OP–SF NET – Volume 23, Number 3 – May 15, 2016

The Electronic News Net of the SIAM Activity Group on Orthogonal Polynomials and Special Functions

http://math.nist.gov/opsf


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Topics:

1. Message from the Chair
2. Call for nominations for the Gábor Szegő Prize
3. V CLAM thematic session on OPSF and approximation theory
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Calendar of Events:

May 20, 2016

5èmes Journées Approximation 2016, International Conference on Constructive Complex Approximation Laboratoire Paul Painlevé, Université de Lille, France

June 5–10, 2016

XII international Conference on Approximation and Optimization Havana University, Cuba
http://gama.uc3m.es/appopt
June 6–8, 2016
Second joint Conference of the Belgian, Royal Spanish and Luxembourg Mathematical Societies
Special Session on Orthogonal Polynomials and Special Functions
Universidad de la Rioja, Logroño, Spain
http://bsl.unirioja.es

June 11–17, 2016
Constructive Theory of Functions
Sozopol, Bulgaria

June 14–18, 2016
Integrable Systems and Quantum Symmetries
Czech Technical University in Prague, Prague, Czech Republic
http://www.intsystems.cz

June 23–28, 2016
9th International Conference on Mathematical Methods for Curves and Surfaces
Tønsberg, Norway
http://www.mn.uio.no/MMCS9

June 27 – July 1, 2016
Abecedarian of SIDE (ASIDE) 12 Summer School,
Centre de Recherches mathématiques, Université de Montréal, Montréal, Quebec, Canada
http://www.crm.umontreal.ca/2016/ASIDE16/index_e.php

July 3–9, 2016
Symmetries and Integrability of Difference Equations 12,
Hôtel Le Chanteclerc, Saint Adèle, Québec, Canada
http://www.crm.umontreal.ca/2016/SIDE12/index_e.php

July 3–8, 2016
VII Jaén Conference on Approximation Theory,
Úbeda, Jaén, Spain

July 11–15, 2016
V Latin American Congress of Mathematicians,
Thematic session on “Special functions, orthogonal polynomials and approximation theory”
Universidad del Norte, Barranquilla, Colombia
http://www.uninorte.edu.co/web/vclam/ana6

July 11–15, 2016
OPSF–S6 Summer School on Orthogonal Polynomials and Special Functions,
Dedicated to the memory and legacy of Frank W. J. Olver,
Norbert Wiener Center for Harmonic Analysis and Applications,
University of Maryland, College Park, Maryland, USA
http://www.norbertwiener.umd.edu/Education/OPSFS6

July 14, 2016
Minisymposium on “Computational Aspects of Special Functions”,
2016 SIAM Annual Meeting,
Boston, Massachusetts, USA
http://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=23333
July 18–22, 2016  
Minisymposium on “Orthogonal Polynomials and Applications”,  
7th European Congress of Mathematics,  
Technische Universität Berlin, Berlin, Germany  
http://www.7ecm.de

July 20–22, 2016  
The 41st International Symposium on Symbolic and Algebraic Computation 2016,  
Wilfrid Laurier University, Waterloo, Ontario, Canada  

August 8–12, 2016  
Dunkl operators, special functions and harmonic analysis,  
Universität Paderborn, Paderborn, Germany  

August 22–26, 2016  
Conference on Methods of Modern Mathematical Physics,  
A Young Researcher Symposium on the Occasion of the 70th Birthday of Barry Simon,  
Fields Institute, Toronto, Canada  
http://www.fields.utoronto.ca/programs/scientific/16-17/modern-physics

August 28–September 1, 2016  
Frontiers in Mathematical Physics,  
A Conference on the Occasion of Barry Simon’s 70th Birthday,  
CRM, Montreal, Canada  
http://www.crm.umontreal.ca/2016/Simon16/index_e.php

September 13, 2016  
Random Matrix Theory: perspectives and applications  
School of Mathematics, Statistics & Actuarial Science, University of Kent, Canterbury, UK  
https://www.kent.ac.uk/smsas/events/matrix-theory.html

September 8–13, 2016  
4th Dolomites Workshop on Constructive Approximation and Applications (DWCAA16)  
Dedicated to Annie Cuyt in the occasion of her 60th birthday  
Alba di Canazei, Trento, Italy  
http://events.math.unipd.it/dwcaa16

