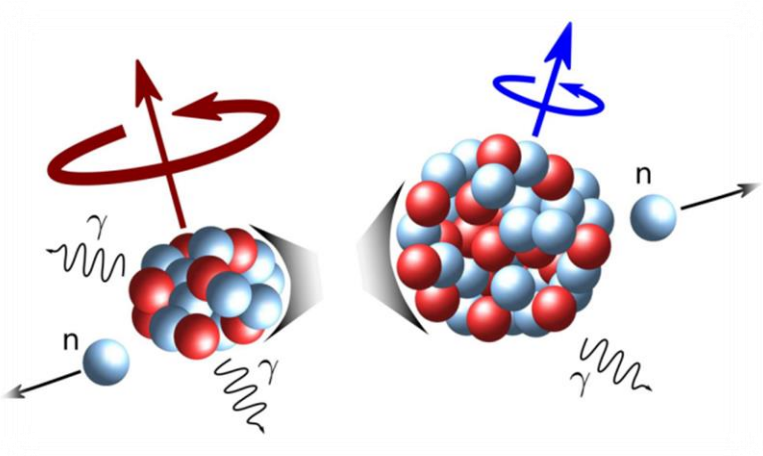
Widening Country Inspiration Story

"Do not hesitate to ask for feedback from your NPCs or from former successful applicants you may know."

Name of the fellow: Petar Marević
Country of the host: Croatia
Project Acronym: AMPLIFI
Project start and end date: 1.07.2024 – 30.06.2026
Type of MSCA, Horizon Europe: Postdoctoral Fellowship



What is your project about?

My project is about fission — the splitting of an atomic nucleus first observed 85 years ago, which continues to challenge physicists to this day. Currently, an area of intense research is the description of the rotation (angular momentum) of the emerging fragments. The AMPLIFI project aims to build a database of angular momentum distributions in fission fragments, applying our knowledge of nuclear theory and high-performance computing.

Why is your project important for society?

Fission has important implications for a broad range of issues — from nuclear stability and nucleosynthesis to energy production and security. In particular, angular momentum distributions are essential inputs for fission simulations. Currently, however, these distributions are often derived from simplified and sometimes inaccurate models. The AMPLIFI project seeks to initiate a paradigm shift by replacing these distributions with those obtained from state-of-the-art theory.

What communication and public engagement measures have you foreseen?

The results will be disseminated to the scientific community through peer-reviewed journals and conference talks. Additionally, I plan to participate in outreach events aimed at both students and the general public.

Why did you choose a widening country as a host?

After completing my master's in physics in Croatia, I spent nearly eight years abroad, earning my doctorate in France and completing postdoctoral assignments in the USA and France. Returning to Croatia was always part of my plan, and the MSCA Postdoctoral Fellowship provided a perfect framework to make it happen.

How did you find your host organisation?

Finding a host organisation was straightforward since I returned to my original alma mater, which also hosts an outstanding research group in my field.

This made the transition seamless and allowed me to rekindle the collaborations I had established during my master's and PhD studies.

What kind of support did you get?

I was fortunate to receive support from multiple sources. Early on, discussions with my future MSCA supervisor and former postdoctoral advisor helped me refine the scientific content of the proposal. For formal aspects, I profited from online MSCA resources and valuable exchanges with two former successful applicants. Finally, the National contact points (NCPs) kindly proofread the proposal to ensure it met all administrative requirements before submission.

What tips can you give other researchers who would like to apply for MSCA?

Choose a subject that is both timely and aligned with your competencies. Find an experienced supervisor whose expertise complements your own. Study the relevant documentation carefully and be precise and diligent when drafting your proposal – details can make all the difference. Finally, do not hesitate to ask for feedback from your NCPs or from former successful applicants you may know.

More information on the project:

The Marie Sklodowska-Curie Actions (MSCA) support researchers at all stage of their career across all disciplines. The MSCA also support cooperation between industry and academia and provide innovative trainings and career developments.

The MSCA Postdoctoral Fellowships (PF) enable talented researchers to work on project in Europe and beyond. They aim at enhancing the innovative potential of postdoctoral researchers through advanced trainings, international and intersectoral mobility.

The MSCA-NET project is the MSCA NCP project to facilitate the transnational cooperation to achieve a consistent and harmonised level of NCP support. The scientific community can also profit from our project to support their MSCA application.