

OP-SF NET – Volume 22, Number 6 – November 15, 2015

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

<http://math.nist.gov/opsf>

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Calendar of Events:

January 6–9, 2016

2016 Joint Mathematics Meetings, American Mathematical Society,
Washington State Convention Center, Seattle, Washington, USA

AMS Special Session on Special Functions and q -Series,

Organized by Richard Askey, Mourad E. H. Ismail, and Erik Koelink,

http://jointmathematicsmeetings.org/meetings/national/jmm2016/2181_program_ss31.html#title

AMS Special Session on Recent Advances in Orthogonal Polynomials and Special Functions,

Organized by Xiang-Sheng Wang,

http://jointmathematicsmeetings.org/meetings/national/jmm2016/2181_program_ss17.html#title

June 5–10, 2016

XII international Conference on Approximation and Optimization,
Havana University, Cuba

<http://gama.uc3m.es/appopt>

June 27 – July 1, 2016

Abecederian of SIDE (ASIDE) 12 Summer School,
Centre de Recherches mathématiques, Université de Montréal, Montréal, Quebec, Canada
<http://www.crm.umontreal.ca/2016/ASIDE2016>

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.php>

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>

June 26–30, 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>

July 10–19, 2017

Foundations of Computational Mathematics,
Barcelona, Spain
<http://focm-society.org>

Topic #1 ——— OP – SF Net 22.6 ——— November 15, 2015

From: Walter van Assche (Walter.VanAssche@wis.kuleuven.be)

Subject: Barry Simon receives the 2016 AMS Leroy P. Steele Prize

Barry Simon (California Institute of Technology) will receive the 2016 AMS Leroy P. Steele Prize for Lifetime Achievement for “his impact on the education and research of a generation of mathematical scientists through his significant research achievements, his highly influential books, and his mentoring of graduate students and postdoctoral fellows.”

Barry Simon was already a well-known researcher in Mathematical and Theoretical Physics (his book “Methods of Modern Mathematical Physics,” with Michael Reed from the 1970’s is a classic) when he decided to dive into the field of orthogonal polynomials. He wrote a two-volume set “Orthogonal Polynomials on the Unit Circle” in 2005 in the same AMS book series where Szegő’s book on “Orthogonal Polynomials” appeared, and this set became an instant classic. Another book of interest to OPSF people is “Szegő’s Theorem and its Descendants: Spectral Theory for L^2 Perturbations of Orthogonal Polynomials” (Princeton University Press, 2011). Not only does Barry add very interesting work to OPSF, but he is

so energetic that he almost clears the field. Personally I must confess that he writes faster than I can read.

Previously Barry also received the Henri Poincaré Prize of the International Association of Mathematical Physics (2012) and the Bolyai Prize of the Hungarian Academy of Sciences (2015). The SIAG OPSF congratulates Barry for this new distinction and we are very proud to have you on our membership list. The prize will be awarded on Thursday, January 7, 2016, at the Joint Mathematics Meetings in Seattle.

See more at [link](#) and [here](#).

Topic #2 ——— OP – SF Net 22.6 ——— November 15, 2015

From: Walter van Assche (Walter.VanAssche@wis.kuleuven.be)

Subject: Message from the Chair

The membership of our activity group is increasing and at the last count (October 2015) there were 173 members. See Figure 1 for the evolution of the number of members.