November 28–December 02, 2016  
International Conference on Mathematical Analysis and its Applications 2016,  
Department of Mathematics, Indian Institute of Technology Roorkee, Roorkee, India  
http://www.iitr.ac.in/icmaa/2016/index.html

June 26–33, 2017  
OPSF–S7 Summer School on Orthogonal Polynomials and Special Functions,  
University of Kent, Canterbury, UK  
http://www.kent.ac.uk/smsas/personal/opsfa

July 3–7, 2017  
14th International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA14), University of Kent, Canterbury, UK  
http://www.kent.ac.uk/smsas/personal/opsfa
This newsletter is the result of the efforts of our two appointed editors Kerstin Jordaan and Howard Cohl, who took over the job of Martin Muldoon and Diego Dominici since March 2015. At the end of 2015, Kerstin Jordaan was elected to be the new president of the South African Mathematical Society (SAMS). Congratulations to Kerstin and good luck running SAMS. As a result, Kerstin decided to step down as co-editor of OPSF-Net by the end of this year. Howard Cohl will continue to serve as co-editor.

Our search for a new co-editor successfully resulted with Sarah Post accepting to take on the task. Sarah Post is assistant professor at the Department of Mathematics of the University of Hawai‘i at Mānoa in Honolulu. She was one of the plenary speakers at the latest OPSFA-13 meeting in Gaithersburg (June 2015) where she gave a talk on Limits of Orthogonal Polynomials and Contractions of Lie Algebras. Sarah obtained her PhD in Mathematics from the University of Minnesota in July 2009 and her supervisor was Willard Miller Jr.

I welcome Sarah to the activity group Orthogonal Polynomial and Special Functions and hope she will enjoy working on OPSF-Net as much as we enjoy reading every issue. Personally I hope I finally found an excuse to visit Hawaii.

Call for nominations for the Gábor Szegő Prize (opens May 1, 2016 and closes October 15, 2016)
The SIAM Activity Group on Orthogonal Polynomials and Special Functions (SIAG/OPSF) awards the Gábor Szegő Prize every two years to an early-career researcher for outstanding research contributions, as determined by the prize committee, in the area of orthogonal polynomials and special functions. The contributions must be contained in a paper or papers published in English in peer-reviewed journals. This prize is intended for an early career researcher. The prize can only be awarded to a researcher who has at most 10 years (full time equivalent) of involvement in mathematics since PhD at the award date, allowing for breaks in continuity, or who in the opinion of the prize committee is at an equivalent stage in their career.

A valid nomination requires:

1. a letter of nomination signed by two (2) members of the SIAG; and
2. a curriculum vitae (CV) of the nominee.

Letters of nomination should indicate the paper(s) cited for the work being recognized, explain the significance of the work, and (especially in the case of multiple authors) indicate the contribution of each of the individuals nominated. Please send all required materials to: szego_prize@siam.org, with a copy to the SIAG–OPSF chair walter@wis.kuleuven.be.

The award will consist of a plaque and a certificate containing the citation. As part of the award, the recipient will be invited to give a plenary lecture at the International Symposium on Orthogonal Polynomials, Special Functions, and Applications (OPSFA–14), which will be held at the University of Kent (Canterbury, UK), July 3–7, 2017. Travel funds will be made available to reimburse the recipient for reasonable travel expenses incurred in attending the award ceremony and giving the talk. SIAM will cover expenses for travel to and from the OPSFA conference and the OPSFA conference will waive the conference registrations fee and cover local accommodation costs.

For more information, see http://www.siam.org/prizes/nominations/nom_siag_szego.php.

Topic #3  OP – SF Net 23.3  May 15, 2016

From: Manuel Domínguez de la Iglesia (mdi29@im.unam.mx)
Subject: V CLAM thematic session on OPSF and approximation theory

The “V Latin American Congress of Mathematicians” will be held in the campus of the Universidad del Norte in the Caribbean city of Barranquilla, Colombia, from July 11–15, 2016:

http://www.uninorte.edu.co/web/vclam-en/inicio

There will be a thematic session on “Special functions, orthogonal polynomials and approximation theory”:

http://www.uninorte.edu.co/web/vclam/ana6

The organizers are:

- Manuel Domínguez de la Iglesia, Instituto de Matemáticas UNAM, México;
- Herbert Alonso Dueñas, Universidad Nacional de Colombia, Colombia; and
- Luis Enrique Garza, Universidad de Colima, México.
The invited speakers are (confirmed):

- Cleonice Fátima Bracciali, Universidade Estadual Paulista, Brazil;
- Abdón Choque, Universidad Michoacana de San Nicolás de Hidalgo, México;
- Erdal Emsiz, Pontificia Universidad Católica de Chile, Chile;
- Ulises Fidalgo, University of Mississippi, USA;
- Natalia Pinzón Cortés, Universidad Nacional de Colombia, Colombia;
- Pablo Román, Universidad Nacional de Córdoba, Argentina; and
- Alagacone Sri Ranga, Universidade Estadual Paulista, Brazil.

