Jovana Nikolov

(She)

Serbia

- Full Professor in Nuclear Physics, head of Nuclear Physics Group at University of Novi Sad, Faculty of Sciences
- PhD in fundamental research - nuclear structure measurements and nowadays mostly involved in applied nuclear physics, radiation protection and nuclear safety and security.
- Co-author of numerous research papers in international journals (more than 100) in the area of alpha, beta and gamma spectrometry.
- Pioneer in development of nuclear forensics capabilities in Serbia and Western Balkan countries, mostly involved in training and education.
- IAEA and INTERPOL external expert – lecturer, supporting trainings and workshops in nuclear forensics and radiological crime scene management in the area of radiation protection and detection.
- Chair of Working Group 1 in IAEA International Nuclear Security Education Network (INSEN)
- Co-lead of Guidelines Task Group in Nuclear Forensics International Technical Working Group (ITWG)

Participation at International relevant Conferences / Workshops / Benchmarking / Courses / Publications:
Scopus: https://www.scopus.com/authid/detail.uri?authorId=37120796700
Orcid profile: https://orcid.org/0000-0002-9331-8151
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She / he can provide mentorship in Serbian and English.

MENTORSHIP TOPICS

Topic 1: Non-destructive methods for the analysis of nuclear and other radioactive materials found out of regulatory control

There are numerous of nuclear analytical techniques that can serve in the analysis of nuclear and other radioactive MORC. Over the course of 1 – 2 years, trainee can gain practical and theoretical knowledge in physical characterization and gamma spectrometry technique that are very often used in nuclear forensics analysis. The emphasis will be on appropriate method selection, data analysis and data interpretation, assessing materials signatures and integrating results into broader nuclear forensics conclusions. Some of the real-case scenarios will be analyzed thoroughly with the aim of building competencies necessary to support national response capabilities and nuclear-security related investigations.

Duration: 1 -2 years.

Topic 2: Nuclear forensics

Foundational and advanced guidance will be provided for the principles and practice of nuclear forensics. Over the course of the programme, the non-destructive and destructive techniques will be presented with their advantages and disadvantages for analysis of materials found out of regulatory control. The focus will be on the understanding the nuclear-forensics process, evidence handling, laboratory examination strategies, material signatures and the development of nuclear forensics conclusions that support investigative and national decision-making. This programme will help in the understanding what is the role of nuclear forensics in national and international nuclear-security framework.

Duration: 1 -2 years.

Topic 3: Radiological crime scene management (RCSM)

What are the main differences between traditional crime scene and radiological crime scene? How to handle and analyze contaminated samples and keep the chain-of-custody. Roles and responsibilities of personnel involved in RCSM.

Duration: 1 year.