The Abdus Salam International Centre for Theoretical Physics

Workshop and Conference on Biogeochemical Impacts of Climate and Land-Use Changes on Marine Ecosystems

Organizer(s): Directors: A. Bracco, L.T. Cang and J. Montoya. Local Organizer: E. Coppola
Trieste - Italy, 02 - 10 November 2009

Venue: Adriatico Guest House Giambiagi Lecture Hall

Final programme

Workshop Day 1 (Room:Adriatico Guest House Giambiagi Lecture Hall)

2 November 2009

08:00 - 08:40	(Room: Adriatico Guest House (Lower Level 1)) **Registration**
08:40 - 09:00	**Welcome and Introduction by the Directors**
09:00 - 10:00	**A. Bracco** / *EAS, Geaorgia Tech, U.S.A.* **Bio-physical interactions: from basin to submesoscales**
10:00 - 10:30	(Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1)) --- Coffee break ---
10:30 - 11:30	**J.W. Dippner** / *IOW, Germany* **Climate variability and climate change**
11:30 - 12:30	**J.R. Moisan** / *NASA, U.S.A.* **Phytoplankton and climate change**
12:30 - 14:00	(Room: Adriatico Guest House Cafeteria) --- Lunch break ---
14:00 - 15:00	**A. Subramaniam** / *LDEO Columbia University, U.S.A.* **Introduction to ocean color remote sensing (theory and data sources)**

15:00 - 15:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

15:30 - 17:30 (Room: Adriatico Guest House - Eklund Informatics Lab (Lower Level 1))
A. Bracco and Y.M. Cardona Orozco / *EAS Georgia Tech, U.S.A.*
ROMS TUTORIAL

Workshop Day 2 (Room:Adriatico Guest House Giambiagi Lecture Hall)

3 November 2009

09:00 - 10:00 **J. Moisan** / *NASA, U.S.A.*
Using ocean ecosystem/biogeochemical models in coupled global climate models, the past, present and future

10:00 - 10:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

10:30 - 11:30 **J.W. Dippner** / *IOW, Germany*
What we have learnt in the SCS

11:30 - 12:30 **A. Subramaniam** / *LDEO Columbia University, U.S.A.*
Great Rivers and Changing Oceans

12:30 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch break ---

14:00 - 15:00 **A. Subramaniam** / *LDEO Columbia University, U.S.A.*
Ocean color remote sensing - data processing basics

15:00 - 15:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

15:30 - 17:30 (Room: Adriatico Guest House - Eklund Informatics Lab (Lower Level 1))
A. Bracco and Y.M. Cardona Orozco / *EAS Georgia Tech, U.S.A.*
ROMS TUTORIAL

18:30 - 20:30 (Room: Adriatico Guest House Cafeteria)
--- Welcome reception ---

Workshop Day 3 (Room:Adriatico Guest House Giambiagi Lecture Hall)

4 November 2009

09:00 - 10:00 **M. Voss** / *IOW, Germany*
Anthropogenic impact on the global nitrogen cycle with a special focus on nitrogen effects along tropical coastal zones

10:00 - 10:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

10:30 - 11:30 **T. Bianchi** / *Texas A&M University, U.S.A.*
Anthropogenic Effects on the Biogeochemical Dynamics of Large-River Deltaic Coastlines: The Mississippi and Yangtze Rivers

11:30 - 12:30 **J. Montoya** / *School of Biology, Georgia Tech, U.S.A.*
A walk through the N cycle

12:30 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch break ---

14:00 - 15:00 **D. Capone** / *USC, U.S.A.*
The Reduced Shakespeare Marine Nitrogen Cycle

15:00 - 15:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

15:30 - 17:30 (Room: Adriatico Guest House - Eklund Informatics Lab (Lower Level 1))
A. Bracco and D. Cardona / *EAS Georgia Tech, U.S.A.*
ROMS TUTORIAL

Workshop Day 4 (Room:Adriatico Guest House Giambiagi Lecture Hall)

5 November 2009

09:00 - 10:00 **D. Capone** / *USC, U.S.A.*
Marine Mosaics: Emerging Patterns of Nitrogen Fixation in the Oceans

10:00 - 10:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

10:30 - 11:30 **T. Bianchi** / *Texas A&M University, U.S.A.*
Hypoxia on the Louisiana Shelf (USA): A tale of muddy waters and politics

11:30 - 12:30 **J.P. Zehr** / *University of California, U.S.A.*
Dynamics of nitrogen cycling microbes in the ocean

12:30 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch break ---

14:00 - 15:00 **M. Voss** / *IOW, Germany*
Nutrient cycling in the Mekong River plume

15:00 - 15:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

15:30 - 17:30 (Room: Adriatico Guest House - Eklund Informatics Lab (Lower Level 1))
A. Bracco and Y.M. Cardona Orozco / *EAS Georgia Tech, U.S.A.*
ROMS TUTORIAL

Workshop Day 5 (Room:Adriatico Guest House Giambiagi Lecture Hall)

6 November 2009

09:00 - 10:00 **J. Richey** / *University of Washington, U.S.A.*
Drainage Basin Structure and Dynamics - How does a River Get its Water and Chemistry that it Delivers to the Sea?

