

CONVERGENCE IN BALL SPACES SETTING

FILIP TUROBOŚ

JOINT RESULTS WITH PIOTR NOWAKOWSKI

The notion of ball spaces, that is, a pair of a set and a nonempty family of some of its nonempty subsets, first appeared in the paper [1]. The purpose of this talk is to introduce a notion of ball convergence. We shall discuss its connection to the classical notions of convergence in topological spaces and semimetric spaces as well as some difficulties that arise while working with ball convergence.

REFERENCES

- [1] F.-V. Kuhlmann, K. Kuhlmann, *A common generalization of metric and ultrametric fixed point theorems*, Forum Math. **27** (2015), 303–327.
- [2] F.-V. Kuhlmann, K. Kuhlmann, M. Paulsen, *The Caristi—Kirk Fixed Point Theorem from the point of view of ball spaces*, J. Fixed Point Theory Appl. **20** (2018), Art. 107

INSTITUTE OF MATHEMATICS, ŁÓDŹ UNIVERSITY OF TECHNOLOGY, UL. WÓLCZAŃSKA 215, 93-005 ŁÓDŹ, POLAND
Email address: `filip.turobos@p.lodz.pl`