Fifteenth International Conference Zaragoza-Pau on Mathematics and its Applications
Jaca, September 10–12th 2018

Quasi-Interpolation and Applications to PDEs with Radial Basis Functions

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SUMMARY

Quasi-interpolation and interpolation with radial basis functions are the most often used methods of approximation in multiple space dimensions by shifts of kernel functions. The advantages of quasi-interpolation are manifold: they are suitable for smoothing for instance and allow function information not only to be provided by point-wise evaluation, but also by local integrals, divided differences etc. In this talk we shall speak about quasi-interpolation and convergence orders using shifts of radial basis functions, and we shall also mention a new method to solve partial differential equations with radial basis functions.

(Joint work with Joaquin Jodar/Jaén University, and with Miguel Rodríguez/Granada University.)

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