



ED n° 474 Interdisciplinaire Européenne "Frontières du Vivant" - Liliane Bettencourt

Workshop: Hands-on Experiments, Scientific Discovery Games and Citizen Science Learning through Research for all

Paris, July 10-13, 2011

Organizers: François Taddei, Ariel Lindner and Livio Riboli-Sasco

Aims of the workshop

Learning by practising true scientific research provides invaluable experience as one gets not only the classical scientific knowledge that is produced by what François Jacob called "day science", but also the thrill of "night science" that only the exploration of the unknown can provide. Unfortunately, too few people have access to such experiences as research is mostly conducted in the few places that have the resources and trained faculties.

Interestingly, different initiatives that focus on promoting "hands-on experiments" that are cheap and easy to realize and to "citizen science", "crowd sourcing of research" and "scientific discovery games". These changes to educational practices make night science accessible to any internet users and allows even the youngest children to contribute to scientific research.

This workshop aims at bringing those who innovate along these lines, together with motivated students and innovative faculty members. We will look for synergies between the different scientific areas covered by the projects that have been proposed, as well as in between online and real life activities as both can promote learning through research. Finally, we will discuss possibilities to attract larger audiences and look for ways of stimulating the development of such approaches on larger scales across the globe.

Location

Faculty of Medicine - Paris Descartes University
Centre for Research and Interdisciplinarity (CRI)
Second Floor - Conference Room 2006
24 rue du Faubourg Saint Jacques
75014 PARIS

Tél CRI : 01 44 41 25 22

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Workshop: Hands-on Experiments, Scientific Discovery Games and Citizen Science. Program Overview

SUNDAY July 10 - Arrival of participants

18:00-20:00 : 3 keynote talks of 40 min (open to all)

Zoran Popovic : *Scientific discovery games*

Harry Swinney : *Hands on research schools*

François Taddei : *Learning through Research for all*

20:00 - 22:00 -- *Dinner buffet at the CRI (open to all)*

MONDAY July 11 - Setting the stage & getting to know each other's visions

9:00-11:00 -- 15-20 min talks (+10 min discussion)

Eva-Maria Schoetz

Mark Shattuk

Michael Shatz

Kenneth Showalter

11:00-11:30 -- *Coffee break*

11:30-13:30 - 15-20 min talks (+10 min discussion)

Ingmar Riedel Kruse

Scott Barolo

Robert Full

Jeehyung Lee

13:30-14:30 -- *Lunch*

14:30-16:30 -- 15-20 min talks (+10 min discussion)

Joseph Niemela

Onofrio Gigliotta

Thomas Schaus

Thomas Murphy

4:30-5pm: *Coffee Break*

17:00-18:30 -- 15-20 min talks (+10 min discussion)

Kenneth Stanley

Eva Guinan

François Grey

18:30-18:45 -- *short break*

18:45 - 19:45 -- Beau Lotto's talk (open to all)

The youngest authors of scientific publications

20:00 -- *Aperitif (at the CRI)*

21:00 -- *Dinner (restaurant) and socializing*

TUESDAY July 12 - Development of hands-on lab projects and games

9:00-10:30 -- Half-baked ideas feedback session

10:30-11:00 -- *Coffee break*

11:00-13:00 -- Setting the challenge & Practical workshop:

How to organize competition(s) for the creation of new hands-on experiments and scientific discovery games that could make learning through research accessible to many more people.

13:00-14:00 -- *Lunch*

14:00-16:00 -- Practical Workshop: Developing research modules and games (in small groups)

- How to integrate outreach activities for high school students with the Hands-on school idea (which is aimed at educating young faculty)?

- Strategic workshop: How to engage more students, faculties and institutions in setting up new hands-on projects in combination with scientific discovery games?

19:00 -- *Dinner (restaurant) and socializing*

WEDNESDAY, July 13 - Wrapping-up

9:00-10:30 -- Debriefing

10:30-11:00 -- *Coffee break*

11:00-13:00 -- Outcomes and strategic decisions

13:00 -- *Lunch and/or Departure*

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**Workshop: Hands-on Experiments, Scientific Discovery Games and Citizen Science.
Learning through Research for all**

Participants

Speakers *by order of talk*

Zoran Popovic (*Washington University*)
Harry Swinney (*University of Texas*)
François Taddei (*CRI, Inserm, Paris Descartes University*)
Eva-Maria Schoetz (*HoS, Princeton University*)
Mark Shattuk (*HoS, City University of New York*)
Michael Shatz (*HoS, Georgia Tech*)
Kenneth Showalter (*HoS, West Virginia University*)
Ingmar Riedel Kruse (*Stanford University*)
Scott Barolo (*University of Michigan*)
Robert Full (*University of California Berkeley*)
Jeehyung Lee (*Carnegie Mellon*)
Joseph Niemela (*Trieste, International Centre for Theoretical Physics ICTP*)
Onofrio Gigliotta (*ISTC Roma*)
Thomas Schaus (*Harvard*)
Thomas Murphy (*University of Maryland*)
Kenneth Stanley (*University of Central Florida*)
Eva Guinan (*Harvard*)
François Grey (*CERN, Citizen Cyberscience Center, Geneva*)
Beau Lotto (*University College London*)

Registered participants

*Sessions are open to all interested PhD students and teachers
but contact us if you wish to join the workshop, to be registered first.*

Ariel Lindner
Livio Riboli Sasco
Fan Yang
Timo Betz
Dusan Misevic
Richard-E.Eastes
Juhan Aru
Luping Xu