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Latest SCI Journal Papers on FDA

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[CERTAIN NEW GRUSS TYPE INEQUALITIES INVOLVING SAIGO FRACTIONAL q-INTEGRAL OPERATOR](#)

By: Wang, Guotao; Agarwal, Praveen; Baleanu, Dumitru
JOURNAL OF COMPUTATIONAL ANALYSIS AND APPLICATIONS Volume: 19 Issue: 5 Pages: 862-873 Published: NOV 2015

[Computational solutions of unified fractional reaction-diffusion equations with composite fractional time derivative](#)

By: Saxena, R. K.; Mathai, A. M.; Haubold, H. J.
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION Volume: 27 Issue: 1-3 Pages: 1-11 Published: OCT 2015

[Dynamical behavior of fractional-order Hastings-Powell food chain model and its discretization](#)

By: Matouk, A. E.; Elsadany, A. A.; Ahmed, E.; et al.
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION Volume: 27 Issue: 1-3 Pages: 153-167 Published: OCT 2015

[Network coherence in the web graphs](#)

By: Ding, Qingyan; Sun, Weigang; Chen, Fangyue
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION Volume: 27 Issue: 1-3 Pages: 228-236 Published: OCT 2015

[Nonlocal Cauchy problems for semilinear differential inclusions with fractional order in Banach spaces](#)

By: Wang, JinRong; Ibrahim, A. G.; Feckan, Michal
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION Volume: 27 Issue: 1-3 Pages: 281-293 Published: OCT 2015

[Existence and symmetric result for Liouville-Weyl fractional nonlinear Schrodinger equation](#)

By: Torres Ledesma, Cesar
COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION Volume: 27 Issue: 1-3 Pages: 314-327 Published: OCT 2015

[WAVE EXTENSION PROBLEM FOR THE FRACTIONAL LAPLACIAN](#)

By: Kemppainen, Mikko; Sjogren, Peter; Luis Torrea, Jose

DISCRETE AND CONTINUOUS DYNAMICAL

SYSTEMS Volume: 35 Issue: 10 Pages: 4905-4929 Published: OCT 2015

[A Novel Multistep Generalized Differential Transform Method for Solving Fractional-order Lu Chaotic and Hyperchaotic Systems](#)

By: Al-Smadi, Mohammed; Reihat, Asad; Abu Arqub, Omar; et al.

JOURNAL OF COMPUTATIONAL ANALYSIS AND

APPLICATIONS Volume: 19 Issue: 4 Pages: 713-724 Published: OCT 2015

[Fractal measures with uniform marginals](#)

By: Day, D.; Mendivil, F.

JOURNAL OF MATHEMATICAL ANALYSIS AND

APPLICATIONS Volume: 429 Issue: 2 Pages: 1096-1112 Published: SEP 15 2015

[A counterexample to a Frederico-Torres fractional Noether-type theorem](#)

By: Ferreira, Rui A. C.; Malinowska, Agnieszka B.

JOURNAL OF MATHEMATICAL ANALYSIS AND

APPLICATIONS Volume: 429 Issue: 2 Pages: 1370-1373 Published: SEP 15 2015

[Viscoelastic behaviour of asphalt modified by grafted tri-block copolymers: predictions of fractional rheological models](#)

By: Vargas, Maria A.; Sanchez, Antonio; Guthausen, Gisela; et al.

INTERNATIONAL JOURNAL OF PAVEMENT

ENGINEERING Volume: 16 Issue: 8 Pages: 730-744 Published: SEP 14 2015

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Call for Papers

International Symposium on Fractional Signals and Systems

FSS 2015, 1-3 October 2015

Technical University of Cluj-Napoca, Cluj-Napoca, Romania

<http://www.fss-conference.com>

Scope

The organizing committee has the pleasure of inviting you to participate at the International Symposium on Fractional Signals and Systems, FSS 2015 hosted by the Technical University of Cluj-Napoca, Romania, during 1-3 October 2015. We sincerely welcome our colleagues worldwide to join us for FSS 2015.

Fully integrated in the international academic life, The Technical University of Cluj-Napoca pays attention to the international exchange of values, an aspect that is visible in the over 200 interuniversity agreements and in the large number of student mobilities. The opening towards the European and world space of education and research through an internationalization process represents one of the major objectives of the university.

Cluj-Napoca is the second most populous city in Romania, after the national capital Bucharest, and is the seat of Cluj County in the northwestern part of the country. Located in the Someşul Mic River valley, the city is considered the unofficial capital to the historical province of Transylvania. Several UNESCO World Heritage sites lie within driving distance from Cluj-Napoca: the fortified churches in Transylvania, the Dacian fortresses of the Orastie Mountains, the historic centre of Sighişoara and the wooden churches of Maramureş.

