

# Advanced materials and methodologies in circular construction

## SCOPE

Emerging materials and methodologies in the construction sector:

- nanomaterials
- nanocomposites
- adaptive materials
- machine learning
- reflective and radiative coatings
- energy efficiency
- 3D printing

## VIRTUAL

March 4, 2022

9:25 – 16:00 (GMT)

3:25 – 10:00 (CST)

FREE REGISTRATION

(until Feb 25):

<https://shorturl.at/qMV24>

## Organizing Committee:

João Ventura, IFIMUP

Nuno Ramos, CONSTRUCT

Nuno Cristelo, CQVR

Catarina Dias, IFIMUP

Rita Veloso, CONSTRUCT

## Contacts:

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9:25 **Opening** João Ventura (IFIMUP) / Nuno Ramos (CONSTRUCT)

- 9:30 **Alberto Miguéns** (CETIM, Spain)  
**Sustainable Built Environment: additive manufacturing with eco-friendly materials**
- 10:00 **Tim Van Mullem** (Ghent University, Belgium)  
**SMARTINCS: Developing Self-Healing Advanced Repair Technologies for Future Concrete Structures**
- 10:30 **Xiangming Zhou** (Brunel University, UK)  
**Contrary effects of nanoSiO<sub>2</sub> on silicate and aluminate hydration**

11:00 **Break**

- 11:15 **Alessandro Cannavale** (Politecnico di Bari, Italy)  
**Active and passive strategies for building cooling**
- 11:45 **Ines Garcia Loureiro** (Instituto Torroja, Spain)  
**Development of hydrophobic mortars to repair Cultural Heritage Concrete**
- 12:15 **Surendra Shah / Geetika Mishra** (University of Texas, USA)  
**Nanotechnology in construction: a way toward Sustainability**

- 12:45 **Steinar Grynning** (Sintef, Norway)  
**TBA**

13:15 **Lunch**

- 14:00 **Julio Fierro** (CETIM, Spain)  
**Addressing sustainability in the construction sector**
- 14:30 **Verónica Bermudez** (UTAD, Portugal)  
**Solar-Powered Windows for Energy-Efficient Buildings**
- 15:00 **Gavin H. West / Bruce Lippy** (CPWR, USA)  
**Nanomaterial Exposure Risks among Construction Workers**
- 15:30 **Moncef L. Nehdi** (McMaster University, Canada)  
**Paradigm Shift in Circular Construction: Systems Based Policy Making**

16:00 **Closing Remarks** Nuno Cristelo (CQVR)

Circular 2B Circular Construction in Energy-Efficient Modular Buildings