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Preface

The 2nd Chongqing workshop on computational and applied mathematics was held at Chongqing University of China on August 16-19, 2015. This workshop was in honor of Prof. George C. Hsiao, Prof. Jean-Claude Nédélec and Prof. Wolfgang L. Wendland for their life-long academic achievements in computational mathematics, in particular, boundary element methods and finite element methods as well as their applications in problems from science and engineering. With great pleasure we dedicate this volume of Journal of Computational Mathematics to Prof. George C. Hsiao, Prof. Jean-Claude Nedelec and Prof. Wolfgang L. Wendland.

G.C. Hsiao was born in Shanghai (China) in 1934, and spent his childhood at the city of Chongqing (China) where the workshop was held. He moved to Taiwan with his family after World War II. In 1956 he received his Bachelor's degree in Civil Engineering from National Taiwan University and then went to the United States in 1958 without turning back (a one-way ticket). He obtained his MSc in Civil Engineering with G. Bugliarello in 1962. Supervised by R. MacCamy at Carnegie Mellon University, he completed his PhD in Mathematics in 1969 focusing on the singular perturbations of boundary value problems for a class of nonlinear differential equations with small parameter. G.C. Hsiao took a position at the University of Delaware in 1969 and became a Full Professor in 1977, then the Carl J. Rees Professor of Mathematics in 2005. With his interdisciplinary background, he brings a unique perspective to his mathematical work, which has ranged in topics from the analysis of boundary integral equations, wave scattering problems, solid mechanics, singular perturbation problems for PDE,

to numerical analysis, inverse problems and their applications. It is noteworthy that he is gifted both in the mathematical analysis and computational implementation of algorithms - he has written codes in languages ranging from Fortran through Maple. His very deep and prolific contributions include over 140 research articles and the definitive 612-page book titled Boundary Integral Equations, with Professor Wolfgang Wendland. He has also been not only a notable and engaged advisor but also a remarkable friend of his students and has strongly influenced their lives in a very profound manner.

Jean-Claude Nédélec was born in Briec de l'Odet (France) in 1943. He studied at the Ecole Polytechnique from 1963 to 1966 and obtained his PhD in mathematics under the supervision of Jacques-Louis Lions in 1970 at the Sorbonne University, on approximation schemes for integro-differential equations of Riccati-type. One year before his thesis defence, he became professor at the University of Rennes. Following this, he moved to Ecole Polytechnique in Palaiseau as Director of Research and head of the Center for Applied Mathematics in 1974. In 2008, Jean-Claude retired and became Professor Emeritus at the University of Rennes. Jean-Claude is an exceptionally accomplished mathematician. He is not only a world-class, leading expert in numerical mathematics, but also a very influential scientific figure. He is one of the fathers of numerical methods for wave propagation problems. His fundamental works on boundary element methods have served as an inspiration to many generations of researchers in applied and computational mathematics. His contributions bridge the gap between mathematics, electromagnetic and elastic wave propagation theory, and real-world applications. Throughout his very brilliant and prolific career, whenever Jean-Claude found himself involved in a challenging problem in numerical mathematics, he resolutely succeeded in proposing a very apposite, innovative, and unified mathematical approach for solving it. His work has opened new avenues, not only for electromagnetic and acoustic wave propagation problems, but also for fluid mechanics. All of these problems with pertinent applications in diverse domains of science were considered to be highly elusive and intriguing. Last, but by no means least, Jean-Claude mentored numerous brilliant PhD students and postdoctoral researchers. Some of them went on to have careers in excellent universities after completing their PhDs under his guidance and became extremely successful researchers and outstanding teachers. Others went on to work in companies and, today play a key role in the rapid transfer of the numerical tools he developed from academia to industry. Jean-Claude is an exceptionally devoted supervisor, a truly great teacher, and an absolutely fantastic role model for young researchers. Without doubt, he is one of the most exceedingly brilliant and influential scientists of our time.

W. L. Wendland was born on Posen (Poland) in 1936 and grew up in East Germany. From 1955 till 1961 he studied mechanical engineering and mathematics at the Technical University in West Berlin, Germany. His mathematical development was strongly influenced by his thesis advisor Wolfgang Haack. In 1965 he completed his PHD on applications of potential theory to hydromechanical problems and in 1969 his habilitation with research work on the Beltrami equation. Also in Berlin he married his wife Gisela; they have two children David and Katrin and two grandchildren. In 1970 he became full-professor at the Technical University Darmstadt. After 17 very succesful years he moved to the University of Stuttgart where he also was very succesful till his retirement and beyond. He has often been a visiting professor at many prestigious universities all over the world, in particular at George Hsiao's home university, the University of Delaware, USA. W. L. Wendland has supported colleagues from all over the world, especially from Eastern Europe. Both in Darmstadt and in Stuttgart he has created highly productive working environments and very active visitor programs. He has initiated and coordinated DFG

Schwerpunkte / Sonderforschungsbereiche and plenty of conferences / workshops – especially promoting the development of boundary element methods. He supervised 31 PHD students. He has collaborated with more than 100 researchers around the world. His interest is in applied mathematics from fluid to solid mechanics, from modelling to theoretical and numerical analysis. He is the author of 8 books and more than 260 scientific articles, many of them in leading journals. He has made fundamental contributions in the theory and numerical methods for boundary integral equations, especially boundary elements, in PDEs in non-smooth domains and in mathematical physics, especially in flow, crack and contact problems.

We all are enjoying their amiable personalities, and we are very much impressed by their seemingly everlasting energy and enthusiasm for mathematics. We thank them for their contributions to mathematics and the stimulating guidance they have given to the scientific community, and, of course, for their friendship. We wish them many years of health and joy in the company of their families, colleagues and friends.

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