Remote sensing for marine autotrophic dynamics and diversity: Recent advances and opportunities

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Recent advances in ocean remote sensing have made it possible to study various aspects of ocean biogeochemistry from satellite data. This presentation will deal with the applications of remote sensing for understanding the biomass and dynamics of the marine autotrophs, which are responsible for almost half of the annual global carbon fixation, and is fundamental to the global carbon cycle. The presentation will include recent results on developing ocean-colour algorithms, and implementation of data assimilation using biogeochemical models towards accurate estimation of autotrophic biomass stocks, and for better understanding of the autotrophic dynamics on a global scale. Limitations of the current approaches and opportunities for future development will be discussed in the context of minimising uncertainties in satellite-derived estimates, through algorithms and marine ecosystem models.

Biography
Shovonlal Roy is a Lecturer in Remote Sensing in Ecosystem Sciences, at the Department of Geography and Environmental Science & Agriculture, Policy and Development, University of Reading, UK. He did a Master’s in Mathematics and PhD in Mathematical Biology. He worked as a researcher at the University of Manchester, the Bedford Institute of Oceanography, the University of Oxford, and the Plymouth Marine Laboratory. He has published more than 20 research articles and an edited book. He is a regular reviewer of more than 10 index journals. He is a Review Editor of Frontiers in Marine Science and Associate Editor of Remote Sensing for Ecology and Conservation.

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