

## KONWERSATORIUM INSTYTUTU FIZYKI UMCS

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## Revisiting physical systems for dark matter traces

The quest for dark matter has been ongoing for almost a century in science and is one of the most intriguing problems in modern physics. Currently dark matter constitutes an issue in many different branches of physics, such as particle physics, gravitational physics, and cosmology. Multiple experiments focused on searching for different candidate particles have failed in bringing meaningful answers, which has resulted in a lot of doubt about our understanding of dark matter. Therefore, the nature of the majority of the mass-energy of the Universe remains unknown and new approaches to the problem are necessary.

In this talk, I will briefly describe the history of dark matter, the state of the art, and possible solutions to the problem. Finally, in the second part, I will present my own research which considers possible dark matter structures which could be present around celestial compact objects, which I have worked on during my doctoral studies.

Dr hab. Ryszard Zdyb, prof. UMCS Dyrektor IF UMCS

Uprzejmie zapraszam wszystkich pracowników, doktorantów i studentów Instytutu Fizyki.