Invitation to IOES Scientific Seminar Series

The Institute of Ocean and Earth Sciences (IOES) is happy to invite you to attend a Scientific Seminar by

Mrs Arely Gonzalez Aravena

"Direct electricity generation by photosynthetic systems"

Date : **1 July 2015**
Time : **10.00 am**
Venue : **Anggerik Room, Level 3, IPS Building**

Direct electricity generation by photosynthetic systems

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Abstract.

Bioenergy based on photosynthetic systems is of great interest for its inherent self-sustained capability of catalyzing the transformation of sun light into biochemical energy. To harvest this energy for our benefit remains a subject of research. The development of Bio-photovoltaic (BPV) electrochemical cells aims to intercept some of that energy to produce electricity directly from living photosynthetic microorganisms.
Our work involves the design of electrochemical platforms to develop further the potentialities of the systems studied, looking into the reactor design, the electrode material selection and the microalgae strain selection.
In this presentation we will explore the state of the art and what this technology is offering today compare to other similar systems. I will talk about the many aspects we need to improve to make BPVs a feasible application and what this applications might be.

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Miss Arely Gonzales Aravena is from Chile, South America. In 2010 she graduated with maximum distinction from the Faculty of physics and mathematical sciences of the University of Chile with two qualifications, chemical engineering and engineering in Biotechnology.
She was a project engineer for a couple of years before she decided to continue postgraduate studies. Currently she is in her 2nd year of the PhD program in chemical engineering at the University of Cambridge, department of Chemical engineering and Biotechnology. Her research interest is bioenergy based on electrochemical systems.