TOPOLOGY IDEALIZED

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Results were obtained in cooperation with G. Wełyczko.

The inspiration was the work of Aleksandar Pavlovic (Cale). Let us recall the notion considered in [1].

Definition 1. *Let (X, τ) be a topological space and $\mathcal{I}$ be an ideal of subsets of X.*

- *For $A \subseteq X$ set $A^* = \{x \in X : (\forall U \in \tau)(x \in U \to U \cap A \notin \mathcal{I})\}$.*
- *The function $A \to A^*$ is called local function.*
- *$cl^*(A) = A \cup A^*$ is a closure operator.*
- *$\tau_{\mathcal{I}}$ is a topology on X given by the closure operator cl^*.*

Fact 1. *The basis of topology $\tau_{\mathcal{I}}$ is given by sets of the form $U \setminus I$, where $U \in \tau$ and $I \in \mathcal{I}$.*

We will consider spaces of the form $(X, \tau_{\mathcal{I}})$ for a Polish space X and σ-ideal $\mathcal{I}$.

We will also try to examine continuous functions between some of such spaces.

References

[1] A. Njamcul, A. Pavlović, On topology expansion using ideals. Topology Appl. 374 (2025)

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