



<b>Title:</b>	<b><i>Geant4 School</i></b>
<b>Lecturers:</b>	M. P. Carante, I. Postuma
<b>Duration:</b>	35h
<b>CFU:</b>	4
<b>Period:</b>	15-19 January 2024
<b>Content:</b>	<p>The school is a five-days hands-on Geant4 course, that will be especially tailored on medical physics applications. Geant4 is a software toolkit, written in C ++, for simulating tracking of particles in matter with the Monte Carlo approach. The software is developed and maintained by an international collaboration of scientists belonging to different institutions. Geant4 can be used for applications in high energy physics, astrophysics, medical physics, particle astrophysics and nuclear physics.</p> <p>The topics of the International Geant4 School will cover topics that are relevant for medical applications, as dosimetry, beam quality, facility design, with a focus on Geant4DNA, for the applications in radiobiology. Geant4DNA is an extension of the code that allows studying the biological effects on cells according to the distribution and type of the radiation field. Three experts from the development group of this extension will be present in Pavia as lecturers for this part of the course.</p> <p>Lectures will cover all aspects of the toolkit from basic installation through advanced topics and will be interspersed with examples that build a progressively more complex application. On the last day, students will have the opportunity to test their learning achievements through a written exam. The successful outcome of the test will be reported on a written certificate for those interested. A simple attendance certificate will also be available on request.</p> <p>Details on the program will be updated on the website <a href="https://agenda.infn.it/event/37741/">https://agenda.infn.it/event/37741/</a>.</p> <p>Lunches, coffee breaks and a social dinner will be included.</p> <p>The school is especially dedicated to PhD students and young researchers working at Universities or Research Institutes.</p>
<b>Notes</b>	<p>For those who intend to participate in the Course as a PhD school, the final test and the certificate will be sufficient. For those who intend to choose this school as a course for their academic career, they need to pass an exam with the reference professors and the final evaluation will be valid for the PhD plan of studies.</p>