

Preface

This volume is dedicated to the memory of Professor Ștefan Mărușter (1937-2017) who was a well known Romanian scientist in the area of Computational Mathematics and Informatics. Professor Ștefan Mărușter had a particular ability in combining complex mathematical methods with techniques specific to computer science. During his long career at the West University of Timisoara, he successfully combined teaching of specific computer science topics (as Formal Languages, Compilers or Operating Systems) with research in the field of Numerical Computing.

Professor Ștefan Mărușter obtained several relevant results related to the class of demi-contractive mappings, projection algorithms for solving the convex feasibility problems, properties of gradient and conjugate gradient type methods for solving sparse nonlinear equations in finite dimensional spaces, the estimation of the stability region for autonomous nonlinear differential systems, parallel implementation of numerical algorithms etc.

All papers included in this volume are related with the activity of Professor Ștefan Mărușter, either directly referring to his activity, or being authored by close collaborators or friends (Ioan A. Rus, Vasile Berinde, Adrian Petrușel, Gheorghe Păun, Ioannis Argyros), or addressing problems similar to those which he also studied (e.g. fixed points, contractions, Newton-like methods).

The paper "Within the world of demicontractive mappings. In Memoriam Professor Ștefan Mărușter" (V. Berinde and M. Păcurar) provides an overview of the main results obtained by Professor Ștefan Mărușter with a focus on the concept of demi-contractive mappings which he introduced.

The paper entitled "On the local convergence of the modified Newton method" includes some of the last results obtained by Professor Ștefan Mărușter on the convergence radius of the modified Newton method.

The papers "Some variants of Ćirić's multi-valued contraction principle", "Extending the applicability of Newton's method for variational inequality problems under Smale-Wang- γ criteria", "Fixed point theory for non-self generalized contractions in Kasahara spaces" and "Some Wonders of a Bio-Computer-Scientist" are authored by collaborators of Professor Ștefan Mărușter.

Besides the contributions which Professor Ștefan Mărușter brought in the field of computational mathematics, he will remain in the memory of his students, colleagues and collaborators as a model of rigour and correctness, passion and creativity.