



EDITORIAL

FCAA RELATED NEWS, EVENTS AND BOOKS (FCAA–VOLUME 24–1–2021)

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Dear readers,

in the Editorial Notes we announce news for our journal, anniversaries, information on international meetings, events, new books, etc. related to the *FCAA* (“Fractional Calculus and Applied Analysis”) areas. All these Notes are published online with free open access.

1. Forthcoming meetings related to FC

ICFDA’20 - Postponed ICFDA’21 “International Conference on Fractional Differentiation” Warsaw, Poland, September 2021

The traditional ICFDA meetings are scheduled to be each 2 years, starting since 2004, with rotating hosts.

In view of the Pandemic situation, the announced ICFDA’20 that was to be in Warsaw, Poland, 23 to 25 September 2020, was postponed, see some preliminary (but *not* actual) info available at:

<http://icfda2020.ee.pw.edu.pl/>.

Note that currently the information on this website is not yet updated, the deadlines and dates announced there are *no more* actual. After an investigation among some members of Steering Committee, the organizers now plan to make it as purely ONLINE event, possibly in beginning September 2021.

No more current information has been reported, so we only can advise the interested participants to follow the above mentioned website for possible actual details.

Information on behalf of FCAA Editorial Board

2. New Books

Vasily E. Tarasov, Valentina V. Tarasova, *Economic Dynamics with Memory. Fractional Calculus Approach*. Ser. Fractional Calculus in Applied Sciences and Engineering, Vol. 8, De Gruyter, Berlin/Boston (January 2021), 571 pp.; ISBN: 9783110624601 (Hardcover), ISBN: 9783110627459 (Electronic).

Details:

<https://www.degruyter.com/document/doi/10.1515/9783110627459/html>;
DOI: <https://doi.org/10.1515/9783110627459>

Annotation: This book presents the applications of fractional calculus, fractional operators of non-integer orders and fractional differential equations in describing economic dynamics with long memory. Generalizations of basic economic concepts, notions and methods for the economic processes with memory are suggested. New micro and macroeconomic models with continuous time are proposed to describe the fractional economic dynamics with long memory as well.

The book presents the applications of modern fractional calculus in the dynamics of economic processes with long memory. It discusses new micro and macroeconomic models with continuous time. The multi-disciplinary topics are suited for wide readership. Audience: Researchers and students in fractional calculus, fractional dynamics, mathematical economy and modern economic dynamics.

Table of Contents (for detailed list see at the website):

Preface, Introduction;

Part I: Concept of memory: – 1. Concept of memory in economics;

Part II: Concepts of economics with memory: – 2. Concepts of marginal values with memory; – 3. Marginal values of noninteger order in economic analysis; – 4. Deterministic factor analysis of processes with memory; – 5. Elasticity for processes with memory; – 6. Multiplier for processes with memory; – 7. Accelerator for processes with memory; – 8. Duality of multipliers and accelerators with memory;

Part III: Linear models of economics with memory: – 9. Model of natural growth with memory; – 10. Model of growth with constant pace and memory; – 11. Harrod–Domar growth model with memory; – 12. Dynamic intersectoral Leontief models with memory; – 13. Market price dynamics with memory effects; – 14. Cagan model of inflation with memory;

Part IV: Nonlinear models of economics with memory: – 15. Model of logistic growth with memory; – 16. Kaldor-type model of business cycles with memory; – 17. Solow models with power-law memory; – 18. Lucas

model of learning with memory; – 19. Self-organization of processes with memory;

Part V: Advanced models: distributed lag and memory: – 20. Multipliers and accelerators with lag and memory; – 21. Harrod–Domar model with memory and distributed lag; – 22. Dynamic Keynesian model with memory and lag; – 23. Phillips model with distributed lag and memory;

Part VI: Advanced models: discrete time approach: – 24. Discrete accelerator with memory; – 25. Comparison of discrete and continuous accelerators; – 26. Exact discrete accelerator and multiplier with memory; – 27. Logistic map with memory from economic model;

Part VII: Advanced models: generalized memory: – 28. Economics model with generalized memory;

Part VIII: Instead of conclusion: – 29. Fractional calculus in economics and finance; – 30. Future directions of economics with memory;

Bibliography, Index

Yuri A. Brychkov, Oleg I. Marichev, Nikolay V. Savischenko,
Handbook of Mellin Transforms. Ser. Advances in Applied Mathematics, Chapman and Hall/CRC, 1st Ed. (2018-2019), 607 pp.;
 ISBN-13: 978-1138353350, ISBN-10: 1138353353.

Details: <https://www.amazon.com/Handbook-Transforms-Advances-Applied-Mathematics/dp/1138353353>.

Annotation: The Mellin transformation is widely used in various problems of pure and applied mathematics, in particular, in the theory of differential and integral equations and the theory of Dirichlet series. It is found in extensive applications in mathematical physics, number theory, mathematical statistics, theory of asymptotic expansions, and especially, in the theory of special functions and integral transformations. It is essentially used in algorithms of integration in computer algebra systems.

Since the majority of integrals encountered in applications can be reduced to the form of the corresponding Mellin transforms with specific parameters, this handbook can also be used for definite and indefinite integrals. By changes in variables, the Mellin transform can be turned into the Fourier and Laplace transforms.

The appendices contain formulas of connection with other integral transformations, and an algorithm for determining regions of convergence of integrals.

The Handbook of Mellin Transforms will be of interest and useful to all researchers and engineers who use mathematical methods. It will become

the main source of formulas of Mellin transforms, as well as indefinite and definite integrals.

Table of Contents (for detailed list, Preface, excerpts of tables, see at menu “Look inside”):

Ch. 1: General Formulas (§1.1.1–§1.1.5);
Ch. 2: Elementary Functions (§2.1–§2.4);
Ch. 3: Special Functions (§3.1–§3.37);
Appendix I; Appendix II;
Bibliography; Indexes

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