioinspired geotechnical engineering.

- Organize specialty conferences, symposiums and workshops.
- Encourage preparation of keynote lectures, state-of-the-art lectures, general reports for conferences organized by the International Society, regional conferences and conferences organized by Member societies.
- Promote (through dissemination activities) interaction with other ISSMGE TCs.



# TC223 Bio-Geotechnical Engineering

## *Objectives*

### Objective 1: Dissemination

### Objective 2: Guidelines & Recommendations

To establish guidelines and technical recommendations in the field of biogeotechnics:

- Promote responsible adoption of biotechnology in geotechnics
- Promote the exchange of information regarding testing of biologically modified soils and bio-inspired technologies from laboratory-scale to in situ monitoring of performance
- Support the development of guidance and tools for bio-based geotechnical interventions and design



# TC223 Bio-Geotechnical Engineering

## *Objectives*

### Objective 1: Dissemination

### Objective 2: Guidelines & Recommendations

### Objective 3: Conference Assistance

Assist with technical programs of international and regional conferences organized by the ISSMGE:

- Promote the presentation of findings of TC223 in main sessions and discussion sessions.
- Promote biogeotechnics sessions at ISSMGE sponsored international and regional conferences on soil mechanics and geotechnical engineering, and to support special conferences and workshops on biogeotechnics.



# TC223 Bio-Geotechnical Engineering

## *Objectives*

Objective 1: Dissemination

Objective 2: Guidelines & Recommendations

Objective 3: Conference Assistance

Objective 4: Industry Links

- Encourage industry participation in all aspects of TC from participation in dissemination events, keynotes in workshops and conferences, and development of guidelines and recommendations
- Actively engage with other Technical Committees whose field of activity is relevant to the application and Impact of Biogeotechnics



# TC223 Bio-Geotechnical Engineering

## *Objectives*

Objective 1: Dissemination

Objective 2: Guidelines & Recommendations

Objective 3: Conference Assistance

Objective 4: Industry Links

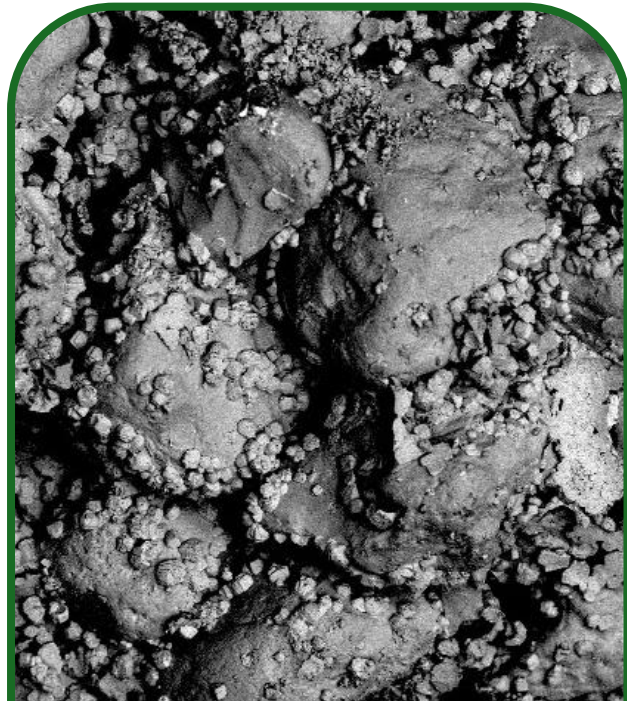


# TC223 Bio-Geotechnical Engineering

## *Technical Task Forces (0-2 years)*



*T1: Living soils for geotechnical engineering*



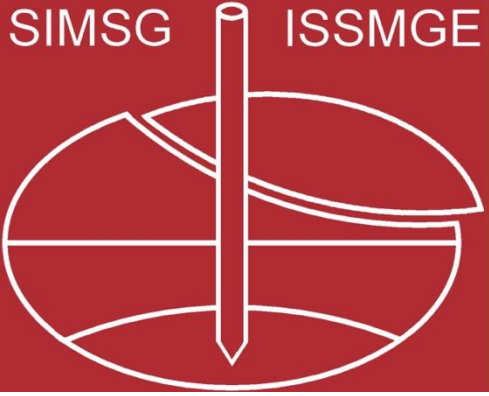
*T2: Biocementation for geotechnical engineering*