Topics include, but are not limited to:

- Fractional order control (tuning, implementation issues, new algorithms)
- Signal analysis and filtering with fractional tools (restoration, reconstruction, analysis of fractal noises, etc.)
- Fractional modeling
- Fractional system identification (linear, nonlinear, multivariable methods, etc.)

Important deadlines

Submission opens: 1 May 2015

Initial submission: **1 June 2015 15 June 2015 (NEW DEADLINE)**

Author notification: 1 July 2015

Final submission: **20 July 2015**

Conference dates: 1-3 October 2015

Submission Guidelines

Prepare the papers according to recommendation available at: <http://www.fss-conference.com>

Fees and registration

Until 20.07.2015 From 20.07.2015

Regular fee: 350 Eur 450 Eur

Accompanying person* 150 Eur 180 Eur

*(welcome reception, dinner and trip)

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Special Issue on Advanced Computational Techniques for Fractional Differential Equations

(Open Mathematics)

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CALL FOR PAPERS

I am the Managing Editor for Open Mathematics at De Gruyter Open (<http://www.degruyter.com/view/j/math>) which belongs to De Gruyter (www.degruyter.com), an established scholarly publisher with more than 260 years of distinguished history.

On behalf of the Guest Editor, Prof. Xiao-Jun Yang, I would like to invite you to submit your paper to the Special Issue on "Advanced Computational Techniques for Fractional Differential Equations" which will be published in Open Mathematics (<http://degruyteropen.com/tiomact/>).

Open Mathematics is an international, open access, peer-reviewed electronic journal that publishes significant, original and relevant works in all areas of mathematics. The journal provides the readers with free, instant, and permanent access to all content worldwide; and the authors with extensive promotion of published articles, language-correction services, no space constraints and immediate publication.

Journal's Impact Factor is IF=0.519 (2013) [5-year IF=0.557].

We solicit excellent research and review articles, as well as communications and vision papers to be published in the journal. All the submissions will undergo fast and fair peer review. In order to sustain the production of our fully-refereed open access journal, each article accepted for publication in Open Mathematics is subject to Article Processing Charges, so please consider this requirement when submitting your paper.

We kindly request that all the submissions are made until 1st September, 2015, so accepted manuscripts are published in 2015.

As an author you can enjoy the following benefits:

- convenient, web-based manuscript submission and tracking system;
- transparent, comprehensive and fast peer review;
- efficient route to fast-track publication and full advantage of De Gruyter's e-technology;
- free language assistance.

I look forward to your manuscript! Please feel free to forward this invitation to any interested colleagues and associates.

Regards,

Agnieszka Bednarczyk-Drag

Managing Editor, Mathematics

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Journals

Fractional Calculus and Applied Analysis

Volume 18, Issue 3 (Jun 2015)_

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[Fcaa Related News, Events And Books \(Fcaa-Volume 18-3-2015\)](#)

[Decay solutions for a class of fractional differential variational inequalities](#)

Dinh Ke, Tran / Van Loi, Nguyen / Obukhovskii, Valeri

[A biomathematical view on the fractional dynamics of cellulose degradation](#)

[The spreading property for a prey-predator reaction-diffusion system with fractional diffusion](#)

Cheng, Hongmei / Yuan, Rong

[Fractional variation of Hölderian functions](#)

Prodanov, Dimiter

[Periodic disturbance rejection for fractional-order dynamical systems](#)

Fedele, Giuseppe / Ferrise, Andrea

[Successive approximation: A survey on stable manifold of fractional differential systems](#)

Sayevand, Khosro / Pichaghchi, Kazem

[When do fractional differential equations have solutions that are bounded by the Mittag-Leffler function ?](#)

Tisdell, Christopher C.

[On explicit stability conditions for a linear fractional difference system](#)

Čermák, Jan / Győri, István / Nechvátal, Luděk

[Fractional differential inclusions in the Almgren sense](#)

Graef, John R. / Henderson, Johnny / Ouahab, Abdelghani

[Time-optimal control of fractional-order linear systems](#)

Matychyn, Ivan / Onyshchenko, Viktoriia

[Analytical solutions for the multi-term time-space fractional reaction-diffusion equations on an infinite domain](#)

Ding, Xiao-Li / Nieto, Juan J.

