

## Cover Letter

Hossein Yarahmadi, PhD

*Dear Members of the Hiring Committee,*

I am writing to express my interest in the postdoctoral position at the Institute for Research in Fundamental Sciences (IPM). With a PhD in Computer Science from the University of Antwerp, Belgium, and extensive experience in artificial intelligence, multi-agent systems, and reinforcement learning, I am enthusiastic about the opportunity to contribute to IPM's cutting-edge research initiatives.

During my PhD, I focused on addressing the "Credit Assignment Problem in Multi-Agent Reinforcement Learning," where I developed innovative algorithms that significantly improved learning efficiency in distributed environments. My work has been published in prestigious journals, reflecting the impact and relevance of my research. Additionally, as a Postdoctoral Research Fellow at the University of Antwerp, I have been working on integrating reinforcement learning with rule-based reasoning to enhance decision-making in intelligent agents, particularly in dynamic and uncertain environments.

At IPM, I am eager to advance research in scalable multi-agent systems and the integration of learning and reasoning. The interdisciplinary nature of IPM's research aligns perfectly with my goals of developing robust Multi-agent systems models that are both theoretically sound and practically applicable. I am particularly interested in exploring frugal AI techniques and contributing to sustainable computing solutions that address global challenges such as resource management.

In addition to my research experience, I have over 20 years of teaching experience at the Islamic Azad University (IAU) in Iran, where I taught a wide range of computer science courses. This experience has honed my ability to communicate complex ideas effectively and to mentor students, which I am eager to continue at IPM.

The opportunity to collaborate with IPM's esteemed researchers and contribute to its mission of advancing fundamental scientific knowledge excites me. I am confident that my background, skills, and passion for AI research would make me a valuable addition to your team.

Thank you for considering my application.

Sincerely,

Hossein Yarahmadi, PhD

Hossein.yarahmadi@uantwerpen.be