O P - S F N E T - Volume 19, Number 2 – March 15, 2012

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The Electronic News Net of the
SIAM Activity Group on Orthogonal Polynomials and Special Functions
http://math.nist.gov/opsf/
Please send contributions to: poly@siam.org
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Today's Topics
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Calendar of Events:

May 17-19, 2012
International Conference on Applied Mathematics and Approximation Theory –
AMAT 2012, Ankara, Turkey (Celebrating the 60th birthday of Professor George
A. Anastassiou)
http://amat2012.etu.edu.tr/

May 29 – June 1, 2012
Hypergeometric series and their generalizations in algebra, geometry,
number theory and physics, Paris, France.   19.1 #3
http://www.liafa.jussieu.fr/~lovejoy/hypergeometric.html

June 11 - 15, 2012
International Symposium on Orthogonal Polynomials and Special
Functions — a Complex Analytic Perspective, Copenhagen, Denmark
18.4 #2
http://www.matdat.life.ku.dk/~henrikp/osca2012/

June 25-29, 2012
AIM Workshop: Hypergeometric Motives, International Centre for Theoretical
Physics, Trieste, Italy
http://aimath.org/ARCC/workshops/hypermotives.html

June 27 – 29, 2012

Second Iberoamerican Workshop in Orthogonal Polynomials and
Applications.   19.2 #2
Colima, Mexico, June 27-29, 2012.
http://fejer.ucol.mx/polynomials/

June 28 – July 3, 2012

Eighth International Conference on Mathematical Methods for Curves and
Surfaces, Oslo, Norway
www.ifi.uio.no/~cagd/2012

June 28 – 29, 2012

4è Journées Approximation, International conference on constructive
complex approximation, Lille, France   19.2 #1
http://math.univ-lille1.fr/~bbecker/ja2012/

July 2-3, 2012

Workshop on orthogonal polynomial and special functions, Leuven,
Belgium --- web site to be linked to
http://wis.kuleuven.be/Events/

July 4-6, 2012

Workshop "Numerical Software: Design, Analysis and Verification"
Santander, Spain
18.6 #1
http://personales.unican.es/segurajj/numsoft12

July 9-13, 2012

SIAM Annual Meeting, Minneapolis, Minnesota, USA
http://www.siam.org/meetings/an12/

July 15 - 20, 2012

III Jaen Conference on Approximation. Ubeda, Spain, July 15-20, 2012.
http://jja.ujaen.es   19.2 #3

September 3-7, 2012

International Conference on Differential Equations, Difference Equations
and Special Functions in memory of Professor Panayiotis D. Siafarikas,
Patras, Greece.   19.1 #4
http://www.icddesf.upatras.gr/

September 19-25, 2012

10th International Conference of Numerical Analysis and Applied Mathematics,
Kos, Greece
http://www.icnaam.org/

March 25-2, 2013
> 12ᵗʰ International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA-12), Sousse, Tunisia   19.1, #2
> http://matematicas.uc3m.es/12opsfa

July 8-12, 2013
> SIAM Annual Meeting, San Diego, California, USA (including OPSF "track")
> http://www.siam.org/meetings/an13/   18.5 #3

Topic #1   -----------   OP-SF NET 19.2   ----------   March 15, 2012

From: Journées Approximation 2012 <jalille2012@math.univ-lille1.fr>
Subject: Conference on Approximation in Lille

First announcement/Call for participation

JOURNEES APPROXIMATION 2012
University Lille 1, June 28-29, 2012
http://math.univ-lille1.fr/~bbecker/ja2012/

This is the fourth international meeting organized in Lille on constructive approximation in the complex plane. Various topics will be covered, in particular orthogonal polynomials and orthogonal rational functions, rational approximation, Hermite-Padé approximation, numerical aspects of approximation, potential theory, analytic function spaces, inverse elliptic problems, random matrices, quadrature formulas, and others.

INVITED SPEAKERS:
 Alexander Borichev (Aix-Marseille)
 Tom Claeys (UC Louvain)
 Juliette Leblond (APICS, INRIA Sophia Antipolis)
 Norman Levenberg (Bloomington)
 Guillermo Lopez-Lagomasino (Carlos III, Madrid)
 Nick Trefethen (Oxford)
 Marc Van Barel (KU Leuven)

There will be also a limited number of contributed talks and a poster session. We kindly invite you to submit an abstract.

DEADLINES:
 Abstract submission ...... April 30, 2012
 Online registration ...... May 31, 2012

This conference is continued by a meeting at KU Leuven on July 2-3, 2012, see http://wis.kuleuven.be/Events/

We are looking forward to meeting you in Lille in June 2012.