[Nonexistence results for a class of evolution equations in the Heisenberg group](#)

Jleli, Mohamed / Kirane, Mokhtar / Samet, Bessem

[High-order approximation to Caputo derivatives and Caputo-type advection-diffusion equations \(II\)](#)

Cao, Jianxiong / Li, Changpin / Chen, YangQuan

[Dyadic nonlocal diffusions in metric measure spaces](#)

Actis, Marcelo / Aimar, Hugo

[Fractional derivative anomalous diffusion equation modeling prime number distribution](#)

Chen, Wen / Liang, Yingjie / Hu, Shuai / Sun, Hongguang

[Time-fractional diffusion equation in the fractional Sobolev spaces](#)

Gorenflo, Rudolf / Luchko, Yuri / Yamamoto, Masahiro

[Continuous time random walk models associated with distributed order diffusion equations](#)

Umarov, Sabir

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Applied Mathematical Modelling

(selected)_

[Duality of singular linear systems of fractional nabla difference equations](#)

Ioannis K. Dassios, Dumitru I. Baleanu

[Analytical treatment of Volterra integro-differential equations of fractional order](#)

Khosro Sayevand

[Derivation, interpretation, and analog modelling of fractional variable order derivative definition](#)

Dominik Sierociuk, Wiktor Malesza, Michal Macias

[Alternative variational iteration method for solving the time-fractional Fornberg–Whitham equation](#)

Mehmet Giyas Sakar, Hilmi Ergören

[Numerical treatment for the solution of fractional fifth-order Sawada–Kotera equation using second kind Chebyshev wavelet method](#)

A.K. Gupta, S. Saha Ray

[Development of a 2D-Multigroup Code \(NFDE-2D\) based on the neutron spatial-fractional diffusion equation](#)

Nader Maleki Moghaddam, Hossein Afarideh, Gilberto Espinosa-Paredes

[Numerical approximations for Volterra’s population growth model with fractional order via a multi-domain pseudospectral method](#)

Mohammad Maleki, Majid Tavassoli Kajani

[Numerical solution of nonlinear Volterra integro-differential equations of fractional order by the reproducing kernel method](#)

Wei Jiang, Tian Tian

[Fractional order description of DNA](#)

J.A. Tenreiro Machado

[Modeling the arterial wall mechanics using a novel high-order viscoelastic fractional element](#)

J.M. Pérez Zerpa, A. Canelas, B. Sensale, D. Bia Santana, R.L. Armentano

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Paper Highlight

Tempered fractional calculus

Farzad Sabzikar, Mark M. Meerschaert, Jinghua Chen

Publication information: Farzad Sabzikar, Mark M. Meerschaert, Jinghua Chen, Tempered fractional calculus. Journal of Computational Physics, 2015, 293, 14-28.

<http://www.sciencedirect.com/science/article/pii/S0021999114002873>

Abstract

Fractional derivatives and integrals are convolutions with a power law. Multiplying by an exponential factor leads to tempered fractional derivatives and integrals. Tempered fractional diffusion equations, where the usual second derivative in space is replaced by a tempered fractional derivative, govern the limits of random walk models with an exponentially tempered power law jump distribution. The limiting tempered stable probability densities exhibit semi-heavy tails, which are commonly observed in finance. Tempered power law waiting times lead to tempered fractional time derivatives, which have proven useful in geophysics. The tempered fractional derivative or integral of a Brownian motion, called a tempered fractional Brownian motion, can exhibit semi-long range dependence. The increments of this process, called tempered fractional Gaussian noise, provide a useful new stochastic model for wind speed data. A tempered fractional difference forms the basis for numerical methods to solve tempered fractional diffusion equations, and it also provides a useful new correlation model in time series.

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Maximum principle for the fractional diffusion equations with the Riemann-Liouville fractional derivative and its applications

Mohammed Al-Refai, Yuri Luchko

Publication information: Mohammed Al-Refai, Yuri Luchko. Maximum principle for the fractional diffusion equations with the Riemann-Liouville fractional derivative and its applications. Fractional Calculus and Applied Analysis, 2014, 17(2) 483-498.

<http://www.degruyter.com/view/j/fca.2014.17.issue-2/s13540-014-0181-5/s13540-014-0181-5.xml>
1

Abstract

In this paper, the initial-boundary-value problems for the one-dimensional linear and non-linear fractional diffusion equations with the Riemann-Liouville time-fractional derivative are analyzed. First, a weak and a strong maximum principles for solutions of the linear problems are derived. These principles are employed to show uniqueness of solutions of the initial-boundary-value problems for the non-linear fractional diffusion equations under some standard assumptions posed on the non-linear part of the equations. In the linear case and under some additional conditions, these solutions can be represented in form of the Fourier series with respect to the eigenfunctions of the corresponding Sturm-Liouville eigenvalue problems.

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