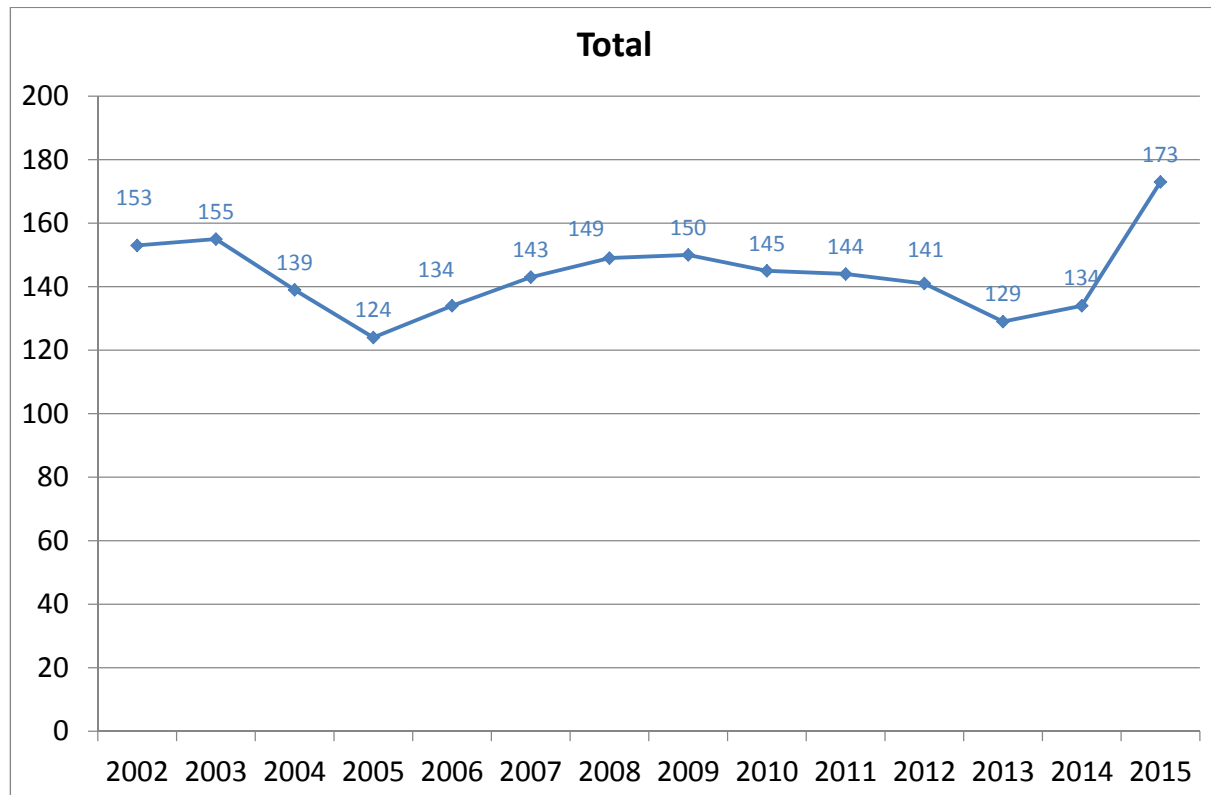


Figure 1: SIAM OPSFA membership

International members can join SIAM and the activity group through reciprocal membership, but unfortunately there are not so many reciprocal agreements:

<http://www.siam.org/membership/individual/reciprocal.php>.

Students can join SIAM for free if their institution is an academic member of SIAM, if they are member of a student chapter of SIAM, or if they are nominated by a nonstudent mem-

ber of SIAM. They will be allowed to join the OPSF activity group for free and one more activity group of their choice: <http://www.siam.org/students/memberships.php>.

Some statistics about the distribution of the members: 16% are students, 84% are non-students; 80% are male and 20% are female; most members come from academic institutions (67%), others from government (12%) and industry (5%); 75% of the members come from mathematics departments, 6% from physics, 6% computer science and 8% from engineering; 56% of the membership is from outside the US, 44% are US members.

An interesting idea was launched by Dan Lozier to set aside royalties of books for the activity group, in particular for the Szegő Prize. The NIST Handbook of Mathematical Functions and the upcoming Askey–Bateman project are potential contributors. This is still under negotiation, however.

Some summer schools were announced, such as the OPSF–S6 summer school (see [link](#)) in 2016 (Norbert Wiener Center for Harmonic Analysis and Applications, University of Maryland), the OPSF–S7 summer school in 2017 (University of Kent, Canterbury), and the Gene Golub SIAM summer school in 2016 (Drexel University, see [link](#)). There is now a call of interest in organizing the Gene Golub SIAM summer school in 2017 (see [link](#)). The next OPSFA meeting (OPSFA–14, see [link](#)) will take place in 2017 at the University of Kent in Canterbury, UK, after the OPSF–S7 summer school.

Topic #3 OP – SF Net 22.6 November 15, 2015

From: Tom Koornwinder (T.H.Koornwinder@uva.nl)
Subject: Vilmos Totik appointed as AMS Fellow

Vilmos Totik (University of South Florida and the University of Szeged, Hungary) has become a Fellow of the AMS, in the 2016 Class “For contributions to classical analysis and approximation theory and for exposition.” Vilmos was a plenary speaker at OPSFA–11 (Madrid, 2011).

See <http://www.ams.org/profession/ams-fellows/new-fellows>.

