



13<sup>th</sup> International Estuarine  
Biogeochemistry Symposium  
7-10<sup>th</sup> June 2015, Bordeaux, France

## PROGRAMME:

### Monday, June 8:

**Oral session 1: Past, present and future anthropogenic pressure – how do environmental changes affect nutrient and Organic Matter cycles, eutrophication, contaminant fate, coastal ocean acidification and ecosystem functions?**

08:30 **Registration**

09:00 Symposium opening

09:15 **Opening lecture:**

**Reconstructing the past, predicting the future: geochemical records of estuarine change**

*Andrew Cundy*

09:40 The International Estuarine Biogeochemistry Conference: A prospectus on meeting goals with progress

*Thomas Church*

10:00 Historical records and geographical distribution of metallic pollution in sediments of the estuary of the Nerbioi-Ibaizabal Estuary (Bilbao, Basque Country)

*Azibar Rodriguez-Iruretagoiena, Nerea Elejoste, Ainara Gredilla, Silvia Fernandez-Ortiz de Vallejuelo, Gorka Arana, Juan Manuel Madariaga, Alberto de Diego Rodriguez*

10:20 Natural radionuclides enhanced by industrial activities: a 50 years sediment record in the upper Seine Estuary

*Dominique Boust, Patrick Lesueur, Luc Solier, Marianne Rozet, Carole Dubrulle-Brunaud*

10:40 **Coffee Break**

11:05 Anthropogenic tritium in the Loire River estuary

*Olivier Péron, Claire Gégout, Benjamin Reeves, Gilles Montavon, Catherine Landesman*

11:25 Sediment contamination and toxicity in the Guadalquivir estuary (SW, Spain)

*Inmaculada Riba, Esther Bautista Chamizo, Víctor Almagro Pastor, T. Angel del Valls Casillas, Pilar Rodriguez*

11:45 **Poster flash presentations**

12:25 **Lunch Time & Poster Session**

- 14:00 Mercury speciation in waters from the Aveiro Lagoon (Portugal)  
*Teodor Stoichev, Emmanuel Tessier, Marisa Almeida, David Amouroux, Maria Clara Basto, Vitor Vasconcelos, Olivier Donard*
- 14:20 Contrasting geochemical behavior and sources of Osmium and Platinum in the environment as revealed from intertidal sediments  
*Clara Almecija, Antonio Cobelo-Garcia, Mukul Sharma, Juan Santos-Echeandia, Miguel Caetano*
- 14:40 Occurrence, sources and fate of pesticides in Gironde estuary (France)  
*Justine Cruz, Patrick Pardon, Karyn Le Ménach, Marie-Hélène Dévier, Hélène Budzinski*
- 15:00 Occurrence of synthetic musk compounds in the Adour estuary (SW France) and their fate during treatment processes  
*Laurent Lancelleur, Joana Cavalheiro, Thierry Pigot, Mathilde Monperrus*
- 15:20 Dynamics and pathways of glutathione-like and thioacetamide-like compounds in temperate macrotidal estuary (Brittany-France)  
*Lauriane Marie, Benoit Pernet-Coudrer, Matthieu Waeles, Ricardo Riso*
- 15:40 **Coffee Break**
- 16:05 Past and present carbon dynamics in the Scheldt estuary as traced by changes in C speciation and isotopes.  
*Natacha Brion, Marc Elskens, Loreto De Brabandere, Frank Dehairs*
- 16:20 Biogeochemical characterisation of 200 years local changes in a transitional environment - What is the foraminifera's message?  
*Fabio Francescangeli, ERIC ARMYNOT du CHATELET, Alain Trentesaux, Thorbjørn Andersen, Vincent Bouchet*
- 16:40 The freshwater estuaries of the Three Gorges Reservoir in China-Insights from in situ and online monitoring with a MINIBAT multisensor system  
*Andreas Holbach, Yonghong Bi, Lijing Wang, Yijun Yuan, Hao Chen, Binghui Zheng, Stefan Norra*
- 17:00 Dilute waters of Kallada-Ashtamudi, Kerala: Steep Terrain and High Rainfall areas with slow erosion rates  
*Stephy Thomas, Govind Chakrapani*
- 17:20 Origin, Transport and Fate of Particulate Organic Carbon and Nitrogen along the Land-Sea Interface of the São Francisco River-Estuary, NE-Brazil  
*Bastiaan Knoppers, Paulo Medeiros, Tim Jennerjahn, Luiz da S. Fontes, Marcileia do Carmo, W de Souza, M Messias, M Arguelho, I Carvalho, M Silva, M Carneiro*
- 17:40 End of Session 1