You are welcome to participate in this conference!

Topic #4 _______ OP – SF Net 23.3 _______ May 15, 2016

From: Andrei Martínez-Finkelshtein (andrei@ual.es)
Subject: “Orthogonal Polynomials and Applications” minisymposium at the 7ECM, Berlin

From 18th to 22nd July, 2016, the 7th European Congress of Mathematics (7ECM), that the European Mathematical Society (EMS) organizes every four years, will take place in Berlin, Germany.

A minisymposium, entitled "Orthogonal polynomials and Applications", has been arranged within this congress, scheduled to take place on July 20th, organized by Alfredo Deaño (University of Kent, United Kingdom), Galina Filipuk (University of Warsaw, Poland), Andrei Martínez-Finkelshtein (University of Almería, Spain), Juan J. Moreno-Balcázar (University of Almería, Spain), Maria das Neves Rebocho (University of Beira Interior, Portugal).

The minisymposium will consist of two sessions, one in the morning and another one in the afternoon. The speakers in the morning session are:

- Jonathan Breuer (Hebrew University of Jerusalem, Israel);
- Ruyman Cruz-Barroso (Universidad de La Laguna, Spain);
- Arno Kuijlaars (KU Leuven, Belgium); and
- Marija Stanić (University of Kragujevac, Serbia).

The speakers in the afternoon session are:

- Yang Chen (University of Macau, Macau);
- Stefan Hilger (Katholische Universität Eichstätt–Ingolstadt, Germany);
- Edmundo J. Huertas (Universidad de Alcalá, Spain);
- Francisco Marcellán (Universidad Carlos III de Madrid, Spain); and
- Walter Van Assche (KU Leuven, Belgium).

More information is available on the 7ECM webpage http://www.7ecm.de.
Random matrix theory: perspectives and applications.
To be held at SMSAS, University of Kent (Canterbury, UK) on September 13, 2016.

This one–day workshop will consist of four talks discussing recent developments and different perspectives of random matrix theory, an extremely active area of research in the last few years that has developed very strong links with other areas of mathematics, such as integrable systems, special functions, asymptotic analysis, probability theory, number theory and combinatorics.

Invited speakers:

- Arno Kuijlaars, Department of Mathematics, University of Leuven (Belgium).
- Tamara Grava, School of Mathematics, University of Bristol (UK), SISSA (Trieste, Italy).
- Nicholas Simm, Warwick Mathematics Institute, University of Warwick (UK).
- Alfredo Deaño–Cabrera, SMSAS, University of Kent (UK).

Supported by the London Mathematical Society (Celebrating New Appointments, Grant Scheme) and the University of Kent Faculty of Sciences Research Fund.

For more information, visit
https://www.kent.ac.uk/smsas/events/matrix-theory.html
or email ad548@kent.ac.uk.

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SIAM Annual Meeting minisymposium: Computational Aspects of Special Functions.

The 2016 SIAM Annual Meeting will take place in Boston, USA (July 11–15, 2016). As a part of this conference, a minisymposium on computational aspects of special functions is being organized by Amparo Gil (U. Cantabria, Spain), Javier Segura (U. Cantabria, Spain) and Nico M. Temme (CWI, The Netherlands). The minisymposium will consist of four 25 minute talks in which algorithms and methods for the computation of special functions will be discussed, together with related problems such as the computation of Gaussian quadrature rules and the numerical solution of ordinary differential equations.

List of contributions:


2. A Method for the Numerical Computation of Nonoscillatory Phase Functions, James Bremer, University of California, Davis, USA.
3. Ultraspherical Spectral Method and Approximating Special Functions, Sheehan Olver, University of Sydney, Australia.

4. Computing without Spherical Harmonics, Alex Townsend, MIT, USA; Grady B. Wright and Heather D. Wilber, Boise State University, USA.

For more details on this minisymposium, see http://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=23333.