*T3: Biological products for geotechnical engineering*



*T4: Bio-inspired geotechnical engineering*



# TC223 Bio-Geotechnical Engineering

## *Technical Task Forces (>2 years)*



*T1: Responsible research and innovation in Biogeotechnical Engineering*



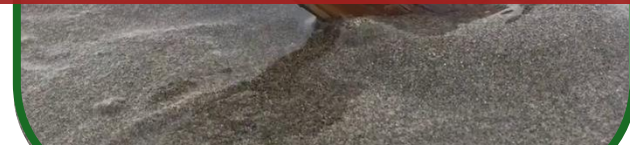
*T2: Modelling approaches for predicting biologically modified/inspired soil behaviour*



*T3: Field-scale deployment and monitoring*



*T4: Sharing, collaboration and open-access*





# TC223 Bio-Geotechnical Engineering

## *Professional Task Forces*



*P1: Academia- Industry Partnerships*



*P2: Young members*



*P3: Educating Biogeotechnical engineers*



# TC223 Bio-Geotechnical Engineering

## *Current Membership*

#	Type	Full Name	Country
1	Chair	Grainne El Mountassir	United Kingdom
2	Vice Chair	Julian Tao	United States
3	Secretary	Rafaela Cardoso	Portugal
4	Nominated by TC Chair	Enrique Romero	Spain
5	Nominated by TC Chair	Michael Gomez	United States
6	Nominated Member	Anthony Leung	Hong Kong Special Administrative Region
7	Nominated Member	Claudia Vitone	Italy
8	Corresponding Member	Sabatino Cuomo	Italy
9	Corresponding Member	Marco Rosone	Italy
10	Nominated Member	Leon van Paassen	Netherlands
11	Nominated Member	Gioacchino (Cino) Viggiani	Italy
12	Nominated Member	Sergio Lourenco	Hong Kong Special Administrative Region
13	Corresponding Member	Alessandro Fraccica	Italy
14	Corresponding Member	Manuela Cecconi	Italy
15	Nominated Member	Dimitrios Terzis	Switzerland
16	Corresponding Member	Vito Tagarelli	Italy



# TC223 Bio-Geotechnical Engineering

## *How to engage with TC223?*

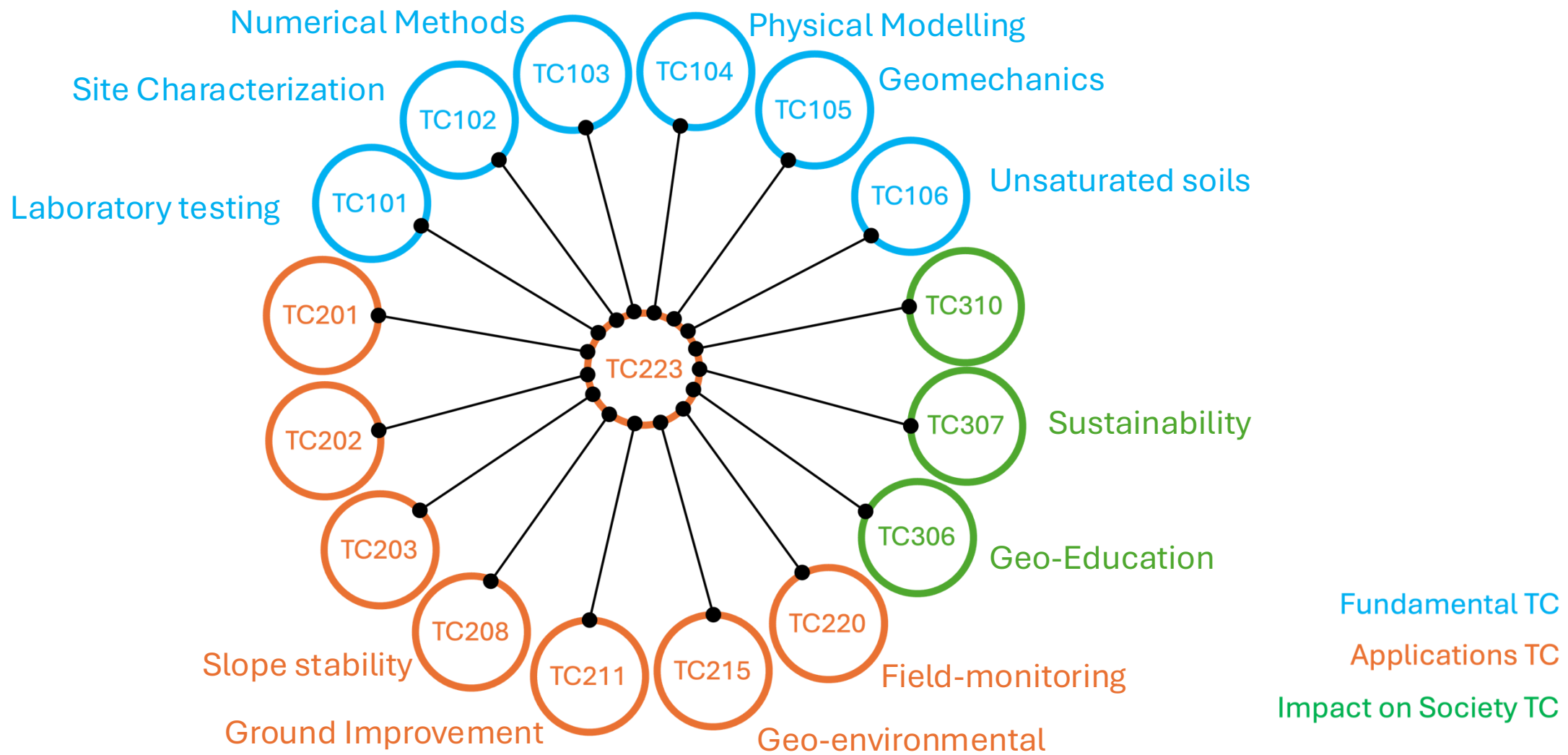
- Members can **only** be proposed via your member society
- Each member society can propose up to two members as nominated members (with voting rights).
- Additional members can be proposed as corresponding members.

