

# ON $(i, j)$ -BAIRE BILOCALES

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ABSTRACT: In the category of bitopological spaces, a bitopological space  $(X, \tau_1, \tau_2)$  is said to be *almost  $(i, j)$ -Baire* [1] if every sequence  $\{G_n : n \in \mathbb{N}\}$  of  $\tau_j$ -open  $\tau_i$ -dense subsets of  $X$  satisfies the condition that  $\bigcap_{n \in \mathbb{N}} G_n$  is  $\tau_i$ -dense, where  $i, j = 1, 2, i \neq j$ . In this talk, we transfer this notion of almost  $(i, j)$ -Baireness to bilocales. In our notion though, the prefix “almost” is dropped. So, we define and characterize  $(i, j)$ -Baire bilocales. We also give internal properties of  $(i, j)$ -Baire bilocales which are not translated from properties of almost  $(i, j)$ -Baireness in bitopological spaces. For instance, we show that in the class of Noetherian bilocales,  $(i, j)$ -Baireness of a bilocale coincides with  $(i, j)$ -Baireness of its ideal bilocale. We also consider relative versions of  $(i, j)$ -Baire where we show that a bilocale is  $(i, j)$ -Baire only if the subbilocale induced by the Booleanization is  $(i, j)$ -Baire.

## REFERENCES

- [1] Irakli Dochviri. On submaximality of bitopological spaces. *Kochi J. Math*, 5 : 121–128, 2010.