

FJOH 2014

Frédéric JOLIOT & Otto HAHN
SUMMER SCHOOL
ON NUCLEAR REACTORS
“Physics, fuels and systems”

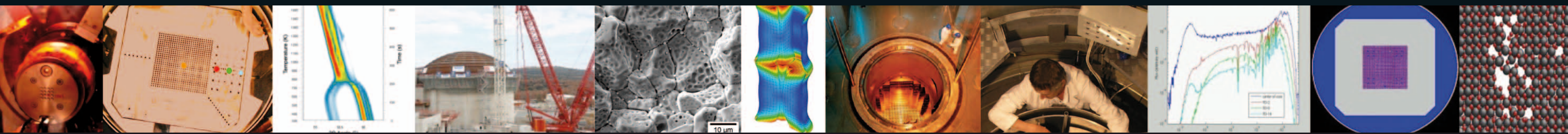


NUCLEAR REACTORS BRIDGING THE GAP BETWEEN SCIENCE AND INDUSTRY

▶ **Application deadline**
May 16, 2014

Aix-en-Provence France

▶ **August 20 > 29, 2014**



LECTURERS

J. Blomgren (INBEx)
B. Bonin (CEA)
K. Smith (MIT)
P. Bryce (EdF Energy)
C. Schneidesch (Tractebel Eng)
D. Bernard (CEA)
H.D. Berger (AREVA)
A. Moeslang (KIT)
G. Was (University of Michigan)
P. Efsing (Vattenfall/KTH)
U. Ilg (ENBW)
J. Noirot (CEA)
N. Waeckel (EdF)
M. Salvatores (Consultant, INL)
F. Tuomisto (Aalto Univ.)

PROGRAMME OUTLINE

- ▶ **Introduction**
 - > Nuclear power plants commercially available today
 - > The life cycle of nuclear energy
- ▶ **Light Water Reactor Physics Methods and data**
 - > Lattice Physics, core modelling
 - > Nuclear industry lessons from operating plants, code limitations and practical issues desirable improvements
 - > Demonstrating core performance via experiments, validation, uncertainty assessment, plant data
- ▶ **Light Water Reactor Fuels and Structural Materials**
 - > Fundamentals of materials science and radiation damage
 - > Materials degradation in a reactor
 - > R&D on nuclear fuel
- ▶ **Group reflection on selected scientific topics**
- ▶ **Seminars**
 - > Modern Reactor Physics : Back to the Future
 - > Moving from the world of material science into the world of nuclear technology
- ▶ **Technical visits of CEA Cadarache R&D facilities**

- ▶ Extra-curricular and social events and an attractive weekend programme will be organized.
- ▶ Full registration fees: 1900 euros. Reduced fees: 950 euros for fellowship recipients.