

Reports of ECORD Summer Schools 2011

8th Urbino Summer School in Paleoclimatology July 13 - August 2, 2011, Urbino, Italy

As a second year PhD student at the "Laboratoire de Géologie de Lyon, Terre Planètes, Environnement (LGL-TPE)" of the University of Lyon (France) I recently participated in the 8th Urbino Summer School in Paleoclimatology (USSP), Italy. My expectation was to improve and develop my background knowledge in paleoclimatology.

The course aimed at providing participants with the basics of paleoclimatology, from cyclostratigraphy to climate modelling. Even though some of the lectures included information I already knew they were useful reminders and provided a very complete overview that gave me both a broad and detailed understanding of the topic. The summer school was therefore a unique opportunity that allowed me to strengthen and develop my scientific knowledge in this domain. For example, I had the opportunity to be introduced to paleobiological and geochemical proxy data that were still unknown for me, especially those used for climate modelling and in continental systems. In addition, the lectures and practical sessions were given by highly specialised and internationally recognised researchers, who were always available to answer questions. This gave me the opportunity to be part of the scientific community and to personally discuss my work with researchers whom I only knew previously from their published papers.

The USSP was also a unique experience from a social point of view allowing me to meet junior scientists from different research areas and nationalities. The poster session and the Cioppino Workshop provided a state-of-the-art view of current research at many different institutions, as well as insights into future research in the field of paleoclimatology.

Moreover, I had the chance to collect different opinions and advice on my PhD research through discussions with post-doc and PhD students specialising in other sub-disciplines. This international and scientific network of contacts will be beneficial to my PhD research (and my future scientific career). But the USSP was also for me the opportunity to meet new people who have become colleagues and friends and I look forward to meeting them again at future international meetings and congresses.

In brief, the USSP was fruitful for me both from a professional and a human point of view and I would strongly recommend participating in the summer school.

*Julien Plancq, ECORD Scholarship Awardee 2011
plancq@pepsmail.univ-lyon1.fr
<http://www.urbinossip.it/>*

Sub-seafloor Fluid Flow and Gas Hydrates September 12-23, 2011, Bremen, Germany

I started my PhD in the Department of Earth and Planetary Sciences at McGill University (Montréal, Canada) in January 2010. I am interested in studying sulfur cycling in gas hydrate bearing sediments by developing a multiple sulfur isotope technique. My educational background is in chemistry and I hope to refine my knowledge of the physical aspects of gas hydrate related systems at the ECORD summer school.

I applied for a scholarship from ECORD and IODP Canada to attend the summer school on Fluid Flow and Gas Hydrates in Bremen, Germany. An international group of experts on gas hydrates gave lectures ranging from the basics of these systems to specific topics related to gas hydrate quantification, exploration and exploitation. We learned about the different environments where gas hydrates occur, seismic techniques to assess gas hydrate occurrence and the interactions between gas hydrate and surrounding environments (*e.g.*, pore water, microbial communities). We were updated on current research



projects; one that I found quite interesting discussed using CO₂ to replace CH₄ in gas hydrates as a way of balancing the economic realities with environmental protection. Also, I enjoyed hearing about the links between gas hydrate destabilization and climate change in vulnerable regions.

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Dominique Weis (PCIGR, University of British Columbia, Canada, "What do we know about mantle plumes and what more can we learn by IODP drilling?"), and Helmut Weissert (ETH Zurich, Switzerland, "Carbon cycle, oceans and climate in the Cretaceous: lessons from Ocean Drilling (DSDP to IODP) and from records on continents"). This phase will be active until June 2012. ECORD still invites colleagues, university or non-profit organisations in **ALL European countries and Canada** to apply via electronical mail to iact_essac.office@iact.ugr-csic.es to host a lecture. Applications from non-traditional IODP and ECORD audiences within the European Community are especially welcome.

In 2011, two summer schools were funded by ECORD:

- ECORD Summer School on Sub-seafloor Fluid Flow and Gas Hydrates, Bremen, Germany,
- The 8th Urbino Summer School in Paleoclimatology, Urbino, Italy.

ECORD provided scholarships to allow young scientists to attend one of the ECORD Summer Schools 2011. From the 50 applicants, ESSAC decided to fund 14 students from ECORD and non-ECORD countries with amounts between € 500 and 1,500. A report of each summer school has been provided by Julien Plancq (University of Lyon, France) and Thi Hao Bui (MacGill University, Canada) ([see page 6](#)).

ECORD sponsored merit-based awards for outstanding graduate students to conduct research related to the Integrated Ocean Drilling Program. We received highly qualified applications, from which five young researchers have been awarded an ECORD Research Grant of around € 2,000 each to cover travel and lab expenses.



ECORD also provided scholarships to allow outstanding young scientists to attend the workshop "Engaging Early Career Scientists in Future Scientific Ocean Drilling" at Texas A&M University. ESSAC chose five young scientists to receive the ECORD Scholarship with maximum amounts of € 1,300. Matthias Forwick (University of Bergen, Norway) has written a report of the workshop ([page 11](#)).

All links and further information are provided on our web site <http://www.essac.ecord.org/index.php?mod=education>.

Julia and I thank Rudy and Jenny for their successful leadership of ESSAC and the running of the ESSAC Office during the past two years. We will do our best to continue their success. For this, we will need the continued active participation of all the ESSAC delegates and collaboration with the IODP/ECORD bodies, as well as the input of the scientific community. The move of the ESSAC Office to Granada coincides with the final two years of the

current IODP in September 2013. Many challenges need to be overcome in the near future by the scientific drilling community as the detailed structure and international partnerships in the new programme are yet to be defined. ESSAC is committed to being central to these discussions, acting as the advisory and support body for the ECORD community.

*Carlota Escutia-Dotti, ESSAC Chair and Julia Gutiérrez-Pastor,
ESSAC Science Co-ordinator
<http://www.essac.ecord.org/>*

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With this two-week training period, I attained an up-to-date synthesis of gas hydrates. From the lectures of experts and the presentations of my fellow attendees, I gained a better understanding of how my specific research may contribute to our overall understanding of gas hydrate systems.

One of the most eye-opening aspects of the school was the hands-on practice we had with various laboratory and field methods. For instance, I practiced measuring marine heat flow, calculating gas hydrate stability and participated in describing ODP/IODP sediment cores. Going on a research cruise to the Baltic Sea was a particularly great experience. I was able to experience how a sediment core is collected (which I had never seen before), how scientists occupy their time on board, and how samples are

preserved for further analysis back on land. This was all very impressive to a lab-based scientist.

Finally, I had the chance to meet a bunch of sympathetic aspiring "gas hydrate scientists" from around the world at this summer school. Within the great learning atmosphere provided by the instructors and organisers, we learned and cooperated together in order to further our understanding of how gas hydrates actually work. I am sure that I will be interacting with my fellow summer school attendees on exciting science in the future.

*Thi Hao Bui, ECORD Scholarship Awardee 2011
tbi.b.bui@mail.mcgill.ca
<http://www.marum.de/Page10870.html>*