



NanoEarth Industry Speaker:

Jamie Lead

Professor, Univ. of South Carolina
Founder and CEO, GeoMat LLC

Date: Thursday, September 19th

Time: 11AM – Noon

Location: Kelly Hall, Room 210



Nanotechnology for Environmental Remediation

Abstract: This presentation will describe the development and optimization of nanoparticles and a nano-enabled device for the treatment of several environmental pollution issues. The platform technology developed is capable of treating oil, metal, harmful algal bloom contamination. A brief overview of the pollution issues will be provided, followed by a discussion of the development and optimization of the nanoparticles of interest, including the removal mechanism and initial designs for the nano-enabled technology. Finally, the development of business models using a lean start-up approach and linking technical capability to market opportunities will be discussed.

Speaker: Jamie Lead is Professor of Environmental Nanoscience and Risk, University of South Carolina (USC). As of 2025, he will be Professor of Environmental Nanoscience, University of Plymouth, UK. He has >30 years of experience in this area. His PhD (Lancaster University, UK) investigated natural nanoparticles in relation to metal chemistry in aquatic systems, followed by postdoctoral work at the same institution and Geneva University, Switzerland, in cognate areas. He continued this work but expanded into studies of manufactured nanoparticles and their environmental fate, behavior and effects as an independent academic at the University of Birmingham, UK, before moving to USC. Research has spanned synthesis and physico-chemical characterization in complex media, to risk, regulation and ELSI, all related to the environmental nanoscale. Since 2012, he has focused on applications for remediation, primarily, but also for sensing and medical uses. He is Editor-in-Chief of the CSIRO journal Environmental Chemistry. He has published > 220 papers with a Web of Science h-index of 60, edited 6 books and holds 7 patents.