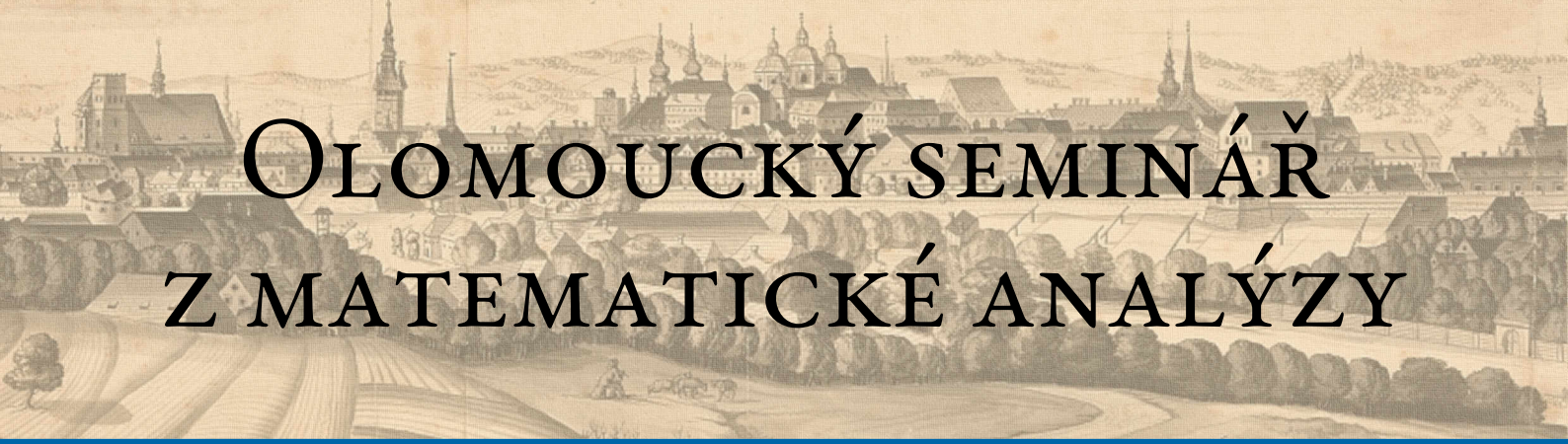




OLOMOUCKÝ SEMINÁŘ Z MATEMATICKÉ ANALÝZY

V úterý 8. dubna 2025 od 13.30 v učebně 5.068, PřF UPOL, 17. listopadu 12

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pronese přednášku na téma

Entropy for doubly stochastic or Markov operators

Abstrakt: The classic notion of a dynamical system, as used in ergodic theory or topological dynamics, i.e., a space with an acting map, gives rise to many generalizations. For the measure-theoretic case, one of the possible directions is a concept of a doubly stochastic operator, i.e., a linear (continuous), positive operator on $L^1(\mu)$, preserving constants and, in some sense, μ -invariant. For topological dynamical systems one can investigate Markov operators on $C(X)$. The class of all such operators includes, in particular, all operators associated to the stationary transition probabilities.

In the literature there are several attempts to give an appropriate definition of entropy for operators. I will try to survey this theory, focusing mainly on the approach, which comes from the joint work with Tomasz Downarowicz (2005). I will present definitions, properties and theorems, which resemble and generalize the classic case, showing also some obstacles and difficulties one may encounter while working on the subject.

