

\int ractional Calculus & \int Applied Analysis

An International Journal for Theory and Applications

ISSN 1311-0454

Our journal, “Fractional Calculus & Applied Analysis”
has grown up,
already TEN YEARS OLD !

We started in 1998. It sounds interesting to read now the PREFACE to the very first issue, vol. 1, No 1, March 1998 (see overleaf)...

And also, how strange sound now the open problems raised on the first international conferences devoted to Fractional Calculus topics (1975, 1984, 1989), as: *“Is there a geometrical representation of a fractional derivative? If not, can one prove that a graphical representation of a fractional derivative does NOT exist?... The consensus of the experts ... is that there is, in general, NO geometrical interpretation of a derivative of fractional order... It can be asked, however at least for a geometrical meaning or a physical phenomena that can be represented by means of equations involving a derivative of a particular order such as $1/2$...”*

To celebrate the 10th anniversary of the journal, this separate brochure is published, as a supplement to vol. 11 (2008), with the contents of all the 10 volumes (40 issues) of “FCAA”.

Our warm thanks to all editors, authors, reading audience and libraries’, institutions’ and distributional agencies’ officers, who supported us with their interest, enthusiasm and work!

January 2008

Virginia Kiryakova,
MANAGING EDITOR EB OF “FCAA” JOURNAL

PREFACE

Dear readers,

it is a pleasure to present the very first issue of our new international journal "Fractional Calculus & Applied Analysis" (or, in short, "FCAA Journal"). Its topics are Fractional Calculus, Special Functions, Integral Transforms and some closely related areas of Applied Analysis. I am indebted to the members of the Editorial Board (EB) for their support and backing in launching this Journal. Their experience and prestige will no doubt ensure a successful start and gaining the confidence of the audience. I also extend my gratitude to all our colleagues and friends who during recent years have continually expressed their interest in the above topics and in the international workshops "Transform Methods & Special Functions" ("TMSF, Sofia'1994", "TMSF, Varna'1996"), thus encouraging us to provide a new forum for the discussion and exchange of results and open problems.

Special Functions and Integral Transforms are well established areas of Applied Analysis. Their recent revival has been driven by many new applications to problems, some of a purely theoretical kind and others of an essentially practical nature. The fractional derivatives and integrals, as a class of Integral Transforms, are the basis of Fractional Calculus (FC), nowadays greatly extended through the use of Special Functions as kernel-functions. This is a discipline as old as the Classical Calculus but with a different and controversial development and deserving to find now its appropriate place in the mentality of mathematicians and their clients from the practice - physicists, engineers, economists and other applied scientists.

The Journal is conceived as a supplement to and continuation of the existing periodicals and proceedings of several international conferences on these topics, starting with New Haven (1974), Glasgow (1984), Tokyo (1989) and continuing in the recent years with meetings in close areas in Poland, Belarus, Yugoslavia, and the "TMSF" Workshops in Bulgaria. In a sense, the Journal's aim is to continue the discussions of the Round Table "Physical and Geometrical Meanings and Applications of the Fractional Calculus Operators" during the Second Workshop "TMSF, Varna'96". As such, we welcome also papers emphasizing possible applications of the "FCAA" techniques to solving differential and integral equations, and problems arising from Physics, Chemistry, Astronomy, Statistics, Economics and Engineering; as well as interactions with Fractals and Fractal Geometry.

The policy of the Editorial Board is to process submitted papers rapidly. To this end, \LaTeX (\TeX) files and e-mail are the most preferred means for all correspondence (submission of papers, reviewing, proofreading, etc.). Current information on the "FCAA Journal" including the EB, contents, abstracts of published papers, style and template files, subscription prices, order forms and other details are available via the Internet: FCAA's Web site and e-mail.

Welcome to our Journal. We hope it will be a cosy place for all who are fond of the topics of "FCAA" or eager to join the "family of fractional and applied analysts".

March 1998

THE MANAGING EDITOR