



## **Lyell Meeting 2017**

## Sticking Together: microbes and their role in forming sediments

7 March 2017

**The Geological Society, Burlington House** 



**Convenors:** 

Daniel Parsons (University of Hull, UK) Mike Rogerson (University of Hull, UK) Concha Arenas Abad (University of Zaragoza, Spain)

Gernot Arp (University of Göttingen, Germany)

Jaco Baas (University of Bangor, UK)

## **Confirmed Keynote Speaker:**

Christophe Dupraz (University of Stockholm, Sweden) – *Biofilms and* Sediment: a 'Geobiological Tango'

## **Further information:**

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Sedimentology and geomorphology have traditionally been seen as fields in which physical, and sometimes chemical, processes dominate completely. Even in settings where biological processes have long been recognised, for example in marine carbonates, focus has been almost entirely on metazoans. This is curious, because microbial communities since the Pre-Cambrian, have suffused all sedimentary environments on Earth, and at least half global biomass is prokaryotic. Are all these microbes simply bystanders? Recent research has hinted that they are key agents in controlling an impressive range of processes and products in sedimentology, bringing the fields of microbe palaeontology and bio-sedimentology into intimate alignment. The implications are fundamental, and pose the question "are large-scale sedimentological features actually microbial trace fossils?".

This meeting will put the majority of life on earth back into its proper place within the sedimentary geosciences. It will shed new light on the important roles that microbial life plays in controlling how sediments erode, transport, precipitate, deposit and cement. We will explore whether microbial processes can leave signatures in sedimentary deposits that prove life was there, despite the fact that the majority of global biomass has nearly zero preservation potential. Ultimately, we will lift the lid on the exciting field of sedimentary geobiology as we collectively work towards a new paradigm of microbial sedimentology.