

1159-49-79

Rafal Zalas* (zalasrafal@gmail.com), Haifa, Israel, and **Simeon Reich**. *Error Bounds for the Method of Simultaneous Projections with Infinitely Many Subspaces*.

We investigate the properties of the simultaneous projection method as applied to countably infinitely many closed and linear subspaces of a real Hilbert space. We establish the optimal error bound for linear convergence of this method, which we express in terms of the cosine of the Friedrichs angle computed in an infinite product space. In addition, we provide estimates and alternative expressions for the above-mentioned number. Furthermore, we relate this number to the dichotomy theorem and to super-polynomially fast convergence. We also discuss polynomial convergence of the simultaneous projection method which takes place for particularly chosen starting points. For more details see arxiv.org/abs/2007.10664. (Received July 30, 2020)