For more information on the 2016 SIAM Annual Meeting, visit http://www.siam.org/meetings/an16.

Topic #7  OP – SF Net 23.3  May 15, 2016

From: Barry Schneider (barry.schneider@nist.gov)
Subject: DLMF updates are being planned

The Editors of the NIST Digital Library of Mathematical Functions have begun to consider how current content can be improved or enlarged. Input from the community is quite welcome as we begin this process. Please send your thoughts to dlmf-feedback@nist.gov.

Topic #8  OP – SF Net 23.3  May 15, 2016

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 during March and April 2016.

http://arxiv.org/abs/1603.00123
A large class of bound–state solutions of the Schrödinger equation via Laplace transform of the confluent hypergeometric equation
P.H.F. Nogueira, A.S. de Castro, D.R.M. Pimentel

http://arxiv.org/abs/1603.00196
Multivariate Krawtchouk polynomials and composition birth and death processes
Robert Griffiths

http://arxiv.org/abs/1603.00269
The Sobolev moment problem and Jordan dilations
F.H. Szafraniec, M. Wojtylak

http://arxiv.org/abs/1603.00689
On a class of formal power series and their summability
A. Lastra, J. Sanz, J. R. Sendra

http://arxiv.org/abs/1603.00722
Integrals of products of Hurwitz zeta functions
M.A. Shpot, M.P. Chaudhary, R. B. Paris
Optimization via Chebyshev Polynomials
Kareem T. Elgindy

Optimal Barycentric Gegenbauer Quadrature
Kareem T. Elgindy

On triple zeta values of even weight and their connections with period polynomials
Ding Ma, Koji Tasaka

Spectral analysis of non-self-adjoint Jacobi operator associated with Jacobian elliptic functions
Petr Siegl, František Štampach

On Kapteyn–Kummer Series’ Integral Form
Tibor K. Pogány, Árpád Baricz, Anikó Szakál

Zeros of certain combinations of Eisenstein series
Sarah Reitzes, Polina Vulakh, Matthew P. Young

Spectral asymptotics on sequences of elliptically degenerating Riemann surfaces
Daniel Garbin, Jay Jorgenson

Optimal Control of a Parabolic Distributed Parameter System Using a Barycentric Shifted Gegenbauer Pseudospectral Method
Kareem T. Elgindy

Dunkl harmonic analysis and fundamental sets of functions on the unit sphere
Roman Veprintsev

Uniform approximations by Fourier sums on classes of generalized Poisson integrals
A.S. Serdyuk, T.A. Stepaniuk

An explicit prime geodesic theorem for discrete tori and the hypergeometric functions
Yoshinori Yamasaki

Alpert multiwavelets and Legendre–Angelesco multiple orthogonal polynomials
Jeffrey S. Geronimo, Plamen Iliev, Walter Van Assche

http://arxiv.org/abs/1603.01989
The class of Lucas–Lehmer polynomials
Pierluigi Vellucci, Alberto Maria Bersani

http://arxiv.org/abs/1603.02053

The Heun operator as Hamiltonian
A.V. Turbiner

http://arxiv.org/abs/1603.02070

On Hermite–Hadamard Inequalities for differentiable $\lambda$-preinvex functions via Riemann–Liouville Fractional Integrals
Abdullah Akkurt, M. Ersay Yildirim, Huseyin Yildirim

http://arxiv.org/abs/1603.02236

Solution of the Wheeler–DeWitt equation and the triconfluent Heun functions
H. S. Vieira, V. B. Bezerra

http://arxiv.org/abs/1603.02312

Asymptotic properties of Jacobi matrices for a family of fractal measures
Gökalp Alpan, Alexander Goncharov, Ahmet Nihat Şimşek

http://arxiv.org/abs/1603.02952

The Selberg integral and a new pair–correlation function for the zeros of the Riemann zeta–function
Alessandro Zaccagnini

http://arxiv.org/abs/1603.02954

Some results on the $\xi(s)$ and $\Xi(t)$ functions associated with Riemann’s $\zeta(s)$ function
Hisashi Kobayashi

http://arxiv.org/abs/1603.03314

Zero Distribution of Hermite–Padé Polynomials and Convergence Properties of Hermite Approximants for Multivalued Analytic Functions
Nikolay R. Ikonomov, Ralitza K. Kovacheva, Sergey P. Suetin

