Particle and Radiation Detectors: Advances & Applications

Overview

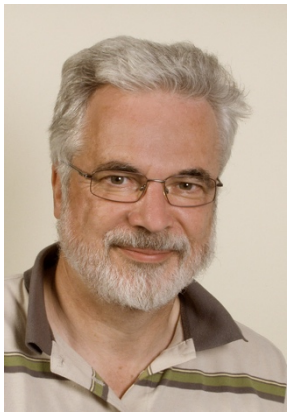
All professionals, whether they work in nuclear spectroscopy or reactions, nuclear medicine, or other disciplines related to defense and homeland security, need to have some common knowledge of nuclear radiations and how they interact with the things around us if they use it in their works in one way or the other. This course will provide the participants with this kind of knowledge and get them familiar with advanced Particle and Radiation Detectors and the web-based tools to enable them to become life-long learners and stay current with nuclear radiation detection during their careers and beyond.

The prime objectives of this course are as follows:

- To advance the participants with the hands-on knowledge of how gamma-radiations and nuclear particles interact with matter.
- To enable participants to assess the capabilities of different detector systems and their employability in various experiments.
- To enable the participants to be able to ask right questions related to the detector development for various nuclear physics related experiments.
- To introduce participants to the advanced gamma & charged particle detectors, and different upcoming mega projects worldwide.

Modules	Particle and Radiation Detectors: Advances & Applications: **November 12 – 18, 2018** **Note:** Number of participants for the course will be limited to **fifty (50)**
You Should Attend If…	- you are a trainee or researcher in manufacturing, service and government organizations including Public and Private R&D laboratories, technical staff of radiation therapy and nuclear medical imaging facilities. - you are a Students at all levels (BTech/MSc/MTech/PhD) or a Faculty from academic institutions and technical institutions.
Fees	The participation fees for taking the course is as follows: - Participants from abroad : **US $500** - Industry/ Research Organizations: **Rs.10,000/-** - Academic Institutions: **Rs. 3,000/-** The above fee includes all course materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility. The participants will be provided with **accommodation on payment basis.**

The Faculty



Professor Dr. habil Hans-Jürgen Wollersheim is a consultant for FAIR/GSI and has been a project leader in Nuclear Spectroscopy group for detector instrumentation at the GSI Helmholtzzentrum für Schwerionenforschung GmbH in Germany. He has more than 40 years of experience working at various ion beam accelerators from 1 MeV Van de Graaff to a few GeV ions machines at GSI. He has been heavily involved in developing nuclear detectors, nuclear electronic data system, data analyses codes, physics interpretation etc, in international collaborations. He has contributed to nearly 200 research articles in international peer reviewed journals with nearly 7000 citations. He has been teaching physics for undergraduate and graduate students at Frankfurt University, Technical University Darmstadt, and University of Munich for more than 30 years on both theory and experiments of diverse subfields of physics. More here: https://web-docs.gsi.de/~wolle/

Dr. Pushpendra P. Singh is a Faculty of Physics at the **Indian Institute of Technology Ropar, Rupnagar, Punjab, INDIA.** His research interest includes, nuclear instrumentation and accelerator based nuclear reactions and spectroscopy investigations. Dr. Singh has more than 15 years of experience working at IUAC New Delhi, TIFR Mumbai, LNL Italy, GSI/FAIR Germany in different areas and applications of nuclear physics. More here: http://www.iitrpr.ac.in/physics/pps

Course Co-ordinator

Dr. Pushpendra P. Singh
Phone: +91-1881-242122, +91-8283834321
E-mail: pps@iitrpr.ac.in

.....

http://www.iitrpr.ac.in/gian-1