Topic #4 OP – SF Net 22.6 November 15, 2015

From: OP–SF Net Editors
Subject: Olga V. Holtz appointed as AMS Fellow

Olga V. Holtz (University of California, Berkeley) has become a Fellow of the AMS, in the 2016 Class “For contributions to numerical linear algebra, numerical analysis, approximation theory, theoretical computer science, and algebra.” Olga was a plenary speaker at OPSFA–13 (Gaithersburg, 2015).

See <http://www.ams.org/profession/ams-fellows/new-fellows>.

Topic #5 OP – SF Net 22.6 November 15, 2015

From: Denise Wood (dmw@ams.org)
Subject: Announcement: *A Comprehensive Course in Analysis* by Barry Simon

The [American Mathematical Society](#) is pleased to announce the publication of *A Comprehensive Course in Analysis* by Henri Poincaré Prize and Leroy P. Steele Prize winner Barry Simon. The depth and breadth of this five-volume reference set covers almost all areas of classical analysis. The set can serve as a graduate-level analysis textbook and contains hundreds of problems, important historical background, and numerous notes. Researchers using analysis, professors teaching analysis at the graduate level, and graduate students who need any kind of analysis in their work will benefit from this set.

- Part 1: Real Analysis
- Part 2A: Basic Complex Analysis
- Part 2B: Advanced Complex Analysis
- Part 3: Harmonic Analysis
- Part 4: Operator Theory

Read more at <http://www.ams.org/bookstore-getitem/item=simon-set>.

Topic #6 ——— OP – SF Net 22.6 ——— November 15, 2015

From: Guillermo Lopez Lagomasino (lago@math.uc3m.es)
Subject: Announcement: Conference in Havana

Next year in the period June 5– June 10 the XII the international Conference on Approximation and Optimization will take place in Havana University. The web page of the conference is <http://gama.uc3m.es/appopt>.

This conference is the twelfth of a series, dedicated to research on Approximation and Optimization. The first two meetings were held in Havana (Cuba) in 1987 and 1993. Since then, these meetings have been organized in the following countries of the Caribbean area: Puebla (México) 1995, Caracas (Venezuela) 1997, Pointe-à-Pitre (Guadeloupe) 1999, Guatemala City (Guatemala) 2001, León (Nicaragua) 2004, Santo Domingo (Republica Dominicana) 2006, San Andrés (Colombia) 2008, San Salvador (El Salvador) 2011, and Puebla (México) 2013.

The goal of these conferences is to support the development of high level research and education in the Caribbean. Included are: invited lectures, tutorials, mini-symposia, and contributed talks on the following topics:

Approximation: Wavelets, polynomial and rational approximation, splines, orthogonal polynomials, interpolation, asymptotic analysis, radial basis functions, numerical methods.

Optimization: Continuous and discrete optimization, parametric, stochastic and global optimization, nonlinear equations and inequalities, nonsmooth analysis, critical point theory, control theory.

Mathematical economics: Fixed point theory, equilibria of competitive economies, portfolio problems, cooperative and non-cooperative games.

Applications: Engineering and energy models, robotics, pattern recognition, image restoration, applications in biology, economy and science.

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 September and October 2015.

<http://arxiv.org/abs/1509.00079>

Factorization for Hardy spaces and characterization for BMO spaces via commutators in the Bessel setting
Xuan Thinh Duong, Ji Li, Brett D. Wick, Dongyong Yang

<http://arxiv.org/abs/1509.00090>

On the solvability of confluent Heun equation and associated orthogonal polynomials
Nasser Saad

<http://arxiv.org/abs/1509.00819>

Remark on the formula by Rakhmanov and Steklov's conjecture
S.A. Denisov

<http://arxiv.org/abs/1509.00886>

Certain Integrals Arising from Ramanujan's Notebooks
Bruce C. Berndt, Armin Straub

<http://arxiv.org/abs/1509.00956>

Sampling of real multivariate polynomials and pluripotential theory
Robert J. Berman, Joaquim Ortega-Cerdá

<http://arxiv.org/abs/1509.01027>

Maximal Meixner generalized generating functions and connection-type relations
Michael A. Baeder, Howard S. Cohl, Roberto S. Costas-Santos, Wenqing Xu

<http://arxiv.org/abs/1509.01293>

On the dimensions of oscillator-like algebras induced by orthogonal polynomials: non-symmetric case
G. Honnouvo, K. Thirulogasanthar