http://arxiv.org/abs/1603.03329

Improved convergence rates for Lasserre–type hierarchies of upper bounds for box–constrained polynomial optimization
Etienne de Klerk, Roxana Hess, Monique Laurent

http://arxiv.org/abs/1603.03340

Thue’s inequalities and the hypergeometric method
Shabnam Akhtari, N. Saradha, Divyum Sharma

http://arxiv.org/abs/1603.03547

Two Definite Integrals Involving Products of Four Legendre Functions
Yajun Zhou

http://arxiv.org/abs/1603.03667

Riemann’s zeta function and the broadband structure of pure harmonics
Artur Sowa

http://arxiv.org/abs/1603.03762
Monotonicity of Zeros of Jacobi–Angelesco polynomials
Elie J. C. dos Santos

http://arxiv.org/abs/1603.03913
Zeta functions interpolating the convolution of the Bernoulli polynomials
Abdelmejid Bayad, Takao Komatsu

http://arxiv.org/abs/1603.03986
Differential equations associated with Legendre polynomials
Taekyun Kim, Dae san Kim

http://arxiv.org/abs/1603.04024
Extension of Frame’s type inequalities to Bessel and modified Bessel functions
Khaled Mehrez

http://arxiv.org/abs/1603.04076
Twisted characteristic $p$ zeta functions
Bruno Anglès, Tuan Ngo Dac, Floric Tavares Ribeiro

http://arxiv.org/abs/1603.04145
On analogues of Arakawa–Kaneko zeta functions of Mordell–Tornheim type
Takuma Ito

http://arxiv.org/abs/1603.04328
Precise deviations results for the maxima of some determinantal point processes: the upper tail
Peter Eichelsbacher, Thomas Kriecherbauer, Katharina Schüler

http://arxiv.org/abs/1603.04352
Overpartitions related to the mock theta function $\omega(q)$
George E. Andrews, Atul Dixit, Daniel Schultz, Ae Ja Yee

http://arxiv.org/abs/1603.04358
A Bochner type classification theorem for exceptional orthogonal polynomials
M. Ángeles García–Ferrero, David Gómez–Ullate, Robert Milson

http://arxiv.org/abs/1603.04658
Weighted inequalities for fractional integral operators and linear commutators in the Morrey type spaces
Hua Wang

http://arxiv.org/abs/1603.04694
Zeros of Ramanujan Type Entire Functions
Ruiming Zhang

http://arxiv.org/abs/1603.04937
On the (Filled–) Julia sets of Orthogonal polynomials
Jacob Stordahl Christiansen, Christian Henriksen, Henrik Laurberg Pedersen, Carsten Lunde Petersen

http://arxiv.org/abs/1603.04974
A novel approach to the discovery of ternary BBP–type formulas for polylogarithm con–
Kunle Adegoke

http://arxiv.org/abs/1603.05041
From Krall discrete orthogonal polynomials to Krall polynomials
Antonio J. Durán

http://arxiv.org/abs/1603.05173
SUSY partners of the truncated oscillator, Painlevé transcendents and Bäcklund transformations
David J. Fernández C, VS Morales–Salgado

http://arxiv.org/abs/1603.05243
An easy upper bound for Ramsey numbers
Roland Bacher

http://arxiv.org/abs/1603.05357
Special functions, integral equations and Riemann–Hilbert problem
R. Wong, Yu–Qiu Zhao

http://arxiv.org/abs/1603.05512
On Certain Positive Semidefinite Matrices of Special Functions
Ruiming Zhang

http://arxiv.org/abs/1603.05697
A lower bound for the $\Theta$ function on manifolds without conjugate points
Yannick Bonthonneau

http://arxiv.org/abs/1603.05773
A framework for structured linearizations of matrix polynomials in various bases
Leonardo Robol, Raf Vandebril, Paul Van Dooren

http://arxiv.org/abs/1603.05810
Shuffle product formulas of multiple zeta values
Zhonghua Li, Chen Qin

http://arxiv.org/abs/1603.05811
A novel approach to the discovery of binary BBP–type formulas for polylogarithm constants
Kunle Adegoke

http://arxiv.org/abs/1603.05811
Finite and étale polylogarithms
Kenji Sakugawa, Shin–ichiro Seki

http://arxiv.org/abs/1603.05815
Minkowski’s Question Mark Measure
Giorgio Mantica

http://arxiv.org/abs/1603.05948
Evaluating Generating Functions for Periodic Multiple Polylogarithms
Kurusch Ebrahimi–Fard, W. Steven Gray, Dominique Manchon
Random Matrix Theory and Quantum Chromodynamics
Gernot Akemann

