

# Day One 12 July

# **Cardiff University**

**Civil & Environmental** Engineering Virtual Summer School 2022

# Schedule

### 2.30-2.45pm - Welcome & Intro to Cardiff University

#### 2.45-5.15pm - Session 1: Hydroenvironmental Research Centre

- Impacts of extreme conditions on coastal areas Professor Shungi Pan, Cardiff University
- Increasingly frequent extreme weather events urge the development of point-of-use water treatment systems – Professor Dawei Wang, Hohai University
  Natural Flood Management & applications – Dr Elizabeth Follett, Cardiff University
- Storm-induced flooding in coasts and estuaries Professor Yongping Chen, Hohai University
- Recent development of marine renewable energy Professor Jisheng Zhang, Hohai University
- Marine renewable energy (tidal barrages and lagoons; offshore waves and winds) Dr Zhihua Xie, Cardiff University

#### 5.25–6.05pm - Session 2: BRE Trust Centre for Sustainable Engineering

- Digital Twins for Engineering Performance management in the built environment -Jonathan Reynolds, Cardiff University
- Lifecycle Assessment towards Net Zero in the built environment Dr Ali Ghoroghi, Cardiff University

#### 6.05-6.45pm - Session 3: Applied & Computational Mechanics Group

- Vibration control and wave filtering using quasicrystalline phononic structures Dr Lorenzo Morini, Cardiff University
- DIGIBRIDGE: Physics-informed Digital Twin supported Smart Bridge Maintenance Dr. Kai Zhao, Cardiff University



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## 2.30 – 2.35pm - Welcome & Intro to Day Two

### 2.35-4.15pm - Session 4: Geoenvironmental Research Centre

- Resource Recovery from Waste: Towards a Circular Economy Professor Devin Sapsford, Cardiff University
- Biogeotechnics and Electrokinetics Dr Michael Harbottle, Cardiff University
- Thermo-Hydro-Mechanical Behaviour and Modelling of Soils Professor Snehasis Tripathy, Cardiff University
- Biocementation in soils and rocks Dr He Jia, Hohai University

### 4.25-6.05pm - Session 5: Materials for Life

- Biomimetic Materials for resilient structures Dr Diane Gardner, Cardiff University
- Simulation of cement healing systems Dr Brubeck Freeman, Cardiff University
- Life Cycle Assessment and its application to novel construction materials Dr Riccardo Maddalena, Cardiff University
- Sustainable Construction Materials towards
   Carbon Neutrality Dr. Ming-Zhi Guo, Hohai University

## 6.05-6.20pm - Summer School Close & Goodbye