**Tuesday, June 9:**

**Oral session 2: Physical and chemical factors influencing biogeochemistry and exchanges at estuarine boundaries (sediment-water-air, urban areas, subterranean estuaries).**

- 08:50 Introduction to the Session 2
- 09:00 Influence of environmental variables on the early diagenesis of Fe and Mn in the Laurentian Trough - one of the world's largest estuaries  
*Qiang Chen, Alfonso Mucci, Bjorn Sundby*
- 09:20 Trace metal cycling in the Baltic Sea: role of suspended Mn and Fe particles  
*Johan Ingri, Susanne Bauer*
- 09:40 Fe isotopes in the near-shore environment - fractionation in the sediments and the water column  
*Michael Staubwasser, Susann Henkel, Sabine Kasten, Simon Poulton*
- 10:00 Natural and anthropogenic processes controlling trace metals dynamics in a highly stratified estuary: the Krka River estuary (Adriatic, Croatia)  
*Ana-Marija Cindric, Cédric Garnier, Benjamin Oursel, Ivanka Pizeta, Dario Omanovic*
- 10:20 Influence of seasonal diminishing of river discharge on the trace metals distribution and fluxes in estuaries  
*Vladimir Shulkin, Pavel Tishchenko*
- 10:40 ***Coffee Break***
- 11:05 Spatial and seasonal variability of reactive metals in surface sediments of the Morbihan coast (South Brittany)  
*Joselyn JIMENEZ, Evelyne GOUBERT, Laurent Labeyrie, Alexandra Coynel, David MENIER*
- 11:25 **Poster flash presentations**
- 12:25 ***Lunch Time & Poster Session***
- 14:00 Conservative or Reactive? Permafrost-derived organic matter in the Lena River Delta  
*Boris Koch, Ivan Dubinenkov, Ruth Flerus, Philippe Schmitt-Kopplin, Gerhard Kattner*
- 14:20 Evolution of molecular weight and type of dissolved organic matter in the Gironde Estuary using asymmetrical field flow fractionation  
*Jérémie Parot, Edith Parlanti, Céline Guéguen*

- 14:40 Nutrient cycling along a subterranean estuary and the discharge zone  
*Mathilde Couturier, Gwénaëlle Chaillou, Christian Nozais*
- 15:00 Nutrient flux through the subterranean estuary of the 240 km-long Aquitanian coast  
*Pierre Anschutz, Céline Charbonnier, Loris Deirmendjian, Damien Buquet, Pascal Lecroart*
- 15:20 Carbon mitigation: a salt marsh ecosystem service in times of change.  
*Isabel Caçador, Bernardo Duarte, João Marques, Noomene Sleimi*
- 15:40 **Coffee Break**
- 16:05 A large annual CO<sub>2</sub> sink enhanced by eutrophication in a tropical coastal embayment (Guanabara Bay, Rio de Janeiro, Brazil)  
*Luiz Carlos Cotovicz Jr, Bastiaan Knoppers, Nilva BRANDINI, Suzan Da Costa Santos, Gwenaël Abril*
- 16:25 Carbon Capture and Storage (CCS) strategy: a risk assessment overview focused on marine bacteria  
*Ana Rocío Borrero, Inmaculada Riba López, Angel Del Valls Casillas*
- 16:45 Effects of CO<sub>2</sub> leakage from CCS technology using a mixed marine microalgae population  
*Esther Bautista Chamizo, Manoela Romanó de Orte, Inmaculada Riba López, T. Angel del Valls Casillas*
- 17:05 End of Session 2
- 19:30 **Conference Dinner: CapSciences**

