



SCMMMS News

June 2022

A warm welcome to you!

This is first edition of Materials, Minerals and Mining Society (SCMMMS) newsletter.

We hope this dissemination channel will help us keep you updated on our activities.

SCMMMS was initiated in May 2021 and rebranded from the former **West Surrey Materials Society** (WSMS). There was also a need to cover a wider catchment area to promote the materials activities within, but not limited to the UK South East region.

The first year has been very eventful with the pandemic situation providing more opportunities. In addition to engaging with a global audience, we were also pleased to have representation from many universities within the region supporting the committee and also participating at the events.



IOM3 Local Society of the Year 2022



We are delighted to announce that SCMMMS is the recipient of the IOM3 **'2022 Local Society of the Year'** award.

We take this opportunity to thank you for all the support during the past year which made all the difference. We certainly enjoyed hosting the webinar series focusing on advanced materials characterisation and were also encouraged by the global audience at these events.

A special thanks to all the presenters, participants in the YPLC competition and judging panel. It was a fantastic team effort. Thanks to the IOM3 judging panel, awards Committee for all the support and recognition, and to the UK South East Regional Representative (Sam Gnaniah) for his guidance and encouragement.

Upcoming Events

Circular Economy and Life Cycle Assessment (LCA)

Thursday 30th June 2022

13:00 to 14:30 BST

REGISTRATION (FREE):



Introduction

Dr. Nilmini Dissanayake MIMMM CSci (Session Chair)
NPL

'Circular Economy' is much more than 'closing loops' and it is about creating value to the economy, society and businesses while minimising resource use and environmental impacts with life cycle thinking.

Life Cycle Assessment (LCA) is a holistic approach or methodology used to identify the environmental consequences of a product or process or its operation throughout the entire life cycle, as well as opportunities to reduce the environmental burden. Applying life cycle approach is highly beneficial to evaluate the impact of circular economy and LCA can strengthen the propositions of the circular economy.



The Materials Cycle and The Circular Economy

Dr. Colin Church FIMMM CEnv CRWM MCIW
IOM3

Humanity's current linear economic model – *take, make, use, lose* – has led to significant environmental damage as the population has expanded and its needs have grown. Moving to a more circular economic model is essential to allow us to continue to thrive on this planet. The Materials Cycle is in turn an essential underpinning of this transition.



Life Cycle Assessment 101

Amy Fitzgerald
University of Surrey / National Composites Centre (NCC)

As the race towards net-zero kicks off, how can we be sure that we are truly on the path of least environmental damage? Life Cycle Assessment (LCA) is a systems analysis tool for modelling a process, product or service that documents material inputs and outputs focussed on a holistic "cradle-to-grave" approach, characterising usually a variety of environmental impacts in real terms. This informs the practitioner of damage hotspots across each life cycle stage of the system, which can be used to shape future decision-making. Due to its growing popularity, the LCA process has been consolidated into

international standards and practice guides so that practitioners have a better idea of how they should be carried out.

This presentation will introduce the key themes of any LCA and the nuances around its practical application through a series of examples.



Life Cycle Assessment may be an imperfect methodology?

Prof. John Summerscales FIMMM FInstNDT CEng CEnv CSci
(University of Plymouth)

Industry has returned from the Covid situation with a new focus on sustainability as a balance of technical, economic, environmental, social and governance (TEESG) factors. Life cycle assessment (LCA) is a tool to determine the potential environmental impacts of a product or system throughout its life cycle. [ISO 14040](#) provides principles and framework, while [ISO 14044](#) outlines requirements and guidelines for an LCA.

The International Reference Life Cycle Data System ([ILCD](#)) aims to provide guidance and standards for greater consistency and quality assurance in applying LCA. To compare different LCA studies, it is necessary to confirm that the goal and scope sensibly address parallel conditions. Software is available to process the data, but does the “black box” do what is expected? Data inventories support the software, but does the data truly represent the system under analysis? When the specific data is not available, how sensible is it to use “proxies”? How appropriate is it to allocate impacts to by co-products as well as the primary product?

Further Information

- [Registration Link](#)
- [Download Flyer](#)





Future Events

- **15 September** - Joint Hybrid Event with IOM3 Natural Materials Group (Title TBC)
- **31 September** - Joint webinar with Cambridge and Anglian Material Society (CAMSOC) and Royce Institute (Title TBC)
- **27 October** - Polymers in Medicine (webinar)
- **24 November** - Materials in Sport (webinar)

Membership of SCMMMS

If you are an existing member of IOM3, you can manage your profile to set SCMMMS as one of your preferred networks. This will help us keep you updated of our activities.

The committee is also trying to appoint representatives in the universities within the region to act as coordinators to promote the activities of SCMMMS. We are keen to hear your views on how best SCMMMS can support you to act as a valuable network for students and the practising researchers community.

If you would like to support the activities of the society, propose topics for future webinars, and have an interest in joining the committee, please email SCMMMS at southerncountiesmmms@gmail.com

Committee

- Chair - **Nilmini Dissanayake** MIMMM CSci (NPL)
- Secretary - **Ana Robador** MIMMM (NPL)
- Treasurer - **Duncan Edser** MIMMM (NPL)
- Events coordinator / GDPR officer - **Caitlin Green** MIMMM (NPL)
- Social Media Manager - **Jasmine Bone** MIMMM (University of Surrey)
- Newsletter coordinator - **Hannah Zhang** MIMMM CSci (NPL)
- Webmaster - **Carmen Lopez** (NPL)

- University/Industry Liaison Representative - **Tony Maxwell** FIMMM (NPL)

Industry sector representatives

- Defence - **Phil Duke** (DSTL)
- Instrumentation - **Jas Mahey** (TA Instruments)

Academic Representatives

- Brunel University - **George Fern**
- University of Reading - **Hisham Al-Obaidi**
- Cambridge University - **Darshil Shah** FIMMM
- University of Surrey - **Jasmine Bone** MIMMM

IOM3 Advisory Committee (South East regional representative)

- **Sam Gnaniah** FIMMM CEng (NPL)

Contact Us

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