

Preface

Israel Gohberg, the founder of the Birkhäuser OT series (and the journal *Integral Equations and Operator Theory*) passed away on October 12, 2009, a few months after his eighty-first birthday. This brought to a close more than sixty years of intense mathematical activity, some 25 in the former Soviet Union, where he was born, and the remaining 35 or so while living in Israel, but with many extended visits to collaborators in Europe (primarily Germany and The Netherlands), the US and Canada.

A recent Birkhäuser volume, *Israel Gohberg and Friends*, provides extensive documentation of Israel's life, activities and interests. It includes biographical material, a list of his papers (458), books (25) and students (40) up to March 2008, as well as testimonials from his many collaborators, students and friends some of which are reprinted from the proceedings of the conferences that celebrated his sixtieth, seventieth and eightieth birthday, in Calgary, Groningen and Williamsburg, respectively. The journal *Linear Algebra and its Applications* also printed six short articles on Israel Gohberg by six of his collaborators in volume 433 (2010), 877–892. Obituaries appeared in various other journals, including the *IEEE Control Systems Magazine* (volume 30, December 2010).

In spite of deteriorating health in his later years, Israel maintained a full schedule of activities and continued to generate a steady stream of ideas, plans for the future, articles and books and continued to exhibit a positive optimistic outlook. Even when he was hospitalized in the Intensive Care Unit of Meir Hospital in Kfar Saba, Israel, and forced to cancel the first of a planned sequence of meetings in Germany, he expressed the hope of being able to participate in the second. Unfortunately, this was not to be.

This volume is a collection of articles written to honor his memory by a number of his former students, collaborators, colleagues and friends on subjects that intersect with his many interests. A list of the key words that appear in the titles gives a partial indication of their scope: interpolation, transfer function, realization theory, Banach algebras, Toeplitz operators, factorization, (numerical) algorithms, semi-separable matrices and operators, Fredholm operators, block Toeplitz matrices, inversion of structured matrices, Riccati equations, trace formulas, matrix polynomials, linearization, analytic operator functions, Jordan structures, canonical differential systems, multivariable operator theory.

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A Panorama of Modern Operator Theory and Related
Topics

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