



CHARLES W. GROETSCH

DEDICATION TO CHARLES W. GROETSCH

KENDALL ATKINSON AND PAUL MARTIN

This issue and the next issue of the *Journal of Integral Equations and Applications* are dedicated by the editors and authors to Charles (Chuck) Groetsch, to express their high regard for his contributions to the world of mathematics. Chuck has been on the board of this journal for the period 1994–2009, and he was a co-managing editor during 2002–2008, helping to grow the journal to its present success.

Chuck's principal research interests have been in integral equations of the first kind, inverse and ill-posed problems, and associated numerical analysis. He is perhaps best known for his books and expository articles. His first book was *Generalized Inverses of Linear Operators: Representation and Approximation* (Dekker, New York, 1977). Then, we must mention his little book on *The Theory of Tikhonov Regularization for Fredholm Equations of the First Kind* (Pitman, London, 1984). Reviewing this book in *Mathematical Reviews*, C.T.H. Baker wrote "The author is no stranger to his subject nor to authorship, and this monograph provides a vehicle for his talents at exposition and for a display of his understanding of the topic and its literature." Indeed, the book has proved to be very influential: it has been cited hundreds of times and it has provided a firm basis for much subsequent work on regularization methods. This work includes Chuck's recent book on *Stable Approximate Evaluation of Unbounded Operators*, published by Springer in 2007 as volume 1894 of its *Lecture Notes in Mathematics*.

Chuck's twin interests in inverse problems and in pedagogy made it almost inevitable that he would try to lure more people into the field. One fruit of this endeavor was a book intended "to apprise college faculty of some of the main lines of research in inverse and ill-posed problems," *Inverse Problems in the Mathematical Sciences* (Vieweg, Braunschweig, 1993). Later, he moved from faculty to students, with *Inverse Problems: Activities for Undergraduates* (Mathematical Association of America, Washington, D.C., 1999). See also his insightful 4-page 1991 paper in the *American Mathematical Monthly* on the "Differentiation of approximately specified functions," an archetypal ill-posed problem.

Chuck has written many research papers on ill-posed problems and related matters. Their influence on researchers in the area has been significant, and this is reflected in the majority of the papers in these two special issues.

Chuck is also very interested in mathematical pedagogy, and the high quality of his writing reflects that interest. He has published a number of articles on what he calls ‘classroom mathematics,’ and he has co-authored texts on calculus and matrix methods. Chuck also has a growing enthusiasm for the history of mathematics.

Charles Groetsch was born and raised in New Orleans, Louisiana. His family has been in the wholesale grocery business for several generations in New Orleans, although it suffered major damage from hurricane Katrina. Chuck was raised in a neighborhood called the ‘Irish Channel.’ It is a working class area near the port of New Orleans, and it had a diverse population of Irish, Germans, Italians and African-Americans. Some of Chuck’s charm in working so well with people must come in part from his upbringing in the tolerance and diversity of New Orleans.

Chuck attended the University of New Orleans for his B.S. and M.S. degrees, and his Ph.D. is from Louisiana State University. Much of his academic career was with the Mathematics Department of the University of Cincinnati, 1971–2006, serving as Chair of the department (1985–90) and as Interim Dean (2000–2001) of the College of Liberal Arts and Sciences. He is now the Traubert Chair in Science and Mathematics and also the Dean of the School of Science and Mathematics at The Citadel in South Carolina.

Chuck is also well-travelled, with extensive research visits to Europe, Asia, and Australia. This is reflected in the list of authors contributing to these special issues.

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