<http://arxiv.org/abs/1509.01449>

Decomposition of the Kostlan-Shub-Smale model for random polynomials
V. Gichev

<http://arxiv.org/abs/1509.01716>

On a generalization of a theorem of Levin and Stečkin and inequalities of the Hermite-Hadamard type
Teresa Rajba

<http://arxiv.org/abs/1509.01725>

On determinants of modified Bessel functions and entire solutions of double confluent Heun equations

Victor M. Buchstaber, Alexey A. Glutsyuk

<http://arxiv.org/abs/1509.01960>

A new construction of the Clifford–Fourier kernel
Denis Constales, Hendrik De Bie, Pan Lian

<http://arxiv.org/abs/1509.02093>

Invariant Gibbs measures for the 2–d defocusing nonlinear Schrödinger equations
Tadahiro Oh, Laurent Thomann

<http://arxiv.org/abs/1509.02352>

More on hypergeometric Levy processes
Emma L. Horton, Andreas E. Kyprianou

<http://arxiv.org/abs/1509.02440>

Wiener Tauberian theorem for hypergeometric transforms
Sanjoy Pusti, Amit Samanta

<http://arxiv.org/abs/1509.02651>

Approximations in Sobolev Spaces by Prolate Spheroidal Wave Functions
Aline Bonami, Abderrazek Karoui

<http://arxiv.org/abs/1509.02764>

New index transforms of the Lebedev– Skalskaya type
Semyon Yakubovich

<http://arxiv.org/abs/1509.03343>

Relative Asymptotics for General Orthogonal Polynomials
Brian Simanek

<http://arxiv.org/abs/1509.04190>

Two closed forms for the Apostol–Bernoulli polynomials
Su Hu, Min–Soo Kim

<http://arxiv.org/abs/1509.04317>

Kantorovich form of generalized Szasz–type operators with certain parameters using Charlier polynomials
Abdul Wafi, Nadeem Rao

<http://arxiv.org/abs/1509.04433>

Nonsymmetric Askey–Wilson polynomials and Q –polynomial distance–regular graphs
Jae–Ho Lee

<http://arxiv.org/abs/1509.04542>

Asymptotic zero distribution of Jacobi–Piñeiro and multiple Laguerre polynomials
Thorsten Neuschel, Walter Van Assche

<http://arxiv.org/abs/1509.04807>

Orthogonal polynomials, reproducing kernels, and zeros of optimal approximants
Catherine Bénéteau, Dmitry Khavinson, Constanze Liaw, Daniel Seco, Alan A. Sola

<http://arxiv.org/abs/1509.04965>

On the existence of finite critical trajectories of families of quadratic differentials
Faouzi Thabet

<http://arxiv.org/abs/1509.05085>

Weighted Orthogonal Polynomials–Based Generalization of Wirtinger–Type Integral Inequalities for Delayed Continuous–Time Systems
Xian Zhang, Yuanyuan Han, Yantao Wang, Cheng Gong

<http://arxiv.org/abs/1509.05120>

Normalized incomplete beta function: log–concavity in parameters and other properties
Dmitrii Karp

<http://arxiv.org/abs/1509.05167>

Computing the Kummer function $U(a, b, z)$ for small values of the arguments
A. Gil, J. Segura, N. M. Temme

<http://arxiv.org/abs/1509.05202>

Constructive Solutions to the Riemann–Hilbert Problem and Middle Convolution
Yulia Bibilo, Galina Filipuk

<http://arxiv.org/abs/1509.05248>

New Airy–type solutions of the ultradiscrete Painlevé II equation with parity variables
Hikaru Igarashi, Shin Isojima, Kouichi Takemura

<http://arxiv.org/abs/1509.05331>

Orthogonal polynomials for a class of measures with discrete rotational symmetries in the complex plane
Ferenc Balogh, Tamara Grava, Dario Merzi

<http://arxiv.org/abs/1509.05873>

On the existence of short trajectories of quadratic differentials related to generalized Jacobi polynomials with non real varying parameters
Mondher Chouikhi, Faouzi Thabet

<http://arxiv.org/abs/1509.05829>

The Padé interpolation method applied to q –Painlevé equations II (differential grid version)
Hidehito Nagao

<http://arxiv.org/abs/1509.06143>

Orthogonal vs. non–orthogonal reducibility of matrix–valued measures
Erik Koelink, Pablo Román

<http://arxiv.org/abs/1509.06156>

Decompositions for hypergeometric function H_A, H_B, H_C
Anvar H. Hasanov, Rakhila B. Seilkhanova, Roza D. Seilova

