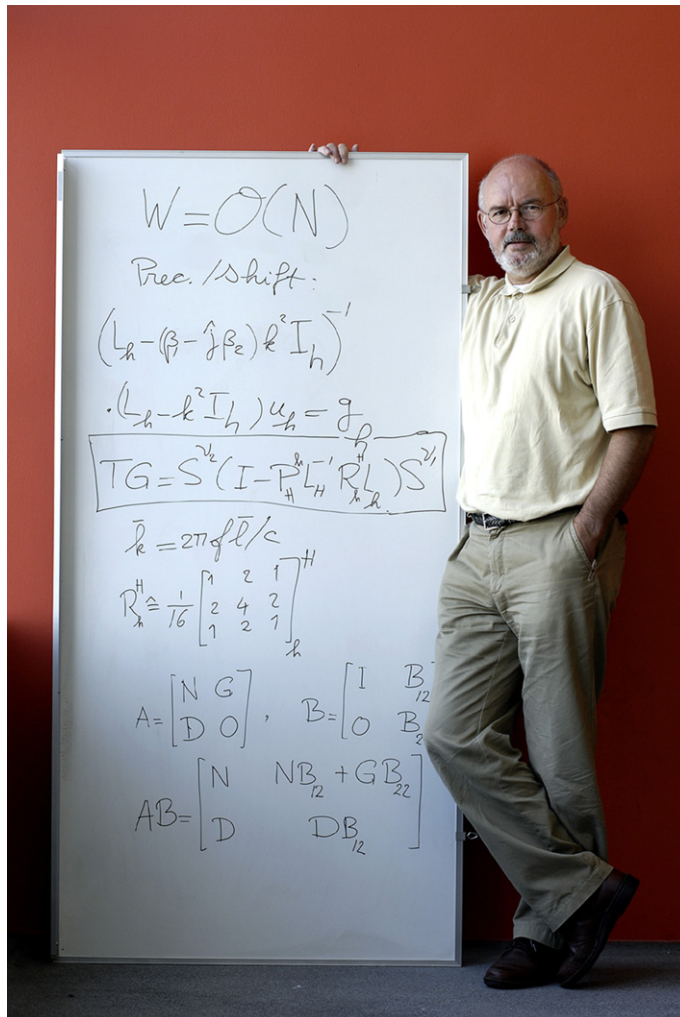


Preface



We are pleased to present this special issue of the Journal of Computational Physics, dedicated to Professor Piet Wesseling, on the occasion of his retirement from the Delft University of Technology as of August 1, 2007.

Piet was born in Rotterdam on August 18, 1942. He studied Aeronautical Engineering at the Delft University of Technology, where he obtained his MSc-degree in 1964. In 1967, he received his PhD-degree in Aeronautics and Applied Mathematics at the California Institute of Technology. From 1967 until 1968, he was a senior research engineer at the Jet Propulsion Laboratory, Pasadena, California. He continued his career as a senior research engineer at the National Aerospace Laboratory in Amsterdam, where he worked from 1968 until 1972. In the period 1972–1977, he was a professor of Numerical Mathematics at Twente University. Since 1977 he has been full professor of Numerical Mathematics at the Delft University of Technology.

Piet is one of the pioneers of multigrid methods, with a specific interest in the application of these techniques in computational fluid dynamics. He contributed with novel ideas on multigrid methods for cell-centered discretizations (with applications in oil-reservoir engineering), and he was one of the first to emphasize the robustness aspect of multigrid methods, by considering versions of ILU-type smoothing for various applications.

His contributions to discretization schemes in computational fluid dynamics include the persistent development of accurate staggered-grid discretizations for all sorts of incompressible and compressible fluid-flow problems, among these high-Reynolds number flows in curved domains. He brought incompressible expertise to the compressible fluid-flow community, which was invaluable for Mach-uniform discretization and solution methods.

Piet is the author of two often cited books, one on multigrid methods and one on computational fluid dynamics.

Piet has been an active member of many national and international organizations. He has been the driving force behind the ECCOMAS-CFD-2006 conference, held in Egmond aan Zee, the Netherlands.

He has been scientific advisor at Philips Research, the Dutch National Aerospace Laboratory, and the Dutch Centre for Mathematics and Computer Science.

Because of Piet's many contacts in the computational science-and-engineering community, it was easy to recruit authors for this special issue. All submissions have been refereed according to the standard procedure of the Journal of Computational Physics. The special issue reflects much of Piet's research interests, among these: multigrid methods and computational fluid dynamics. We thank all people who have helped us in preparing this issue; authors, referees, and members of the editorial board of the Journal of Computational Physics.

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Available online 2 April 2007