Workshop on Potential Theory and Applications, 2012, Szeged, Hungary http://www.math.u-szeged.hu/wspota2012/

## Nearly optimal meshes on subanalytic sets

Wiesław Pleśniak

(Jagiellonian University, Poland)

We prove that any fat, subanalytic compact subset of  $\mathbf{R}^N$  possesses a nearly optimal (polynomial) admissible mesh. It is related to particular results that have recently appeared in the literature for very special (globally semianalytic) sets like N-dimensional polynomial or analytic graph domains or polynomial and analytic polyhedrons. We also show that an infinitely differentiable map f from a compact set Q in  $\mathbf{R}^N$  onto a Markov compact set K in  $\mathbf{C}^l$  ( $l \leq N$ ) transforms a (weakly) admissible mesh in Q onto a (weakly) admissible mesh in K, which extends a result of F. Piazzon and M. Vianello [PV10] for analytic maps in case Q is a subset of  $\mathbf{R}^N$ .

## References

[PV10] F. Piazzon and M. Vianello. Analytic transformations of admissible meshes. *East J. Approx.*, 16(4):389–398, 2010. ISSN 1310-6236.