

Topological games and directed complete spaces

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Domain representable topological spaces were introduced by H. R. Bennet and D. J. Luzter [3]. We say that a topological space is domain representable if it is homeomorphic to the space of maximal elements of some continuous directed complete partial order topologized with the Scott topology (see [1]). In 2013 W. Fleissner and L. Yengulalp [4] introduced countably directed complete spaces and an equivalent definition of a domain representable spaces (see also [6]). A topological space X is called *Choquet complete* if the NONEMPTY player has a winning strategy in the strong Choquet game (see [7]). In [2] it was established that Choquet complete spaces are countably directed complete, which can be considered a partial answer to Question 11.11 of [5]. We would like to present a characterization a certain class of directed complete spaces by the existence of winning strategy for NONEMPTY player in a generalized strong Choquet game, which can be also considered a partial answer to Question 11.11 of [5].

References

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