***TC223 will be announced on our website and social media as well as on the next issue of the ISSMGE bulletin.***



# TC223 Bio-Geotechnical Engineering

## *Interaction with other TCs*





# TC223 Bio-Geotechnical Engineering

## *Interaction with Regional Committees*

- Asian Regional Technical Committee in Biogeotechnics
  - *Anthony Leung*



# TC223 Bio-Geotechnical Engineering

## *Upcoming activities*

- 21<sup>st</sup> ICSMGE 2026 in Vienna
  - **Tuesday 16th June 2026, 13:00-13:45 (UTC+2)**
  - Meeting Room 1.16, Level 1 and online
- TC223 Webinar Series



# TC223 Bio-Geotechnical Engineering

*Upcoming activities*



9<sup>th</sup>

## International Conference on Unsaturated Soils

Joyce Cummings Center (JCC) - Tufts University  
June 6-9, 2027

UNSAT  
2027  
BOSTON, USA



***9<sup>th</sup> International conference on unsaturated soils (TC106), Boston, USA***

**Abstract Submission: 22<sup>nd</sup> May 2026**

**Conference Dates: 6-9<sup>th</sup> June 2027.**



# TC223 Bio-Geotechnical Engineering

*Upcoming activities*



***9<sup>th</sup> International Symposium on Deformation Characteristics of Geomaterials (TC101), Ankara, Türkiye.***

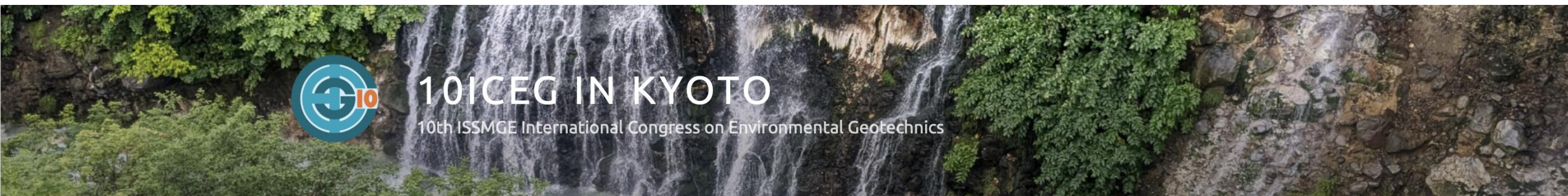
***Abstract Submission: 21<sup>st</sup> September 2026.***

***Conference Dates: 14-17<sup>th</sup> September 2027.***



# TC223 Bio-Geotechnical Engineering

*Upcoming activities*



***10th ISSMGE International Congress on Environmental Geotechnics (TC215) Kyoto, Japan.***

***Abstract Submission: 31<sup>st</sup> December 2026,***

***Conference Dates: 1<sup>st</sup> – 5<sup>th</sup> November 2027.***