



Contribution ID: 84

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### Short ABSTRACT of Participant's research field

*Tuesday 26 September 2023 09:00 (15 minutes)*

Over the course of my faculty studies in the field of physics I was introduced to plethora of different subjects. My background when it comes to Bachelors revolves around Medical Physics. There I was introduced in subjects and techniques that utilize concepts of modern physics and medicine. Here I did research and practical work in the field of RadioTherapy/Diagnostics where my B.Sc. was devoted to optimizing the shielding in the case of PET diagnostics. However, I always showed interest in a more fundamental approach to physics, and during my Masters this interest was recognized by my then mentor and I was employed in CERN within the NICOLE research group (ISOLDE Collaboration). Here we tackled in detail the topic of nuclear structure by exploring certain properties of some exotic nuclei to which my Master Thesis was dedicated. This only further sparked my interests and would send me off to pursue even more ambitious goals towards my future career as a nuclear physics researcher. During my PhD studies I developed high interest in tools for large data analysis such as ROOT, but more importantly I got inspired by the world of Monte Carlo simulations and their applications, which is what I'm predominantly working on ever since and which will also be the topic of my Doctoral Dissertation. My efforts in these fields were recognized both by my research group from Faculty and the group I'm working with where I'm employed at the Institute for Physics in Belgrade, where amongst other works we did some novel research in the study of different uranium samples. Some of my international collaborations amongst other include DUNE Collaboration, co-joint research with group for Centre for Energy Research (Budapest) and work at the EU-JRC Institutes with which I honed and improved my skills. Aside efforts at CERN, I've spent time both in JRC-Geel, where I've worked on the study of spontaneous fission of Cf-252 - more precisely investigating the multiplicity of prompt gammas in regards to TKE (but we also tackled some topics concerning neutrons from this process as well), and in JRC-Karlsruhe, where I worked with both Nuclear Forensics Group and the Gamma Spectrometry Team - more precisely we're investigating certain materials and how they could be used as personal dosimeters in case they were to be used as Retrospective Dosimeters, and Monte Carlo modeling of known plutonium samples afterwhich we're aiming at predicting the unknown matrices, which are both considered hot topics in these areas. I would be more than happy to present and expand more in detail my up-to-date work, what my PhD thesis will include and revolve around as well as what plans and motivations I hold for my future career.

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**Session Classification:** Flash presentation of the participants

**Track Classification:** Flash presentations