## Can an ideal give you a maximal space?[1]

**Aleksandar Pavlović**[2]
*Faculty od Sciences*
*Department of Mathematics and Informatics*
*University of Novi Sad (Serbia)*
apavlovic@dmi.uns.ac.rs

Anika Njamcul
*Faculty od Sciences*
*Department of Mathematics and Informatics*
*University of Novi Sad (Serbia)*
anika.njamcul@dmi.uns.ac.rs

Extending topology in order to make a specific set $A \subseteq X$ open is easy. But, the question is how to do it using the local function, an operator defined by an ideal which generalizes the closure of a set. Several ideas of defining the required ideal are presented. Also, certain properties of $\tau^*$, the topology obtained by the starting topology $\tau$ by the ideal, especially under the assumption that $A$ is a preopen set, are examined. Further, we reflect on the ideal topological space in which the ideal is generated by a chosen family of dense sets. Here we prove that the generated topology by this ideal is submaximal, but not always maximal connected.

## References

[1] Njamcul, A., Pavlović, A., On topology expansion using ideals. arXiv:2312.03197 (2023). https://doi.org/10.48550/arXiv.2312.03197

[1] This talk is supported by the Science Fund of the Republic of Serbia, Grant No. 7750027: Set-theoretic, model-theoretic and Ramsey- theoretic phenomena in mathematical structures: similarity and diversity â€“ SMART

[2] speaker