



South Asia Centre for Medical  
Physics and Cancer Research

SCMPCR

**Newsletter**

Quality Education and Health Science for Patient Benefit

Feb 2025 / Volume 7 / Issue 1



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### **Enhancing Skills at the ICTP-IAEA Monte Carlo Workshop**

From October 28 to November 8, 2024, I had the privilege of attending the prestigious Joint ICTP-IAEA Workshop on Monte Carlo Radiation Transport and Associated Data Needs for Medical Applications in Trieste, Italy. Supported by a scholarship, this opportunity proved to be an invaluable experience for deepening my understanding of Monte Carlo techniques and their pivotal role in medical physics. Selection for the workshop was highly competitive and based on “merit and relevant experience” in the field. This ensured that all participants brought unique expertise and perspectives, further enriching the learning experience.

The workshop brought together leading experts, researchers, and fellow participants from across the globe, fostering an environment of collaboration and innovation. Each day featured lectures, hands-on sessions, and group discussions that explored the intricacies of Monte Carlo simulations, with a special focus on their application in radiotherapy, diagnostic imaging, and nuclear medicine.

One of the highlights of the workshop was learning the “EGSnrc Monte Carlo Code”, a widely used and highly accurate tool for simulating the transport of electrons and photons in various mediums. Through guided sessions, I gained hands-on experience in configuring and running simulations using EGSnrc, understanding its modular structure, and interpreting the results for practical applications. This exposure was particularly beneficial in broadening my knowledge of Monte Carlo techniques and their clinical applications.

The workshop included interactions with seasoned professionals, who shared their experiences and challenges, and the hands-on sessions, which allowed us to apply theoretical knowledge in real-world scenarios. These experiences reinforced my belief in the potential of Monte Carlo simulations to revolutionize precision in radiation dose delivery and patient safety.

I strongly encourage other professionals and scholars in medical physics and related fields to apply for such opportunities. Workshops like these provide a platform to connect with global experts, gain advanced knowledge, and collaborate with peers who share similar interests.

This workshop has been a cornerstone in my academic and professional journey, aligning seamlessly with my ongoing PhD research. I am deeply grateful to ICTP and IAEA for this opportunity and am committed to applying the knowledge gained to advance the field of medical physics.