**Wednesday, June 10:**

**Oral session 3: New experimental techniques and technologies for in-situ high-resolution monitoring and modelling of element cycles in coastal environments.**

- 09:00 Introduction to the Session 3, supported by the SChemA project
- 09:20 **Keynote speaker:**  
**Interconnections between Estuaries, Human Health and Wellbeing**  
*Michael Depledge*
- 10:00 Nutrient and Carbon Cycling in Coastal Tropical Waters of Hawaii: Effects of Land-derived Inputs, Reef biogeochemistry, and Physical Forcing.  
*Eric Heinen De Carlo, Gerianne Terlouw, Patrick Drupp, Fred Mackenzie, Sylvia Musielewicz, Adrienne Sutton, Christopher Sabine*
- 10:20 Modelling nutrient budgets in the Elbe Estuary (Germany) - role of phytoplankton as sink and source term  
*Andreas Schöl*
- 10:40 **Coffee Break**
- 11:10 Connectivity and fate of nutrients in the Derwent and Huon Estuaries in southeast Tasmania.  
*Karen Wild-Allen, John Andrewartha*
- 11:30 Study of water-sediment interface: coupled approach biogeochemistry-modeling for nutrient fluxes evaluation (C, P, N)  
*Arnaud Vennin, Valérie Mesnage, Nicolas Lecoq*
- 11:50 **Poster flash presentations**
- 12:30 **Lunch Time & Poster Session**
- 14:00 The environmental constraints on faunal distribution: biogeochemical interaction as underlined by geostatistical tools  
*ERIC Armynot du Chatelet, Viviane Bout-Roumazeilles, Rodolfo Coccioni, Fabrizio Frontalini, Fabio Francescangeli, Giulia Margaritelli, Roberto Rettori, Federico Spagnoli, Federica Semprucci, Alain Trentesaux, Nicolas Tribovillard*
- 14:20 Geochemical rates estimated from two-dimensional distributions of dissolved iron and phosphate from an intertidal estuarine mudflat  
*Aubin Thibault de Chanvalon, Edouard Metzger, Emmanuelle Geslin, Florian Cesbron, Joel Knoery, Aurelia Mouret, Sebastiaan van de Velde, Filip Meysman*

- 14:40 Lab-on-chip analysers for high resolution in situ analysis of nutrients in estuaries and rivers  
*Alexander Beaton, Anouska Panton, Duncan Purdie, Matthew Mowlem*
- 15:00 The Biofish - an underwater insitu and on line measuring multi-sensor system  
*Stefan Norra, Andreas Holbach, Lijing Wang, Hao Chen, Yanwen Qin, Binghui Zheng, Yonghong Bi, Peter Haushahn*
- 15:40 **Coffee Break**
- 15:45 Defining benchmark values for nutrients in twelve Portuguese estuaries under the Water Framework Directive  
*Miguel Caetano*
- 15:55 Abandoned boats as a source of metal contamination of estuarine sediments  
*Andrew Turner, Aldous Rees*
- 16:05 Modelling summer hypoxia in the Gironde estuary, using a 3D model coupling hydrodynamics, sediment transport and biogeochemical processes.  
*Katixa Lajaunie Salla, Aldo Sottolichio, Bénédicte Thouvenin, Xavier Litrico, Gwenael Abril*
- 16:25 Approaching environmental Cu and Ag bioaccumulation in oysters (*Crassostrea gigas*) from Gironde Estuary by stable isotope spiking in-vivo experimentations.  
*Mathilde Mikolaczyk, Ane Rementeria, Laurent Lanceleur, Jörg Schäfer, Jérôme Petit, Benat Zaldibar, Jean-François Chiffolleau, Manu Soto, Ionan Marigomez, Gérard Blanc*
- 16:45 Awards for the best student oral and poster presentation
- 16:55 Announcements
- 17:00 Closing

The Organizing Committee greatly acknowledges support by:

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SEVENTH FRAMEWORK  
PROGRAMME