ORGANIZERS:
Bernd Beckermann (Université de Lille 1)
Ana C. Matos (Université de Lille 1)
Ahmed Salam (Université du Littoral)
Franck Wielonsky (Université d'Aix-Marseille)

Topic #2   -----------   OP-SF NET 19.2 ----------   March 15, 2012

From: OP-SF NET Editors
Subject: Workshop on Orthogonal Polynomials in Colima, Mexico
June 27 – 29, 2012

Second Iberoamerican Workshop in Orthogonal Polynomials and Applications.
Colima, Mexico, June 27-29, 2012.

The Facultad de Ciencias of the Universidad de Colima will host the Second
Iberoamerican Workshop in Orthogonal Polynomials and Applications
(EIBPOAII). The event is part of an initiative that aims to:

- Promote the study of orthogonal polynomials in Latin America, throught
  introductory courses intended for students.
- Establish a forum that facilitates interaction and exchange of ideas
  between iberoamerican researchers, academics and students currently
  working in orthogonal polynomials or related areas.

The Main speakers are
- Dimitar K. Dimitrov– UNESP – Universidade Estadual Paulista (Brazil)
- Francisco Marcellán – Universidad Carlos III de Madrid (Spain)

Further information is available at the web site
http://fejer.ucol.mx/polynomials/

Topic #3   -----------   OP-SF NET 19.2 ----------   March 15, 2012

From: OP-SF NET Editors
Subject: III Jaen Conference on Approximation

    III Jaen Conference on Approximation. Ubeda, Spain, July 15-20, 2012.

The plenary speakers are
    Andrei Martínez-Finkelshtein (Universidad de Almeria)
    Erik Koelink (Radboud Universiteit Nijmegen)

Jószef Szabados (Hungarian Academy of Sciences)
Larry L. Schumaker (Vanderbilt Unbiversity)
Manfred v. Golitschek (Universität Wirzburg)
Marie-Laurence Mazure (Université Joseph Fourier)
Martin Buhmann (Justus-Liebig-Universität Giessen)

Further information is available at the web site
    http://jja.ujaen.es

Topic #4   -----------   OP-SF NET 19.2   ----------   March 15, 2012

From: OP-SF NET Editors
Subject: Textbook on Differential Equations and Special Functions

Gerhard Kristensson, Second Order Differential Equations: Special Functions and their classificatioin, Springer, 2010. Xiv + 216 pp., ISBN 978-1-4419-7019-0, $59.95, available as eBook.

The following is from the Springer web site:

Second Order Differential Equations presents a classical piece of theory concerning hypergeometric special functions as solutions of second-order linear differential equations. The theory is presented in an entirely self-contained way, starting with an introduction of the solution of the second-order differential equations and then focusing on the systematic treatment and classification of these solutions.
Each chapter contains a set of problems which help reinforce the theory. Some of the preliminaries are covered in appendices at the end of the book, one of which provides an introduction to Poincaré-Perron theory, and the appendix also contains a new way of analyzing the asymptomatic behavior of solutions of differential equations.
This textbook is appropriate for advanced undergraduate and graduate students in Mathematics, Physics, and Engineering interested in Ordinary and Partial Differntial Equations. A solutions manual is available online.

Topic #5   -----------   OP-SF NET 19.2   ----------   March 15, 2012

From: OP-SF NET Editors
Subject: Preprints in arXiv.org

The following preprints related to the fields of orthogonal polynomials and special functions were posted or cross-listed to one of the subcategories of arXiv.org mostly during January and February 2012.

http://arxiv.org/abs/1201.1209
Riesz transform for Dunkl Hermite expansion
Béchir Amri

http://arxiv.org/abs/1201.1975
When physics helps mathematics: calculation of the sophisticated multiple integral
A.L. Kholodenko, Z. K. Silagadze

http://arxiv.org/abs/1201.2526
On fractional Bessel equation and the description of corneal topography
Wojciech Okrasiński, Łukasz Płociniczak

http://arxiv.org/abs/1201.3776
Multidimensional Heisenberg convolutions and product formulas for multivariate Laguerre polynomials
Michael Voit

http://arxiv.org/abs/1201.5129
Nonlinear Fourier Analysis
Terence Tao, Christoph Thiele

http://arxiv.org/abs/1201.6633
A new class of generalized Bernoulli polynomials and Euler polynomials
Nazim I. Mahmudov

http://arxiv.org/abs/1201.0495
Inequalities for Jacobi polynomials
Uffe Haagerup, Henrik Schlichtkrull

