1125-41-257   **Vira Babenko*** (`vbabenko@ithaca.edu`), Ithaca College, Department of Mathematics, 953 Danby Road, Ithaca, NY 14850. *Approximation of functions with values in general and specific L-spaces.*

In this talk, we show that classical approximation operators such as Bernstein, Schoenberg, and other positive linear operators can be adapted to functions with values in L-spaces (which are generalizations of set-valued and fuzzy-valued functions). We obtain error estimation of approximation for functions with values in L-spaces by such operators, as well as error estimations for some formulas of approximate integration. The results are used to develop algorithms for the solution of integral equations involving functions with values in L-spaces. We also discuss problems of approximation by generalized polynomials and splines for functions whose values lie in a specific L-space, namely a space of sets. Because the structures of spaces of sets are richer than the structure of general L-spaces, we have additional tools in the former space (e.g., the support function of a set), which allows us to obtain deeper results for the approximation and interpolation of set-valued functions. (Received August 19, 2016)