<http://arxiv.org/abs/1509.06308>

Evaluation of a Family of Bessel Function Integrals
Jeremiah Birrell

<http://arxiv.org/abs/1509.06309>

Estimates for certain integrals of products of six Bessel functions
Diogo Oliveira e Silva, Christoph Thiele

<http://arxiv.org/abs/1509.06465>

Some new properties of Confluent Hypergeometric Functions
Xu-Dan Luo, Wei-Chuan Lin

<http://arxiv.org/abs/1509.06540>

Symmetric moment problems and a conjecture of Valent
Christian Berg, Ryszard Szwarc

<http://arxiv.org/abs/1509.06674>

A sharp trilinear inequality related to Fourier restriction on the circle
Emanuel Carneiro, Damiano Foschi, Diogo Oliveira e Silva, Christoph Thiele

<http://arxiv.org/abs/1509.06704>

Critical measures for vector energy: global structure of trajectories of quadratic differentials
Andrei Martínez-Finkelshtein, Guilherme Silva

<http://arxiv.org/abs/1509.06750>

3D weak lensing with spin wavelets on the ball
Boris Leistedt, Jason D. McEwen, Thomas D. Kitching, Hiranya V. Peiris

<http://arxiv.org/abs/1509.07008>

Complex exceptional orthogonal polynomials and quasi-invariance
William A. Haese-Hill, Martin A. Hallnäs, Alexander P. Veselov

<http://arxiv.org/abs/1509.07015>

Hankel determinants for a singular complex weight and the first and third Painlevé transcendents
Shuai-Xia Xu, Dan Dai, Yu-Qiu Zhao

<http://arxiv.org/abs/1509.07115>

Orthogonal fast spherical Bessel transform on uniform grid
Vladislav V. Serov

<http://arxiv.org/abs/1509.07391>

Spacing properties of the zeros of orthogonal polynomials on Cantor sets via a sequence of polynomial mappings
Gökalp Alpan

<http://arxiv.org/abs/1509.07419>

Some dual definite integrals for Bessel functions
Howard S. Cohl, Sean J. Nair, Rebekah M. Palmer

<http://arxiv.org/abs/1509.07624>

Tensor calculus in polar coordinates using Jacobi polynomials
Geoffrey M. Vasil, Keaton J. Burns, Daniel Lecoanet, Sheehan Olver, Benjamin P. Brown, Jeffrey S. Oishi

<http://arxiv.org/abs/1509.08186>

Geometric Aspects of Painlevé Equations

Kenji Kajiwara, Masatoshi Noumi, Yasuhiko Yamada

<http://arxiv.org/abs/1509.08213>

Recurrence Relations of the Multi-Indexed Orthogonal Polynomials : III

Satoru Odake

<http://arxiv.org/abs/1509.08235>

On the Paley–Wiener theorem in the Mellin transform setting

Carlo Bardaro, Paul L. Butzer, Ilaria Mantellini, Gerhard Schmeisser

<http://arxiv.org/abs/1509.08529>

Fractional Laplace operator and Meijer G–function

Bartłomiej Dyda, Alexey Kuznetsov, Mateusz Kwaśnicki

<http://arxiv.org/abs/1509.08533>

Eigenvalues of the fractional Laplace operator in the unit ball

Bartłomiej Dyda, Alexey Kuznetsov, Mateusz Kwaśnicki

<http://arxiv.org/abs/1509.08723>

Index transforms with the square of Bessel functions

Semyon Yakubovich

<http://arxiv.org/abs/1509.08963>

Integrals of Lipschitz–Hankel type, Legendre functions, and table errata

Robert S. Maier

<http://arxiv.org/abs/1510.00025>

Correlation functions of real zeros of random polynomials

Friedrich Götze, Dzianis Kaliada, Dmitry Zaporozhets

<http://arxiv.org/abs/1510.00045>

Weyl type asymptotics and bounds for the eigenvalues of functional–difference operators for mirror curves

Ari Laptev, Lukas Schimmer, Leon A. Takhtajan

<http://arxiv.org/abs/1510.00185>

Jacob’s ladders, factorization and metamorphoses as an appendix to the Riemann functional equation for $\zeta(s)$ on the critical line