Simultaneous Gaussian quadrature for Angelesco systems
Doron S. Lubinsky, Walter Van Assche

Noncommutative extensions of elliptic integrable Euler–Arnold tops and Painlevé VI equation
A. Levin, M. Olshanetsky, A. Zotov

The Kontsevich matrix integral: convergence to the Painlevé hierarchy and Stokes’ phenomenon
Marco Bertola, Mattia Cafasso

Spectral Methods for Tempered Fractional Differential Equations
Lijing Zhao, Weihua Deng, Jan S Hesthaven

A geometry where everything is better than nice
Larry Bates, Peter Gibson

Summation formulae for the bilateral basic hypergeometric series $_1\psi_1(a; b; q, z)$
Hironori Mori, Takeshi Morita

Moments of zeta and correlations of divisor–sums: IV
Brian Conrey, Jonathan P. Keating

The complex Airy operator with a semi–permeable barrier
D. S. Grebenkov, B. Helffer, R. Henry

Sums of squares of Krawtchouk polynomials, Catalan numbers, and some algebras over the Boolean lattice
Philip Feinsilver

Ramanujan and coefficients of meromorphic modular forms
Kathrin Bringmann, Ben Kane

Three term relations for a class of bivariate orthogonal polynomials
Misael Marriaga, Teresa E. Pérez, Miguel A. Piñar
A characterization theorem and its applications for d-orthogonality of Sheffer polynomial sets
Serhan Varma

Zeros of a cross-product of the Coulomb wave and Tricomi hypergeometric functions
Árpád Baricz

Generating Functions for Products of Special Laguerre 2D and Hermite 2D Polynomials
Alfred Wünsche

Orthogonal polynomials associated with equilibrium measures on $\mathbb{R}$
Gökalp Alpan

Minimal Cubature rules and polynomial interpolation in two variables II
Yuan Xu

Turán type inequalities for Mittag–Leffler functions
Sergei M. Sitnik, Khaled Mehrez

A Riemann–Hilbert approach for the Novikov equation
Anne Boutet de Monvel, Dmitry Shepelsky, Lech Zielinski

Some Congruences of a Restricted Bipartition Function
Nipen Saikia, Chayanika Boruah

New identities for binary Krawtchouk polynomials, binomial coefficients and Catalan numbers
Ricardo A. Podestá

Fourier coefficients of meromorphic modular forms and a question of Petersson
Kathrin Bringmann, Ben Kane

Lattice equations arising from discrete Painlevé systems. II. $A_4^{(1)}$ case
Nalini Joshi, Nobutaka Nakazono, Yang Shi

A generalization of the 2D Sleipian functions
Fethi Bouzeffour

Rényi, Shannon and Tsallis entropies of Rydberg hydrogenic systems
I.V. Toranzo, J. S. Dehesa

http://arxiv.org/abs/1603.09556
Improved bounds for Fourier coefficients of Siegel modular forms
Kathrin Bringmann

http://arxiv.org/abs/1603.09587
On the number of lattice convex chains
Julien Bureaux, Nathanaël Enriquez

http://arxiv.org/abs/1603.09622
Bipartite Chebyshev polynomials and elliptic integrals expressible by elementary functions
Kazuto Asai

http://arxiv.org/abs/1604.00042
Derived equivalence, Albanese varieties, and the zeta functions of 3–dimensional varieties
Katrina Honigs

http://arxiv.org/abs/1604.00186
Characterizations of classical orthogonal polynomials on quadratic lattices
M. Njinkeu Sandjon, A. Branquinho, M. Foupouagnigni, I. Area

http://arxiv.org/abs/1604.00480
Three–Term Relations for 3F2(1)
Akihito Ebisu, Katsunori Iwasaki

http://arxiv.org/abs/1604.00622
On a duality formula for certain sums of values of poly–Bernoulli polynomials and its application
Masanobu Kaneko, Fumi Sakurai, Hirofumi Tsumura

http://arxiv.org/abs/1604.00663
Doron Gepner’s Statistics on Words in 1,2,3 is (most probably) Asymptotically Logistic
Doron Zeilberger

http://arxiv.org/abs/1604.00714
Orthogonal Polynomials from Hermitian Matrices II
Satoru Odake, Ryu Sasaki

