

Preface

The interplay between measure theory, topology, and functional analysis

Measure theory, general topology, and functional analysis continuously benefit from cross-fertilization between them. The interaction between these areas goes back to their origins and it has deepened and widened over the years. Of course, there are also ties between the above areas and classical convexity, probability theory, operator theory, approximation theory, etc. Historically, there have been influential schools on the subject in different countries and at present a large mathematical community, spread all over the world, actively works in functional analysis and uses deep techniques coming from measure theory and topology.

The aim of this special issue is to collect a number of research papers that somehow show the state-of-the art of this part of functional analysis (mainly Banach space theory) that uses measure theory and general topology as its primary sources for tools and inspiration. It is not uncommon to find in the literature good books, handbooks, and encyclopedias of measure theory, topology, and functional analysis. Although some of these books are quite recent, they are usually devoted to collections of *survey* papers that greatly help researchers by providing them with a background in different subjects. It therefore seems appropriate to collect a number of purely research papers in the area (with possible applications to other areas), written by leading senior experts as well as young researchers who have already made notable contributions to the area.

Our expectation is that this special issue will be a very useful source of information as well as inspiration for young and senior researchers already working in this direction. The material can also be of interest for some other

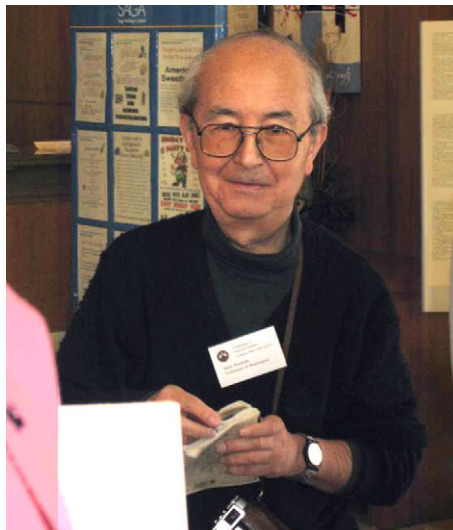


Fig. 1. Isaac Namioka, March 2006.

researchers who are not fully aware yet of the fact that when one mixes various diverse mathematical endeavors, such as topology, geometry, algebra, and analysis, the end product is oftentimes much greater than the simple sum of the individual parts.

This special issue is dedicated to Professor Isaac Namioka, who became 80 years old on the 25 April 2008. Namioka (Fig. 1) went to Cornell University after finishing his Ph.D. in 1956 at Berkeley under John Kelley; he has been at the University of Washington since 1963. His thesis, “Partially Ordered Linear Topological Spaces,” was published as the American Mathematical Society Memoir Nr. 14 in 1957, while his 1963 book *Linear Topological Spaces* with J.L. Kelley became a standard text and has been reprinted twice. His true influence in the area is reflected by the numerous citations of his work and the numerous results and concepts bearing his name that are frequently used.

As many of his 19 plus co-authors can attest, Isaac Namioka’s remarkable talent for penetrating to the heart of a proof frequently results not only in a simpler argument but also in a more general result. His continued enthusiasm for doing mathematics has been an inspiration for many of his fellow mathematicians throughout the world. When you work with him or when you attend one of his lectures, you understand that there is still place in our high-speed world of numerous and fast publications for the mathematics itself, mathematics without fuss, deep mathematics with clever and simple ideas done by someone who has mastered them.

Namioka has been a visiting professor at the Institute for Advanced Study in Princeton, the Research Institute for Mathematical Sciences in Kyoto, the University of Warwick, and University College London. Isaac met his wife, Lensey, in a Berkeley graduate mathematics class; she subsequently became an award-winning author of over 24 books, many written for children. They have two daughters, Aki and Michi.

Finally, we thank all the authors who contributed to this special issue for their enthusiasm, for sharing with us their best mathematics, and for fulfilling all the strict deadlines we had to impose them to make this publication a reality. Last but not least we extend our gratitude to the *Journal of Mathematical Analysis and Applications* (Elsevier) and particularly to the editors in chief, Prof. Aron, Prof. Krantz, and Prof. Gordon, who supported this special issue from the very beginning. From the technical point of view, we thank again Prof. Aron for assisting us all the way during the preparation of the issue and the journal managers, Mrs. Maldonado, Mrs. McInerney, and Mr. Young.

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