http://arxiv.org/abs/1201.0673
Bäcklund flux-quantization in a model of electrodiffusion based on Painlevé II
A.J. Bracken, L. Bass, C. Rogers

http://arxiv.org/abs/1201.4703
A simple approach to q-Chebyshev polynomials
Johann Cigler

http://arxiv.org/abs/1201.6539
The Minkowski ?(x) function and Salem's problem
Giedrius Alkauskas

http://arxiv.org/abs/1201.0420
Chu-Vandermonde convolution and harmonic number identities
Chuanan Wei, Dianxuan Gong, Qin Wang

http://arxiv.org/abs/1201.0622
Jacobi-Stirling polynomials and P-partitions
Ira M. Gessel, Zhicong Lin, Jiang Zeng

http://arxiv.org/abs/1201.1645
Krawtchouk polynomials, the Lie algebra $\mathfrak{sl}_2$, and Leonard pairs
Kazumasa Nomura, Paul Terwilliger

http://arxiv.org/abs/1201.5963
Factors of Some Lacunary q-Binomial Sums
Hao Pan

http://arxiv.org/abs/1202.0766
Properties of three functions relating to the exponential function and the existence of partitions of unity
Feng Qi

http://arxiv.org/abs/1202.0219
A new class of generalized Genocchi polynomials
Nazim I. Mahmudov

http://arxiv.org/abs/1202.1205
Explicit formulas for the n-th derivatives of the tangent and cotangent functions
Feng Qi

http://arxiv.org/abs/1202.1210
A note on the main theorem for absolutely monotonic functions
Sergei M. Sitnik

http://arxiv.org/abs/1202.1976
Symbolic calculus and integrals of Laguerre polynomials
D. Babusci, G. Dattoli, K. Górska

http://arxiv.org/abs/1202.2003
Some New Integral Inequalities for Several Kinds of Convex Functions
M. Emin Ozdemir, Alper Ekinci, Ahmet Ocak Akdemir

http://arxiv.org/abs/1202.2006
Eight interesting identities involving the exponential function, derivatives, and Stirling numbers of the second kind
Feng Qi

http://arxiv.org/abs/1202.2557
On the convergence of Charlier polynomials to the Hermite function|
Martin Nilsson
http://arxiv.org/abs/1202.2606
Limit formulas for ratios of polygamma functions at their singularities
Feng Qi

http://arxiv.org/abs/1202.2782
The AGM Simple Pendulum
Mark B. Villarino

http://arxiv.org/abs/1202.2783
On the accuracy of the Chakrabarti-Hudson approximation to π
Mark B. Villarino

http://arxiv.org/abs/1202.2786
An integral inequality and the Ricatti-Bernoulli differential equation
Mark B. Villarino

http://arxiv.org/abs/1202.2898
Orthogonal Laurent polynomials in unit circle, extended CMV ordering and 2D
Toda type integrable hierarchies
Carlos Alvarez-Fernandez, Manuel Manas

http://arxiv.org/abs/1202.4000
High order three-term recursions, Riemann-Hilbert minors and Nikishin
systems on star-like sets
Steven Delvaux, Abey López García

http://arxiv.org/abs/1202.4240
Limit formulas for ratios of derivatives of the gamma and digamma functions
at their singularities
Feng Qi

http://arxiv.org/abs/1202.4853
Bounds for Turánians of modified Bessel functions
Árpád Baricz

http://arxiv.org/abs/1202.5728
A transference result of the L^p continuity of the Jacobi Riesz transform to
the Gaussian and
Laguerre Riesz transforms
Eduard Navas, Wilfredo O. Urbina

http://arxiv.org/abs/1202.6525
On computing the generalized Lambert series
Jörg Arndt

http://arxiv.org/abs/1202.0154
Explicit barycentric weights for polynomial interpolation in the roots or
extrema of classical orthogonal polynomials
Haiyong Wang, Daan Huybrechs, Stefan Vandewalle

http://arxiv.org/abs/1202.1351
Continuous lower bounds for moments of zeta and L-functions
Maksym Radziwill, Kannan Soundararajan

http://arxiv.org/abs/1202.1504
The radius of starlikeness of normalized Bessel functions of the first kind
Árpád Baricz, Pál A. Kupán, Róbert Szász

http://arxiv.org/abs/1202.3933
How would Riemann evaluate $\zeta(2n)$?
Marco Dalai

http://arxiv.org/abs/1202.1869
A note on a generalized circular summation formula of theta functions
Jun-Ming Zhu

http://arxiv.org/abs/1202.0199
A generalization of the Gaussian formula and a q-analog of Fleck's congruence
Andrew Schultz, Robert Walker

