

EDITORIAL

A SPECIAL ISSUE ON NONLINEAR FUNCTIONAL ANALYSIS AND ITS APPLICATIONS IN MEMORY OF PROFESSOR RONALD E. BRUCK

This special issue on Nonlinear Functional Analysis and Its Applications is dedicated to the memory of Professor Ronald E. Bruck (1943-2016).

Professor Bruck was an American mathematician who made fundamental contributions to Nonlinear Functional Analysis, with particular emphasis on constructive aspects of fixed point theory and optimization, infinite products of orthogonal projections in Hilbert spaces, nonlinear mean ergodic theorems, and the asymptotic behavior of nonexpansive mappings and semi-groups.

Ronald E. Bruck was born in Wichita Falls, Texas, in 1943. He studied mathematics at the University of Chicago during 1960-1969, where he earned his PhD degree in 1969 under the supervision of Professor Felix E. Browder. In 1969, Ronald Bruck joined the faculty of the Mathematics Department at the University of Southern California, where he became a full professor in 1982. Professor Bruck was the chairman of the department during 1985-1990. He authored about forty papers and supervised the work of five PhD students.

In this special issue, we present papers authored by a select group of experts in the area of nonlinear functional analysis and its applications. The papers collected here were written by his collaborators and colleagues, who were influenced by Professor Ronald E. Bruck's mathematical work.

The special issue consists of nine papers contributed by researchers from Australia, Chile, France, Germany, Greece, Iran, Israel, Portugal, Romania, Turkey, USA, and Vietnam. These papers cover a wide spectrum of important problems and topics of current research interest, including fixed point results in super metric spaces, nonlinear nonhomogeneous logistic equations of super diffusive type, universal bounds for fixed point iterations via optimal transport metrics, ergodic and fixed point theorems for Bregman nonexpansive sequences and mappings in Banach spaces, proof mining and rates of asymptotic regularity for ergodic averages in Banach spaces, modular projections, a totally relaxed self-adaptive method for solving variational inequality and fixed point problems in Banach spaces, fixed points of multi-valued contractions, and a porosity result regarding fixed points for a class of nonexpansive mappings.

We hope this special issue serves as a source of ideas for mathematicians, who are interested in pursuing recent developments in nonlinear functional analysis and its diverse applications.

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