Special Volume

Dedicated to Olof B. Widlund on the occasion of his 80th birthday

This special volume of ETNA, the Electronic Transactions on Numerical Analysis, is dedicated to Olof B. Widlund for his many contributions to numerical analysis and scientific computing, on the occasion of his 80th birthday, the 11th of February 2018.

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Olof B. Widlund received his Ph.D. degree from the Royal Institute of Technology in Stockholm in 1964, with Heinz-Otto Kreiss as advisor. He obtained his habilitation degree from Uppsala University in 1966. He first arrived at the Courant Institute, New York University, in 1965 for a year-long postdoc. He returned in early 1968, and joined its faculty later that year. The Courant Institute became his professional home for the rest of his career, and he eventually became a Silver Professor of Mathematics and Computer Science, until he began his retirement (from teaching) in early 2017.

Earlier in his career, Widlund's contributions were on finite difference approximation of initial value problems for partial differential equations, including issues of stability; nonsymmetric Krylov subspace methods; and capacitance matrix methods. Over the past three and a half decades Widlund worked almost exclusively on domain decomposition algorithms for large linear systems of algebraic equations arising in the discretization of partial differential equations. He was one of the pioneers in this field, and one of the organizers of the series of conferences on these methods,

the International Conferences on Domain Decomposition in Science and Engineering, now totaling 25 meetings. He also co-edited about half of the refereed proceedings of these conferences.

In 2005, he published *Domain Decomposition Methods - Algorithms and Theory*, coauthored with Andrea Toselli, which received the Award for Excellence in Professional and Scholarly Publications of the Association of American Publishers, in the category Mathematics and Statistics.

Widlund's scientific contributions are numerous, highly cited, and with lasting impact. He has published well over a hundred papers, with over three dozen collaborators. He supervised 32 Ph.D. students, and hosted many postdocs and visitors. But these numbers do not reflect the tremendous esteem and affection that his students, colleagues, and collaborators have for him. He is a fantastic role model for all of us, a tireless and generous teacher, mentor, and friend.

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