Professor Dr. Günter Meinardus celebrates his 80. birthday

On June 11, 2006, Professor Meinardus celebrates his 80. birthday. He ranks as one of the most distinguished figures who have made fundamental contributions to approximation theory and related fields in the widest sense. Some of his main achievements include the following topics:

Professor Meinardus developed a pioneering nonlinear theory with the aim of concrete applications. By applying the theory to best approximation by rational functions and exponention sums, complete results were obtained. The basic principles had great influence on the development of nonlinear approximation and optimization, in particular concerning splines with free knots.

His contributions to the theory of splines are fundamental. Professor Meinardus derived sharp estimates for the norm of interpolation operators, developed a complex integral representation of B-splines and proved the uniqueness of best L1-approximations from periodic spline spaces.

Segment approximation is regarded as an extremely difficult and highly nonlinear problem. Professor Meinardus developed efficient algorithms for computing segment approximations with applications to splines with free knots. It is remarkable that in addition to the univariate case also bivariate segment approximation problems were investigated. Some of the above results were obtained in cooperation with G. Merz, G. Nürnberger, M. Sommer, H. Strauss, D. Schwedt, G.D. Taylor and G. Walz.

Professor Meinardus has written a famous book on “Approximation of Functions: Theory and Numerical Methods”, published by Springer in 1967. He organized jointly with K. Böhmer, L. Collatz, G. Nürnberger, W. Schempp and H. Werner many international conferences and edited the corresponding proceedings. Since the foundation of the “Journal of Approximation Theory”, he belonged to the editorial board. His scientific work is highly regarded, and he held chairs at the Universities of Clausthal, Erlangen-Nürnberg, Siegen and Mannheim.

Günther Nürnberger