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Vira Babenko* (vira.babenko@drake.edu) and **Vladyslav Babenko**. *Function L-spaces. Optimal recovery and best approximation.*

We consider the problem of approximation of unbounded positively homogeneous operators in L-spaces using Lipschitz operators. In this talk, we discuss its connection to the problem of computing modulus of continuity of the unbounded operator on the class of elements, as well as, to the problem of optimal recovery of an unbounded operator by a Lipschitz one on the class of elements given with an error. As applications, we consider the problem of approximation of unbounded operator, that for functions with values in some L-space puts in a correspondence Hukuhara-type derivatives, by Lipschitz operators. Further, we discuss the solution of the problem of the optimal recovery of this operator on the class of functions that have Hukuhara-type derivative with the given majorant of the modulus of continuity. (Received August 24, 2020)