10:00 - 10:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

10:30 - 11:30 **J. Montoya** / *School of Biology, Georgia Tech, U.S.A.*
A Walk Through the Nitrogen Cycle, part 2

11:30 - 12:30 **J. Richey** / *University of Washington, U.S.A.*
The Drainage Basins of the World - from the Amazon to the Zaire

12:30 - 14:00 (Room: Leonardo da Vinci Building Cafeteria)
--- Lunch break ---

14:00 - 15:00 **J.P. Zehr** / *University of California, U.S.A.*
Molecular approaches and remote instrumentation for studying microbes and microbial processes in coastal organisms

15:00 - 15:30 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee break ---

15:30 - 17:30 (Room: Adriatico Guest House - Eklund Informatics Lab (Lower Level 1))
A. Bracco and D. Cardona / *EAS Georgia Tech, U.S.A.*
ROMS TUTORIAL

Conference Day 1 (Room:Adriatico Guest House Giambiagi Lecture Hall)

9 November 2009

09:00 - 09:20 **J. Richey** / *University of Washington, U.S.A.*
From the last gauge to the plume: Aqua Incognita

09:20 - 09:40 **M. Voss** / *IOW, Germany*
Recent results from the Mekong River plume studies

09:40 - 10:00 **L.T. Cang** / *Vietnam National University, Viet Nam*
Human impacts on coastal ecosystem: Case study of mangroves along the coastline of Binh Thuan Province, Southeast of Vietnam

10:00 - 10:20 **W.M. Moufaddal** / *National Institute of Oceanography and Fisheries, Egypt*
Assessment of the possible key factors responsible for fall and rise of the coastal fisheries off the Nile delta, Egypt: A remote sensing approach.

10:20 - 10:50 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee Break ---

10:50 - 11:10 **J. Montoya** / *School of Biology, Georgia Tech, U.S.A.*
Distribution of N2-Fixation in the Open Ocean

11:10 - 11:30 **A. Subramaniam** / *LDEO Columbia University, U.S.A.*
Nitrogen fixation in the Eastern Equatorial Atlantic

11:30 - 11:50 **D. Capone** / *USC, U.S.A.*
Testing the P* hypothesis in the ETSP

11:50 - 12:45 **Open Session: River Plumes and their Impact on Nearshore and Offshore Marine Systems**

12:45 - 14:30 (Room: Adriatico Guest House Cafeteria)
--- Lunch Break ---

14:30 - 14:50 **A. Bracco** / *EAS Georgia Tech, U.S.A.*
High frequency wind events and vertical mixing in the SCS

14:50 - 15:10 **J.W. Dippner** / *IOW, Germany*
A HAB forecast model for the Vietnamese coast

15:10 - 15:30 **O. Gurses** / *Middle East Technical University, Turkey*
Modelling the circulation dynamics of the Turkish Strait System

15:30 - 15:50 **A. Ferchichi** / *Universite de Tunis el Manar, Tunisia*
Optimal strategy of fishing problem for hermaphrodite population

15:50 - 16:20 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee Break ---

16:20 - 17:00 **Open Session: Physical/Biological Modeling**

18:30 - 20:30 (Room: Adriatico Guest House Cafeteria)
--- Get-together Reception ---

Conference Day 2 (Room:Adriatico Guest House Giambiagi Lecture Hall)

10 November 2009

09:00 - 09:20 **J.R. Moisan** / *NASA, U.S.A.*
Using Genetic Algorithms and Programs for Ocean Biogeochemical Models

09:20 - 09:40 **M.F.H. Gomes** / *Bigelow Laboratory for Ocean Sciences, Maine, USA.*
Unusual blooms of the green Noctiluca miliaris in the Arabian Sea during the Winter Monsoon

09:40 - 10:00 **C. Liu** / *University at Weihai, P.R. of China*
Variation of Harmful Algal Bloom (HAB) in the western SCS based on remote sensing

10:00 - 10:20 **S. Pal** / *University of Kalyani, India*
Non-toxic phytoplankton, toxin producing phytoplankton and zooplankton interaction in an open marine system

10:20 - 10:50 (Room: Adriatico Guest House - Giambiagi Lecture Hall Area (Lower Level 1))
--- Coffee Break ---

10:50 - 11:10 **T. Bianchi** / *Texas A&M University, U.S.A.*
A Comparison of Lignin-Phenols and Branched/Isoprenoid Tetraethers (BIT index) as Indices of Terrestrial Organic Matter in Doubtful Sound, Fiordland, New Zealand

11:10 - 11:30 **L. Aveytua Alcazar** / *OGS Trieste, Italy*
Implementation and calibration of a complex marine biogeochemical flux model in benthos of Gulf of Trieste

11:30 - 11:50 **G. Narvenkar** / *National Institute of Oceanography, India*
Comparison of N2O distribution along the eastern and western continental shelf of Arabian Sea

11:50 - 12:10 **L.G. Lartey-Antwi** / *Smart Youth Volunteers Foundation, Ghana*
Effect of ocean acidification on the growth of flat tree oyster, Isognomon alatus

12:10 - 12:50 **Round Table Discussion on blooms and land/climate changes**

12:50 - 14:30 (Room: Adriatico Guest House Cafeteria)
--- Lunch Break ---

14:30 - 15:15	(Room: Adriatico Guest House (Lower Level 1)) **Poster Session**
15:15 - 15:30	**Synthesis & Concluding Remarks**
15:30 - 16:00	--- Coffee Break ---