

# EURADOS TRAINING COURSE

## Application of Monte Carlo Methods for Individual Monitoring Dosimetry of Ionizing Radiation

### Saturday 18<sup>th</sup> April 2020:

09:00	Welcome, Introduction, Housekeeping (Eakins)
09:05	'Dose Quantities' lecture (Van Hoey)
10:00	'Instruments, Detectors and Dosemeters' lecture (Van Hoey)
11:00	<i>Coffee Break</i>
11:15	Introduction to the QUADOS Albedo Dosemeter problem (Eakins)
11:30	Practical Session 1: Surfaces, cells, materials, tallies etc.
13:00	<i>Lunch</i>
14:00	Provision / discussion of optimum input file for photon-only dosimeter
14:30	Provision / discussion of output file for photon-only dosimeter
15:00	'Including Neutrons' lecture (Gomez-Ros): materials, cross-sections, tallies, additional physics etc.
15:15	Practical Session 2: Photon dosimeter to combined photon and neutron dosimeter
16:15	<i>Coffee Break</i>
16:30	Provision / discussion of output file for photon/neutron dosimeter
17:00	Practical Session 3: The effects of backscatter
17:30	Practical session 3 discussion
17:45	Q&A / discussion of day
18:00	End

**Sunday 19<sup>th</sup> April 2020:**

- 09:00 'Calculating dose quantities' lecture (Gomez-Ros)
- 09:15 Practical Session 4: Calculating  $H_p(10,0,^{137}\text{Cs})$
- 10:45 *Coffee Break*
- 11:00 'Albedo Response: absorbed doses to  $H_p(10)$ ' lecture + practical (Eakins)
- 11:30 'QUADOS Intercomparison – common successes and pitfalls' lecture (Gomez-Ros)
- 12:00 Exercise discussions
- 12:30 *Lunch*
- 13:30 'New ICRU quantities and their impacts for dosimetry' lecture (Eakins)
- 14:00 'Further applications of MC for dosimetry' lecture (Van Hoey)
- 14:30 Practical Session 5: Example applications in dosimetry
- 15:30 *Coffee Break*
- 15:45 Practical Session 5: Example applications in dosimetry (*continued*)
- 17:30 Introduction to optional test exercise
- 17:45 Discussions and Q&A
- 18:00 End

*Participants will have 1 month to submit solutions to the optional test exercise, success in which will gain a 'Pass' certificate for the course.*