Tomorrow's Solutions to Today's Ocean Challenges

Catch the Next Wave, with its theme â€˜Tomorrow's solutions to today's ocean challenges', is a one-day conference organised by New Scientist and Oceanology International on Monday 12th March 2012. The event will get off to a flying start with a keynote address by Graham Hawkes of Deep Ocean Engineering and Virgin Oceanic.

Keynote speaker Graham Hawkes has been called ‘the Leonardo of submarine design' by Jeremy Webb, editor-in-chief of *New Scientist*. Over the past decade, he has built a series of machines that outperform the rest. He mixes cutting-edge engineering, science and design to build the most imaginative creations.

Graham Hawkes has designed and built over 60 manned submersibles and over 350 Remote Operated Vehicles (ROVs). Hawkes is known for his forward-thinking solutions and his innovative use of materials and systems. His underwater vehicles include the innovative Atmospheric Diving Suits (ADS) and ROVs which dominated the offshore oil industry segment in the 1970s; the Deep Rover series for science and exploration, most recently used by filmmaker James Cameron in the IMAX film Aliens of the Deep; the Deep Flight series of submersibles; and the design/build of the experimental prototype DeepFlight Challenger, the only full ocean depth manned vehicle. He is recognised world-wide as a pioneer in innovating state of the art solutions for ocean access.

"Catch the Next Wave will not only inform people about developments in marine science and technology, it will also highlight the latest thinking across the board in six vital fields, from nanotechnology to power sources and robotics," adds Jeremy Webb. "I'm looking forwards to some really surprising conclusions emerging from the meeting."

The conference, aptly being held at the Royal Institution of Great Britain in London, UK, and home to two centuries of scientific and technological breakthroughs and the oldest research body in the world, takes a long-term view of the capabilities that will shape our future to explore, understand, predict and exploit the oceans. Catch the Next Wave includes presentations by leading world authorities on key disruptive and emerging technologies - power sources, sensors, nanotechnology, materials, robotics and cyber infrastructure. Their thoughts will be complemented by presentations from their counterparts working at the highest level in marine research and the ocean industries highlighting where these disruptive technologies, and their applications, are migrating to, and already emerging in the marine sector.

Chaired by Ralph Rayner, Professorial Research Fellow, London School of Economics; and Sector Director, Energy and Environment for the BMT Group, and Jeremy Webb, the distinguished international line-up comprises Dr Greg Offer, Research Fellow, Imperial College and Jim Bellingham, Chief Technologist MBARI talking on power sources; Tony Case, Professor of Chemical Biology and Research Director, Imperial College and Rich Camilli, Associate Scientist, Woods Hole Oceanographic Institution addressing sensors; Dr Tim Albrecht of the London Nanotechnology Centre, Imperial College covering nanotechnology; and Professor Mark Miodownik, Professor, Materials Science, UCL and Andy Bowen, Principal Engineer, Director of National Deep Submergence Facility, Woods Hole Oceanographic Institution speaking on new materials.

Robotics will be addressed by a leading authority in the field and David Brookes, Senior Advisor, BP from the marine side of the ‘fence'; while Tony Hey, VP Microsoft Research Connections and John Delaney, Professor of Oceanography, University of Washington will both speak on cyber infrastructure.

Prof Ralph Rayner explains in a video on the conference website: "Catch the Next Wave is designed to bring together the providers of technology, the users of technology and the end applications of that technology, to look at new ways in which these disruptive technologies will start to impact on their businesses, on science they undertake, and on the applications that they develop."

Taking place on the eve of Oceanology International 2012, the world's leading ocean science and technology exhibition, Catch the Next

Wave will be the subject of a special supplement published by *New Scientist*. It is supported by the Society for Underwater Technology; the Institute of Marine Engineering, Science and Technology and the Marine Technology Society.

Online registration is now open and the full programme is available at the website below, networking sessions at lunch, coffee, and tea breaks will be supplemented by a post-conference drinks reception.
