INSALATE DI MATEMATICA

Adaptive approximation of functions using trees

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IN THIS TALK

The main focus of the seminar will be the study of instance optimal algorithms for the adaptive approximation of functions, closely related to applications in adaptive finite element methods. The approach we shall focus on bases on organizing the degrees of freedom (DOFs) in trees, following Binev and DeVore (2004). A key ingredient of such algorithms is the so-called marking strategy which, with the help of local quantities called marking indicators, decides where to introduce new DOFs. These marking indicators are based on local errors, which in applications are subadditive or, more general, stable. The aim of the seminar is to briefly describe the state of the art, to expand the known literature in the stable case and to propose a new type of marking indicator, proving that it leads to instance optimality.

🔑words: adaptive approximation, trees, dof

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"Obvious" is the most dangerous word in mathematics.
(Eric Temple Bell)

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U9 - 09 📍
4:45 pm (CEST)