

BIOGRAPHY



OMID ZAHIRI

Institute of Mathematics
Slovak Academy of Sciences

Project number
1048/01/01

Project duration
8/2022 - 7/2025

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"In 2013, my supervisor and I started working with one of the best scholars of the field who is a member of Institute of Mathematics SAS. Since then, we continued our collaboration and published more than 20 joint papers in scientific peer-reviewed journals. Having the opportunity of working with highly reputable and distinguished scholars of SAS along with enjoying the academic potentials of Slovakia are my main reasons for applying to the SASPRO 2 fellowship program. I believe these opportunities will help me to extend my knowledge in the field. In line with the goals of the Slovak Academy of Sciences, this collaboration is expected to lead to some effective publications in peer-reviewed journals of the field."

Omid Zahiri received his Ph.D. in Mathematics (Algebra: Algebraic ordered structures) at Shahid Beheshti University in 2013. He has published over 42 research papers and a Book chapter since 2012. His research interests include:

- Ordered algebraic structures;
- Ordered groups;
- Logical Algebras (MV-algebras, Effect algebras, BL-algebras, and BCK-algebras);
- Fuzzy Mathematics.

PROJECT SUMMARY

Relations between EMV-algebras, pseudo MV-algebras and commutative and noncommutative Bézout domains

An I -group is one of the well-known ordered algebraic structures. It has some important and interesting relations with the other algebraic structures. We know that every Abelian I -group is a group of divisibility of a Bézout domain. On the other hand, Mundici proved that the category of unital I -groups and the category of MV-algebras are categorical equivalent. Relations between I -groups and Bézout domains and MV-algebras were recently studied by Y.Y.Chuan. The main purpose of this project is to investigate and study the relation between EMV-algebras and Bézout domains.



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PUBLICATIONS

- 1- R. A. Borzooei, A. Dvurečenskij, O. Zahiri, State BCK-algebras and State-Morphism BCK-algebras, *Fuzzy Sets and Systems*, 244 (2014) 86–105.
<https://doi.org/10.1016/j.fss.2013.12.007>
 - 2- R.A. Borzooei, A. Dvurečenskij, O. Zahiri, L-orderd and L-lattice ordered groups, *Information Sciences*, 314 (2015), 118-134.
<https://doi.org/10.1016/j.ins.2015.03.072>
 - 3- A. Dvurečenskij, O. Zahiri, When lexicographic product of two po-groups has the riesz decomposition property, *Algebra Universalis*, 78(1) (2017), 67-91.
<https://doi.org/10.1007/s00012-017-0447-y>
 - 4- A. Dvurečenskij, O. Zahiri, The Loomis--Sikorski Theorem for EMV-algebras, *Journal of the Australian Mathematical Society*, 106 (2019) 200-234.
<https://doi.org/10.1017/S1446788718000101>
 - 5- Dvurečenskij, O. Zahiri, On EMV-algebras, *Fuzzy Sets and Systems*, 373 (2019), 116–148.
<https://doi.org/10.1016/j.fss.2019.02.013>
- <https://orcid.org/0000-0002-2178-9421>