

CONTEMPORARY MATHEMATICS

445

Interpolation Theory and Applications

A Conference in Honor of Michael Cwikel

March 29–31, 2006, and

AMS Special Session on Interpolation Theory and Applications

AMS Sectional Meeting

Florida International University

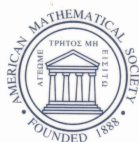
April 1–2, 2006

Miami, Florida

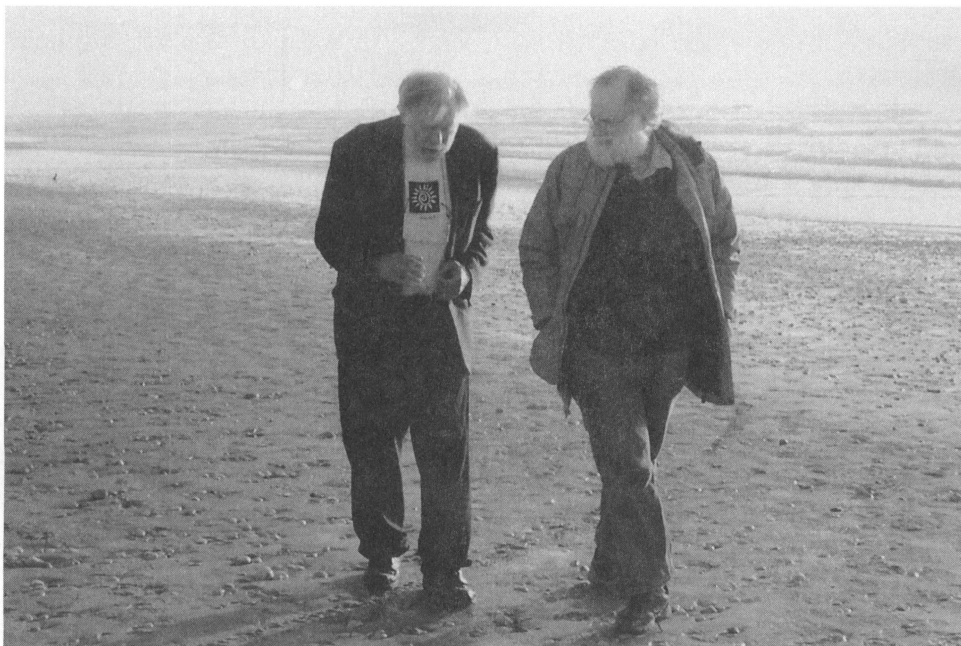
Laura De Carli

Mario Milman

Editors



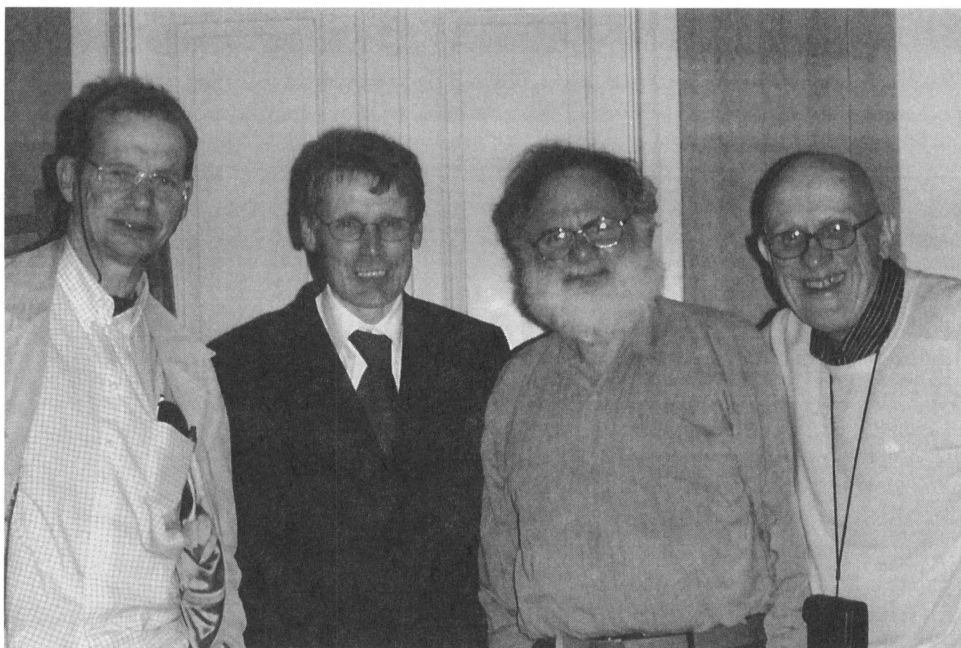
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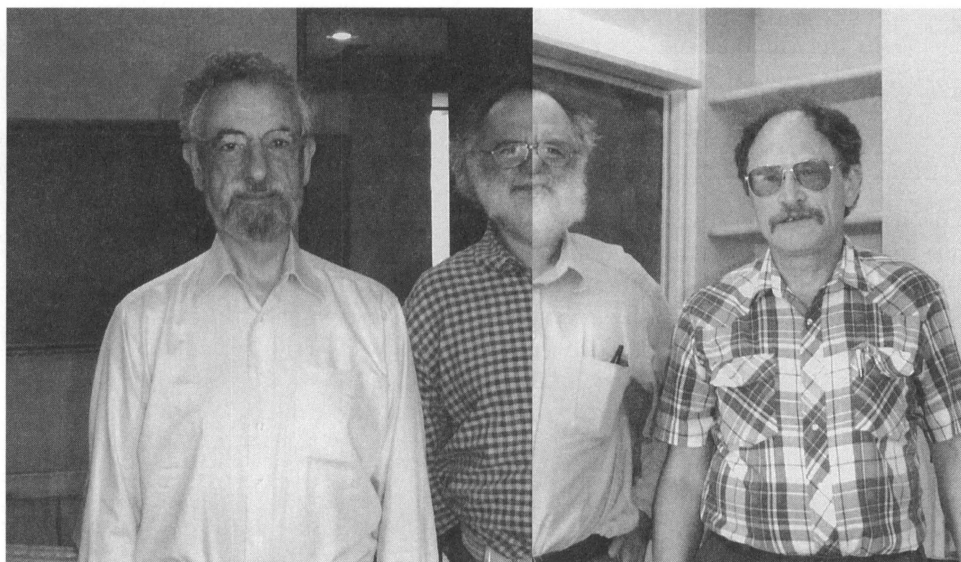
With Harold S. Shapiro, on the Haifa seashore.