http://arxiv.org/abs/1604.00753
The Fourier series of the log–Barnes function
István Mező

http://arxiv.org/abs/1604.00929
Application of Modal Filtering to a Spectral Difference Method
Jan Glaubitz, Philipp Öffner, Thomas Sonar

http://arxiv.org/abs/1604.00941
Quantum mock modular forms arising from eta–theta functions
Amanda Folsom, Sharon Garthwaite, Soon–Yi Kang, Holly Swisher, Stephanie Treneer

http://arxiv.org/abs/1604.01060
Bessel operators on Jordan pairs and small representations of semisimple Lie groups
Jan Möllers, Benjamin Schwarz

http://arxiv.org/abs/1604.01095

Exact diagonalization of the $d$–dimensional confined quantum harmonic oscillator
Kunle Adegoke, Adenike Olatinwo, Henry Otobrise, Funmi Akintujoye, Afees Tiamiyu

http://arxiv.org/abs/1604.01106

Crouching AGM, Hidden Modularity
Shaun Cooper, Jesús Guillera, Armin Straub, Wadim Zudilin

http://arxiv.org/abs/1604.01820

Algebro–geometric solutions to triangular Schlesinger systems
Vladimir Dragovic, Vasilisa Shramchenko

http://arxiv.org/abs/1604.01977

Asymptotic behavior of partial and false theta functions arising from Jacobi forms and regularized characters
Kathrin Bringmann, Amanda Folsom, Antun Milas

http://arxiv.org/abs/1604.02452

Scattering amplitudes for the rationally extended P T symmetric complex potentials
Nisha Kumari, Rajesh Kumar Yadav, Avinash Khare, Bijan Bagchi, Bhabani Prasad Mandal

http://arxiv.org/abs/1604.02530

Lax pairs for additive difference Painlevé equations
Hidehito Nagao

http://arxiv.org/abs/1604.02649

Bounds for the radii of univalence of some special functions
Ibrahim Aktaş, Árpád Baricz, Nihat Yağmur

http://arxiv.org/abs/1604.03070

A vector equilibrium problem for Muttalib–Borodin biorthogonal ensembles
Arno B.J. Kuijlaars

http://arxiv.org/abs/1604.03082

Monodromy dependence and connection formulae for isomonodromic tau functions
A. Its, O. Lisovyy, A. Prokhorov

http://arxiv.org/abs/1604.03133

An Update on Local Universality Limits for Correlation Functions generated by Unitary Ensembles (First Draft)
Doron S Lubinsky

http://arxiv.org/abs/1604.03155

Fast convolution with free–space Green’s functions
Felipe Vico, Leslie Greengard, Miguel Ferrando

http://arxiv.org/abs/1604.03245

A fresh approach to classical Eisenstein series and the newer Hilbert–Eisenstein series
Paul L. Butzer, Tibor K. Pogány
On almost homogeneous Schroedinger operators
Jan Dereziński, Serge Richard

Metrizability of Painlevé equations
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A \((p, q)\)-Analogue of Poly–Euler Polynomials and Some Related Polynomials
Takao Komatsu, José L. Ramírez, Víctor F. Sirvent

Finite braid group orbits in Aff(C)–character varieties of the punctured sphere
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Conditional estimates on small distances between ordinates of zeros of \( \zeta(s) \) and \( \zeta'(s) \)
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The Sine\(_\beta\) operator
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On the numerical quadrature of weakly singular oscillatory integral and its fast implementation
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A representation of the Dickson polynomials of the third kind by Legendre functions
Neranga Fernando, Solomon Manukure

On some Algebraic Properties for \( q \)-Meixner Multiple Orthogonal Polynomials of the First Kind
J. Arvesú, A.M. Ramírez–Aberasturis

Spirallikeness of shifted hypergeometric functions
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Mathieu–type series built by \((p, q)\)–extended Gaussian hypergeometric function
Junesang Choi, Rakesh K. Parmar, Tibor K. Pogány

Fast Fourier Transforms for Spherical Gauss–Laguerre Basis Functions
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Unified Bessel, Modified Bessel, Spherical Bessel and Bessel–Clifford Functions
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http://arxiv.org/abs/1604.05179
On zeros of some entire functions
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Vector–valued modular forms and the Mock Theta Conjectures
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http://arxiv.org/abs/1604.05345
Congruences modulo powers of 2 for the number of unique path partitions
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Solution of the nonlinear equation of a divergent type in the corner point domain
E.E. Perepelkin, B.I. Sadovnikov, N.G. Inozemtseva

