2020 RESILIENT MATERIALS 4LIFE INTERNATIONAL CONFERENCE

RM4L2020

20-23 SEPTEMBER 2021

CHURCHILL COLLEGE, CAMBRIDGE, UK

CALL FOR PAPERS

WELCOME AND INVITATION

Inspired by the ongoing EPSRC-funded RM4L project grant, the RM4L conference brings together relevant aspects of innovative research on cementitious infrastructure materials used in civil engineering applications and provides a forum for the exchange of materials' research more generally. It will provide a unique opportunity to discuss the latest developments in intelligent and autonomous construction materials. 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.

The deadline for the submission of abstracts is 30 October 2020

THE ORGANISERS

Cardiff University / Prifysgol Caerdydd

University of Bradford

UKRI Engineering and Physical Sciences Research Council

University of Cambridge

University of Bath

COMMITTEES

THE CHAIRS' COMMITTEE

Prof Robert Lark
Cardiff University, Chair

Prof Abir Al-Tabbaa
University of Cambridge

Dr Diane Gardner
Cardiff University

Prof Tony Jefferson
Cardiff University

Dr Kevin Paine
University of Bath

See also:

INTERNATIONAL SCIENTIFIC COMMITTEE

LOCAL ORGANISING COMMITTEE

www.RM4L.com/RM4L2020-committees

CONFERENCE TOPICS

The RM4L2020 conference topics are organised according to 4 main themes - biomimetic materials, material sensing and diagnostics, multi-functional materials and intelligent materials. Within the main themes are the following subthemes: experimental and numerical research, real- world application and material manufacture.

The conference will focus on materials that are relevant to the construction industry.

The following is a list of possible topics. It is not intended to be exclusive and papers on both experimental and numerical research as well as the development and application of the proposed technologies to real-world scenario are welcome.

- 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

Selected contributions will be invited for publications in Applied Science (MDPI) and in special editions of ASCE and ICE journals.

GUIDELINES FOR AUTHORS

Prospective authors are invited to submit abstracts of up to 250 words for review by 30 October 2020.

Authors whose submissions are accepted for an oral presentation will be invited to submit an extended abstract. These will be published in an electronic conference proceedings together with the short abstracts of submissions accepted for a poster presentation. Selected authors will also be invited to prepare full papers (up to 8 pages) that will be published in a special issue of a leading international journal.

SUPPORTED BY:

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KEY DATES

ABSTRACTS SUBMISSION DEADLINE
30 October 2020

DEADLINE SUBMISSION OF EXTENDED ABSTRACTS
29 January 2021

ANNOUNCEMENT OF ACCEPTED EXTENDED ABSTRACTS
26 March 2021

DEADLINE SUBMISSION OF REVISED EXTENDED ABSTRACTS
23 April 2021

Venue
The conference will be held at Churchill College, Cambridge

www.RM4L.com