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Organisers

RM4L2020 is being organised under the auspices of the on-going EPSRC-funded Resilient Materials 4 Life (RM4L) programme grant.

Event Manager: IfM ECS, Institute for Manufacturing, 17 Charles Babbage Road, Cambridge, UK CB3 0FS

2020 RESILIENT MATERIALS 4LIFE

INTERNATIONAL CONFERENCE

20-23 SEPTEMBER 2021

CHURCHILL COLLEGE, CAMBRIDGE, UK

Register your interest :

www.RM4L.com/RM4L2020

Enquiries: info@RM4L.com

THE RM4L CONSORTIUM

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A unique opportunity to discuss the latest developments in intelligent and autonomous infrastructure materials.

About the Conference

The development of novel and smart infrastructure materials, driven by the desire to reduce the costs of their maintenance and their significant environmental impact, is attracting the attention of researchers, academics, industrialists and policy makers across the world. Infrastructure materials with self-sensing, self-healing and self-adapting capabilities, and tailored materials such as engineered cementitious composites are just a few examples of the research areas that are of interest.

The scope of the conference encompasses research, innovation, design and implementation. In particular, the conference will include a number of dedicated sessions on biomimetic materials that have the ability to self-sense, self-immunise, self-heal, self-repair and self-adapt.

Who should attend?

Researchers, academics, students, engineers, scientists, architects, contractors, concrete producers, public works officials, material suppliers and construction industry professionals are invited to present and discuss their latest findings on the following four strategic themes biomimetic materials, materials sensing and diagnostics, multi-functional materials and intelligent materials.

Conference attendance counts as CPD toward your professional qualification.

Important dates

Deadline for abstract submission
30 October 2020

Deadline for extended abstract submission
29 January 2021

Registration information and fees will be available on the website: www.RM4L.com/RM4L2020

Conference themes

The RM4L2020 conference topics are organised according to 4 main themes:

» biomimetic materials
» material sensing and diagnostics
» multi-functional materials
» intelligent materials.

Within the main themes are the following subthemes:

» experimental and numerical research
» real-world application
» material manufacture

Conference topics

» Self-healing materials
» Smart materials
» Biological and bio-inspired materials
» Adaptive and multi-functional materials
» Self-sensing and self-diagnosing materials
» Advanced manufacturing platforms for bio-inspired cement-based materials
» Use of microorganisms and synthetic biology
» Simulation of bio-inspired and smart materials
» Sensor technology (chemical and biological sensors, actuators, photonics etc)
» On-site monitoring and structural condition assessment using smart materials
» Damage identification and evaluation using smart materials
» Threshold levels and criteria for intervention
» Mechanics of composite and multifunctional materials
» Use of time, rate and stimuli-dependent materials
» Novel nano-materials and nano-structures

Confirmed plenary speakers:

Prof. Nele De Belie (UGhent-BE), Prof Liberato Ferrara (PoliMi-IT), Prof Mark Miodownik (UCL-UK), Prof Erik Schlangen (TU-Delft-NE)

Programme outline

Sunday 19 September 2021
Welcome Reception

Monday 20 September
9.00am - Morning sessions
11.00am - Keynote speaker
12.00pm - Lunch
1.00pm - Afternoon sessions

Tuesday 21 September
9.00am - Morning sessions
11.00am - Keynote speaker
12.00pm - Lunch
1.00pm - Afternoon sessions
RM4L2020 Industry session
Conference dinner

Wednesday 22 September
9.00am - Morning sessions
11.00am - Keynote speaker
12.00pm - Lunch
1.00pm - Afternoon sessions
Best poster and best paper prize presentations

Thursday 23 September
Guided tour of Cambridge or London
Visit to RM4L construction sites
(more details to follow)

Venue
Churchill College, University of Cambridge, Cambridge, UK

Supported by:

Find out more: www.RM4L.com/RM4L2020   info@RM4L.com