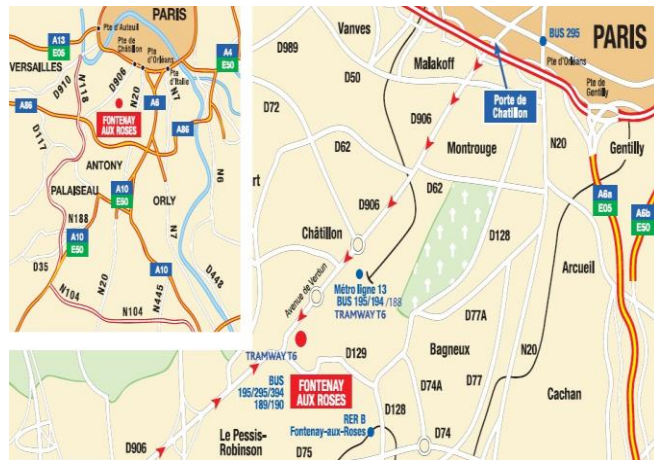


## Venue

IRSN, Bâtiment 33  
12 rue de la redoute  
Fontenay-Aux-Roses (close to Paris)  
France

❖ **By metro** Line 13  
station Châtillon/Montrouge then  
Tramway T6 stop Division Leclerc

❖ **By train** RER B (Charles de  
Gaulle/Robinson)  
station Fontenay-Aux-Roses then  
Bus 394 stop Division Leclerc



IRSN, Bâtiment 33  
Noak/Le bar Floréal/Médiathèque IRSN

Further information  
&  
Registration

[dosicourse@irsn.fr](mailto:dosicourse@irsn.fr)  
<http://www.concert-h2020.eu/>

## Organizing committee

**Sophie Ancelet (IRSN, France, Chair)**  
Liz Ainsbury (PHE, UK)  
Clemens Woda (HMGU/EURADOS, Germany)  
Augusto Giussani (BfS, Germany)



**Helmholtz Zentrum münchen**  
Deutsches Forschungszentrum für Gesundheit und Umwelt

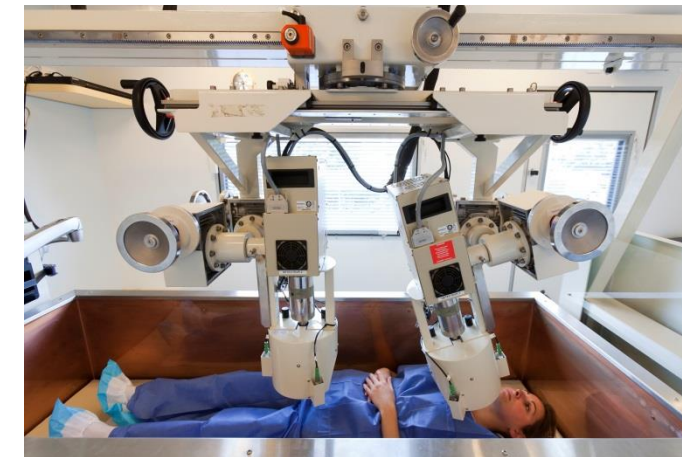


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(CONCERT) 2018 Education & Training  
call



**Uncertainty in  
biological, physical  
and internal dosimetry  
following a single  
exposure**

**April 15-19, 2019  
IRSN, Paris, France**



Anthroporadiometric measurements  
Photo: Noak/Le bar Floréal/Médiathèque IRSN



Organized in the framework of EURADOS, this course will cover standard and advanced methods (based on mathematical, probabilistic and statistical concepts) used to identify, characterize, describe/model and assess the major sources of uncertainty related to the estimation of doses in biological, physical and internal retrospective dosimetry following a single exposure to ionizing radiation.

## Lecturers

- ❖ Sophie Ancelet, Mohamedamine Benadjaoud, Gaetan Gruel, David Broggio, Eric Blanchardon, Estelle Davesne, François Trompier, Guillaume Manificat, Laurence Roy (IRSN)
- ❖ Augusto Giussani (BfS)
- ❖ Demetrio Gregoratto (PHE)
- ❖ Pedro Puig, Joan Francesco Barquinero (UAB)

## Course open to

- ❖ Mainly MSc/PhD students and other young scientists who need a strong grounding in uncertainty analysis techniques for retrospective dosimetry.
- ❖ Later career professionals, who want to deepen their knowledge in this field.



Electron Paramagnetic Resonance (EPR) spectroscopy  
Photo: FrancescoAcerbisl/Médiathèque IRSN

## Topics

- ❖ Dose estimation in biological, physical and internal dosimetry following a single exposure
  - ❖ *State of the art*
- ❖ Dealing with uncertainty: basic probabilistic and statistical tools
  - ❖ *Practical session*
- ❖ Introduction to R language for statistical computing in radiation dosimetry
  - ❖ *Practical session*
- ❖ GUM methods for retrospective dosimetry
  - ❖ *Practical session*
- ❖ The bootstrap approach for uncertainty assessment in retrospective dosimetry
  - ❖ *Practical session*
- ❖ Advanced methods for uncertainty propagation in internal dosimetry
  - ❖ *Practical session*
- ❖ Bayesian approach for retrospective dosimetry
  - ❖ *Practical sessions*
- ❖ ISO approach to account for uncertainty in internal dosimetry
- ❖ Overview of the limit of detection issue
- ❖ An advanced method to deal with heterogeneous exposures in biological retrospective dosimetry
- ❖ Factors affecting *in vivo* activity measurements

All practical sessions will be based on real case studies in biological, physical and internal retrospective dosimetry

## Information for applicants

People wishing to apply should submit at **[dosicourse@irsn.fr](mailto:dosicourse@irsn.fr)** :

- ❖ A letter of application
- ❖ A CV describing the scientific career
- ❖ A supporting letter from the supervisor (only for PhD students)

Deadline for applications: **February 15<sup>th</sup> 2019**

Max number: **20 participants**

There is **no course fee**.

A **limited financial support** will be available to cover accommodation and breakfast for **10 students** for 5 nights.

Preference will be given to students from Eastern and Southern European countries.



Photo: Olivier Seignette/Mikaël Lafontan/Médiathèque IRSN

