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Erasmus+

Paris *Undergrad Research Meeting*

Thursday, October 21: 10am-12:30pm and 2:30pm-5:30pm
Centre de Recherche Interdisciplinaire (CRI), 8, rue Charles 5, Paris

Participative mini-conference on learning through research for undergraduate students

Objectives of the workshop:

- 1) Come to present, discuss, and co-design learning through research at the university, with international experts and student-researchers who have learned through research.
- 2) Take part in building a European community of teachers around research-based learning, at Bachelor and Master levels.

Target audience: 30-50 teacher-researchers, current or future actors of learning and teaching through research + student-researchers eager to share their experiences.

Confirmed participants :

- Harald L Mieg (Humboldt University, Berlin)
- Susanne Haberstroh (Oldenbourg University)
- Peter Tresp (Luzerne University)
- Femi Odebiyi (LCC International University, Klaipėda, Lituanie)
- Ariel Lindner (CRI, Université de Paris)
- Brigitte Römmer-Nossek (Center for Teaching and Learning, Vienna University)
- Belén Jiménez Alonso (Universitat Oberta de Catalogne, Barcelona)

Program :

- Presentation of reference learning systems in France and in Europe, digital tools, innovative places.
- Presentation by students of their research experiences
- Discussion and workshop to co-design research-based learning systems
- Visit of the CRI, a pioneer ecosystem for *learning through research*

Registration :

Registration is free, subject to availability. Please indicate your presence with [the following link](#), before October 1st.

For students or teachers who wish to present a research work or a research-based teaching experiment / curriculum / module / digital tool / place (...), you can copy a small abstract in the registration form. Please note that we might not be able to let all volunteers present, but we'll organize a speed dating session between participants to share with those of you who have common interests.



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Why should we develop *undergrad research* ?

Undergraduate students often suffer from a passive relationship to their learning, and develop a static, academic approach to their disciplinary field(s). However, project-based teaching shows a living science, which engages intellectually and emotionally. It can reveal in some students, especially in populations less represented in higher education, excellent dispositions and a strong appetite for research [1]. Thinking about authentic research experiences for undergraduates is a challenge, but it is being met in many universities around the world (and referred to as *undergraduate research*).

Educational research on undergraduate research has highlighted key elements that justify these pedagogical approaches. Research experiences significantly increase students' understanding of science and research methods, their confidence in their ability to be scientists, their knowledge of the research profession, and their awareness of what master's research and doctoral studies are [1-3]. Identifying with a researcher, projecting oneself into this posture, changes the student's vision of him/herself [3]. In general, learning through research contributes to the necessary diversity of learning required to understand the multiple modes of scientific reasoning [4-5].

Among the diversity of initiatives, we can distinguish those that prepare for the international student engineering competition in synthetic biology, iGEM [6], during which teams of student researchers are rewarded for working in multidisciplinary, multi-age teams of 10 to 15 students on research projects, some of which are the subject of very good level publications. In France, the Centre de Recherche Interdisciplinaire (CRI), associated with the University of Paris, has been a pioneer in research-based learning at all ages. The CRI teams accompanied the first French team at iGEM, whose success led to the creation of an associated M1 (now part of UP's AIRE master's degree), and created a bachelor program offering diverse and in-depth research experiences (licence Frontières du Vivant). At the European level, a group of faculty teachers led by Harald H. Mieg is trying to set up a network to collaborate and disseminate best practices, in the framework of the Erasmus + project digi-UR.

References

- [1] [Undergraduate Research Experiences Broaden Diversity in the Scientific Workforce](#)
- [2] [Benefits of undergraduate research experience.](#)
- [3] [Undergraduate research experiences: Impacts and opportunities](#)
- [4] [Learning Science through research apprenticeship](#)
- [5] [Styles of Scientific Reasoning: A Cultural Rationale for Science Education?](#)
- [6] [Promoting microbiology education through the iGEM synthetic biology competition](#)

For any question, please send a message to the organizers Andrea Giraldo Sevilla (andrea.giraldosevilla@cri-paris.org) and Vincent Dahirel (vincent.dahirel@cri-paris.org)