Michael and some of his family with a remarkably enthusiastic group of calculus students and families, celebrating the end of the semester. Guests of honour are Dr. Moshe Katz and young teaching assistant Shahar Mendelson.



With Swedish "interpolators", Uppsala 2005,
Sten Kaijser, Svante Janson, Michael, and Jaak Peetre.



The Cwikel-Lieb-Rozenblum estimate.
Elliott Lieb and Michael/Michael and Grigori Rozenblum,
(aka Rozenblioum, Rozenblyum, Rozenbljum)
in Fine Hall-Princeton-University/Amado Building-Technion.

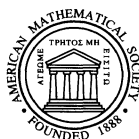
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All photos courtesy of Michael Cwikel

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Preface

This volume contains the Proceedings of the Conference on Interpolation Theory and Applications held in Miami, FL, March 29-31, 2006, in honor of Professor Michael Cwikel, on the occasion of his 59th birthday. The conference was an inspiring homage to Michael by his many friends and collaborators. Indeed, researchers from all over world converged on Miami to express their gratitude and admiration to a person who has done so much for their field of study, influencing in many important ways their own work.

The central topic of the conference was Interpolation Theory in its broadest sense, with special attention to its applications to Analysis. In fact, the lectures included applications to Classical Analysis, Harmonic Analysis, Partial Differential Equations, Function Spaces, Image Processing, Geometry of Banach Spaces, etc.

The conference then continued as a Special Session on Interpolation Theory and Applications, which was part of the American Mathematical Society Eastern Sectional Meeting, held at Florida International University, April 1-2, 2006.

The participants at both of these Interpolatory events were invited to contribute original papers and the Editors also arranged, by invitation, some specially prepared survey papers. Alongside the articles of this volume reporting recent research, the reader will also find one that was originally written long ago, and which we have long felt should be made available in print, namely Annika Sparr's investigation of Lorentz spaces and their duals. (As it happens, this is also the very topic with which Michael Cwikel began his career.) All papers were carefully peer refereed.

The conference was supported by the Florida Israel Institute, The Division of Research of Florida Atlantic University, The Charles E. Schmidt College of Science at FAU and the FAU Mathematics Department. In particular, we are grateful to Nathan W. Dean (former Dean, The Charles E. Schmidt College of Science at FAU), Larry Lemansky (Vice President for Research, Florida Atlantic University), Spyros Magliveras (Chairman, Mathematics Department at FAU) and Dr Zvi Roth (Director, Florida Israel Institute), for their generous support to our project.

We are very grateful to all the participants and most specially to those that contributed to this volume. Special thanks are also due to Joan Cerda, Dory Cwikel, Nigel Kalton, Mieczysław Mastyło, Jaak Peetre and Richard Rochberg for their help at various stages in the development and execution of the project. We happily acknowledge our debt to Michael Cwikel for his participation in the conference. We are also grateful to Christine M. Thivierge, from the editorial office at the AMS, for her help with the preparation of the volume.

A specially prepared short paper by Mario Milman and Richard Rochberg containing a brief synopsis of Michael's career, with a list of publications and the names of his collaborators, opens the volume.

Laura De Carli (Miami) and Mario Milman (Delray Beach), June 4, 2007.

This volume contains the Proceedings of the Conference on Interpolation Theory and Applications in honor of Professor Michael Cwikel (Miami, FL, 2006). The central topic of this book is interpolation theory in its broadest sense, with special attention to its applications to analysis. The articles include applications to classical analysis, harmonic analysis, partial differential equations, function spaces, image processing, geometry of Banach spaces, and more. This volume emphasizes remarkable connections between several branches of pure and applied analysis. Graduate students and researchers in analysis will find it very useful.

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