

IRSN

INSTITUT
DE RADIOPROTECTION
ET DE SÛRETÉ NUCLÉAIRE



Bundesamt für Strahlenschutz



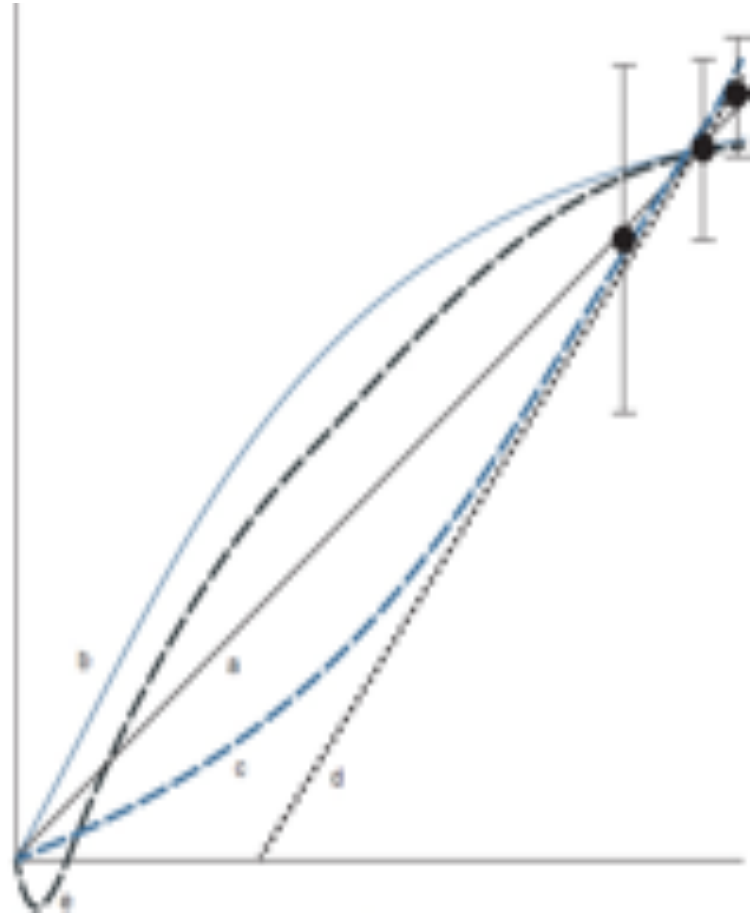
Public Health
England

ISGlobal
Barcelona
Institute for
Global Health

In alliance with



UNCERTAINTY ANALYSIS FOR LOW DOSE RESEARCH



FURTHER INFORMATION
&
REGISTRATION

+34 932 147 310
uncertaintycourse@creal.cat
<http://www.creal.cat>
<http://www.concert-h2020.eu/>

COURSE CONTENTS

First part: Basic topics

- Welcome
- Measurement error in environmental and occupational studies
- Software for statistical analysis
- Basics of radiation epidemiology
- Introduction to uncertainty analysis in radiation epidemiology
- Identification of main uncertainty sources: Dose uncertainty, uncertainties in biological models
- Classical risk models and risk model uncertainty
- Practical session: Introduction to statistical software
- Introduction to radiation biology
- Overview of epidemiological methods
- Practical session: The importance of properly accounting for uncertainties

Second part: Advanced topics

- Incorporating other sources of uncertainty
- Introduction to Bayesian methodology
- Bayesian methods in epidemiology
- Practical session: Overview of epidemiological methods and classical risk models
- Advanced topics on uncertainty modelling: Regression calibration and full likelihood methods
- Practical session: Advanced modelling for radiation epidemiology

This course is funded by the European Joint Programme for the Integration of Radiation Protection Research (CONCERT) 2015 Education & Training call



OBJECTIVES

Introduce basic aspects on statistics, radiation epidemiology and uncertainty analysis, as well as an introduction to radiation biology. The second part of the course will focus on more advanced and state of the art topics in uncertainty analysis. All theoretical lectures will be accompanied by practical sessions including real world examples

ADDRESSED TO

Young researchers in radiation epidemiology who need a strong statistical and mathematical background, and to MSc and PhD students in related fields that want to be aware of the classical and cutting-edge techniques in uncertainty analysis used in radiation epidemiology

INFORMATION FOR APPLICANTS

People wishing to apply should submit the following documents (uncertaintycourse@creal.cat):

- A letter of application
- A CV with a description of the scientific career
- A supporting letter from the supervisor

Deadline for applications is June 3rd

DATES AND VENUE

July 4th 2016 – July 8th 2016
ISGlobal, Centre for Research in Environmental Epidemiology (CREAL);
Universitat Pompeu Fabra (UPF),
Barcelona, Spain
A limited number of travel grants to cover travel, accommodations and expenses will be available

LECTURERS

Liz Ainsbury (PHE)
Sophie Ancelet (IRSN)
Francesc Barquinero (UAB)
Graham Byrnes (IARC)
Elisabeth Cardis* (CREAL)
Michael Hauptmann (NKI)
Michaela Kreuzer (BfS)
David Morina* (CREAL)

* Course co-organisers