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On Arakawa–Kaneko zeta–functions associated with $GL_2(\mathbb{C})$ and their functional relations
Yasushi Komori, Hirofumi Tsumura

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Bernstein–gamma functions and exponential functionals of Levy Processes
Pierre Patie, Mladen Savov

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The monodromy representations of local systems associated with Lauricella’s $F_D$
Keiji Matsumoto

http://arxiv.org/abs/1604.06321
Mass–deformed ABj(M) theory, Meixner–Pollaczek polynomials, and $su(1, 1)$ coherent states/oscillators
Miguel Tierz

http://arxiv.org/abs/1604.06428
Massless Fermions in anisotropic Bianchi type I spacetimes
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http://arxiv.org/abs/1604.06510
Time and band limiting for matrix valued functions
F. Alberto Grünbaum, Inés Pacharoni, Ignacio Nahuel Zurrián

http://arxiv.org/abs/1604.06786
Spectral determinants and quantum theta functions
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Remarks on $\tau$–functions for the difference Painlevé equations of type $E_8$
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Time Varying Isotropic Vector Random Fields on Spheres
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Fast polynomial transforms based on Toeplitz and Hankel matrices
Alex Townsend, Marcus Webb, Sheehan Olver

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Hypergeometric functions and algebraic curves $y^e = x^d + ax + b$
Pramod Kumar Kewat, Ram Kumar

http://arxiv.org/abs/1604.07772
High order recurrence relation, Hermite–Padé approximation, and Nikishin systems
D. Barrios Rolania, J. S. Geronimo, G. López Lagomasino

http://arxiv.org/abs/1604.07846
Approximation and orthogonality in Sobolev spaces on a triangle
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http://arxiv.org/abs/1604.07847
Multi–Poisson approach to the Painlevé equations: from the isospectral deformation to
the isomonodromic deformation
Hayato Chiba

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Experimental observations on $q$–Fibonacci numbers
Johann Cigler

http://arxiv.org/abs/1604.08015
Zeros of the first derivative of Dirichlet $L$–functions
Hirotaka Akatsuka, Ade Irma Suriajaya

http://arxiv.org/abs/1604.08195
Evaluating Theta Derivatives with Rational Characteristics
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Thinning and conditioning of the Circular Unitary Ensemble
Christophe Charlier, Tom Claeys

http://arxiv.org/abs/1604.08441
Integral and Series Representations of $q$–Polynomials and Functions: Part I
Mourad E. H. Ismail, Ruiming Zhang

Topic #9      OP – SF Net 23.3      May 15, 2016

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 155 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 Howard Cohl (howard.cohl@nist.gov), Kerstin Jordaan (kerstin.jordaan@up.ac.za), and Sarah Post (spost@hawaii.edu).

Back issues of OP–SF NET can be obtained at the websites:
https://staff.fnwi.uva.nl/t.h.koornwinder/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, go to http://lists.siam.org/mailman/listinfo/siam–OPSF and follow the instructions under the sub–heading “Subscribing to SIAM–OPSF”. To contribute an item to the discussion, send e-mail 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:

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Topic #10  OP – SF Net 23.3  May 15, 2016

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 e–mail to one of the OP–SF Editors howard.cohl@nist.gov, kerstin.jordaan@up.ac.za, or spost@hawaii.edu. Contributions to OP–SF NET 23.4 should be sent by July 1, 2016.

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 as well as news about new appointments, promotions, research visitors, awards and prizes. OP–SF Net is transmitted periodically through a post to SIAM–OPSF.
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 e-mail 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 (2014–2016) are:
- Walter Van Assche, Chair
- Jeff Geronimo, Vice Chair
- Diego Dominici, Program Director
- Yuan Xu, Secretary

The appointed officers are:
- Howard Cohl, OP–SF NET co-editor
- Kerstin Jordaan, OP–SF NET co-editor
- Sarah Post, OP–SF NET co-editor
- Diego Dominici, OP–SF Talk moderator
- Bonita Saunders, Webmaster and OP–SF Talk moderator

Thought of the month

“Archimedes will be remembered when Aeschylus is forgotten, because languages die and mathematical ideas do not. "Immortality” may be a silly word, but probably a mathematician has the best chance of whatever it may mean.”

G. H. Hardy, A Mathematician’s Apology, 1940.