

The Banach-Mazur game and product of Baire spaces

Gabriel Andre Asmat Medina*
Department of Mathematics
University of Sao Paulo
Sao Carlos, Brasil

Abstract

We study Baire spaces and analyze the problem of product of Baire spaces. Then we present some conditions using the Banach-Mazur game to show that the Baire property is preserved in the product. Then we analyze the difference of the infinite product of Baire spaces, between the box product and Tychonoff product. We also present a multiboard version for this problem. Finally we present some open problems regarding the product of Baire spaces.

References

- [1] L. Aurichi and R. Dias, A minicourse on topological games, *Topology Appl*, 2019, 305-335.
- [2] F. Galvin and M. Scheepers, Baire spaces and infinite games, *M. Arch. Math. Logic*, 2016, 85-104.

*Partially supported by CAPES, e-mail: andre_asmat@usp.br