http://arxiv.org/abs/1202.1203
A new proof of a Conjecture by D. Zeilberger about Catalan numbers
T. Amdeberhan, V. H. Moll, C. Vignat

http://arxiv.org/abs/1202.2264
Non-Commutative Q-Binomial Formula
Sengul Nalci, Oktay Pashaev

http://arxiv.org/abs/1202.3922
Macdonald polynomials in superspace as eigenfunctions of commuting operators
O. Blondeau-Fournier, P. Desrosiers, L. Lapointe, P. Mathieu

http://arxiv.org/abs/1202.3981
On Two Types of Harmonic Number Identities
Maarten Kronenburg

Topic #6 ----------- OP-SF NET 19.2 ---------- March 15, 2012

From: OP-SF NET Editors
Subject: About the Activity Group

The SIAM Activity Group on Orthogonal Polynomials and Special Functions consists of a broad set of mathematicians, both pure and applied. The Group also includes engineers and scientists, students as well as experts. We have around 130 members scattered about in more than 20 countries. Whatever your specialty might be, we welcome your participation in this classical, and yet modern, topic. Our WWW home page is:
http://math.nist.gov/opsf/

This is a convenient point of entry to all the services provided by the Group. Our Webmaster is Bonita Saunders (bonita.saunders@nist.gov).

The Activity Group sponsors OP-SF NET, an electronic newsletter, and SIAM-OPSF (OP-SF Talk), a listserv, as a free public service; membership in SIAM is

not required. OP-SF NET is transmitted periodically through a post to OP-SF Talk. The OP-SF Net Editors are Diego Dominici (dominicd@newpaltz.edu) and Martin Muldoon (muldoon@yorku.ca).

Back issues of OP-SF NET can be obtained at the WWW addresses:
http://staff.science.uva.nl/~thk/opsfnet
http://math.nist.gov/~DLozier/OPSFnet/

SIAM-OPSF (OP-SF Talk), which was recently moved to a SIAM server, facilitates communication among members and friends of the Activity Group. To subscribe or to see a link the archive of all messages, go to http://lists.siam.org/mailman/listinfo/siam-OPSF. To contribute an item to the discussion, send email to siam-opsf@siam.org . The moderators are Bonita Saunders (bonita.saunders@nist.gov) and Diego Dominici (dominicd@newpaltz.edu).

SIAM has several categories of membership, including low-cost categories for students and residents of developing countries. In addition, there is the possibility of reduced rate membership for the members of several societies with which SIAM has a reciprocity agreement; see
http://www.siam.org/membership/individual/reciprocal.php
For current information on SIAM and Activity Group membership, contact:
Society for Industrial and Applied Mathematics
3600 University City Science Center
Philadelphia, PA 19104-2688 USA
phone: +1-215-382-9800
email: service@siam.org
WWW : http://www.siam.org
http://www.siam.org/membership/outreachmem.htm

Topic #7   -----------   OP-SF NET 19.2 ----------   March 15, 2012

From: OP-SF NET Editors
Subject: Submitting contributions to OP-SF NET and SIAM-OPSF (OP-SF Talk)

To contribute a news item to OP-SF NET, send email to one of the OP-SF Editors dominicd@newpaltz.edu or muldoon@yorku.ca .
Contributions to OP-SF NET 19.3 should be sent by May 1, 2012.

OP-SF NET is an electronic newsletter of the SIAM Activity Group on Special Functions and Orthogonal Polynomials. We disseminate your contributions on anything of interest to the special functions and orthogonal polynomials community. This includes announcements of conferences, forthcoming books, new software, electronic archives, research questions, and job openings. OP-SF NET is transmitted periodically through a post to SIAM-OPSF (OP-SF Talk).

SIAM-OPSF (OP-SF Talk) is a listserv of the SIAM Activity Group on Special Functions and Orthogonal Polynomials, which facilitates communication among members, and friends of the Activity Group. See the previous Topic. To post an item to the listserv, send email to siam-opsf@siam.org .

WWW home page of this Activity Group:
http://math.nist.gov/opsf/
Information on joining SIAM and this activity group: service@siam.org

The elected Officers of the Activity Group (2011-2013) are:
Chair: Francisco Marcellán
Vice Chair: Jeff Geronimo
Program Director: Diego Dominici
Secretary: Peter Clarkson
The appointed officers are:
Diego Dominici, OP-SF NET co-editor and OP-SF Talk moderator
Martin Muldoon, OP-SF NET co-editor
Bonita Saunders, Webmaster and OP-SF Talk moderator