Jan Moser

<http://arxiv.org/abs/1510.00192>

A note on a modified Bessel function integral

R.B. Paris

<http://arxiv.org/abs/1510.00323>

Large n –limit for Random matrices with External Source with 3 eigenvalues

Jian Xu, Engui Fan, Yang Chen

<http://arxiv.org/abs/1510.00335>

Jacobi's epsilon and zeta function for moduli outside the interval $[0, 1]$

Milan Batista

<http://arxiv.org/abs/1510.00406>

Notes on the q -Analogues of the Natural Transforms and Some Further Applications

S. K. Q. Al-Omari, A. Kilicman

<http://arxiv.org/abs/1510.01141>

On the algebraicity of some products of special values of Barnes' multiple gamma function

Tomokazu Kashio

<http://arxiv.org/abs/1510.01285>

On the zeros of Confluent Hypergeometric Functions

Wei-Chuan Lin, Xu-Dan Luo

<http://arxiv.org/abs/1510.01540>

Confluence of hypergeometric functions and integrable hydrodynamic type systems

Y. Kodama, B. Konopelchenko

<http://arxiv.org/abs/1510.01549>

A Non-Sieving Application of the Euler Zeta Function

Michael P. May

<http://arxiv.org/abs/1510.01897>

Subdyadic square functions and applications to weighted harmonic analysis

David Beltran, Jonathan Bennett

<http://arxiv.org/abs/1510.01901>

Hankel determinants of zeta values

Alan Haynes, Wadim Zudilin

<http://arxiv.org/abs/1510.02339>

On asymptotic Gauss-Lucas theorem

R. Boegvad, D. Khavinson, B. Shapiro

<http://arxiv.org/abs/1510.02570>

Differential equations for discrete Jacobi-Sobolev orthogonal polynomials

Antonio J. Durán, Manuel D. de la Iglesia

<http://arxiv.org/abs/1510.02575>

Hypergeometric Functions over Finite Fields

Jenny Fuselier, Ling Long, Ravi Ramakrishna, Holly Swisher, Fang-Ting Tu

<http://arxiv.org/abs/1510.02579>

Exceptional Hahn and Jacobi orthogonal polynomials

Antonio J. Durán

<http://arxiv.org/abs/1510.02584>

Stabilization of the asymptotic expansions of the zeros of a partial theta function

Vladimir Kostov

<http://arxiv.org/abs/1510.02923>

On 1-Laplacian Elliptic Equations Modeling Magnetic Resonance Image Rician Denoising
Adrian Martin, Emanuele Schiavi, Sergio Segura de Leon

<http://arxiv.org/abs/1510.02959>

Estimates for approximations by Fourier sums, best approximations and best orthogonal trigonometric approximations of the classes of (ψ, β) -differentiable functions
A.S. Serdyuk, T.A. Stepaniuk

<http://arxiv.org/abs/1510.02965>

Derivative bounds for fractional maximal functions
Emanuel Carneiro, José Madrid

<http://arxiv.org/abs/1510.03200>

Sinc integrals and tiny numbers
Uwe Bäsel, Robert Baillie

<http://arxiv.org/abs/1510.03265>

On the Markov inequality in the L_2 -norm with Gegenbauer weight
Alexei Shadrin, Geno Nikolov, Dragomir Aleksov

<http://arxiv.org/abs/1510.03459>

Some inequalities for the q -Extension of the Gamma Function
Kwara Nantomah, Edward Prempeh, Stephen Boakye Twum

<http://arxiv.org/abs/1510.03772>

A Generalized Freud Weight
Peter A. Clarkson, Kerstin Jordaan, Abey Kelil

<http://arxiv.org/abs/1510.04359>

The distribution of zeros of $\zeta(s)$ and gaps between zeros of $\zeta(s)$
Fan Ge

<http://arxiv.org/abs/1510.04837>

Generalized 3D Zernike functions for analytic construction of band-limited line-detecting wavelets
Augustus J.E.M. Janssen

<http://arxiv.org/abs/1510.05017>

Generations of monic polynomials such that the coefficients of the polynomials of the next generation coincide with the zeros of the polynomials of the current generation, and new solvable many-body problems
Oksana Bihun, Francesco Calogero

<http://arxiv.org/abs/1510.05023>

Combinatorics of the two-species ASEP and Koornwinder moments
Sylvie Corteel, Olya Mandelshtam, Lauren Williams

<http://arxiv.org/abs/1510.05110>

The asymptotics of the Struve function $\mathbb{H}_\nu(z)$ for large complex order and argument
R. B. Paris

<http://arxiv.org/abs/1510.05322>

The Weber equation as a normal form with applications to top of the barrier scattering
Rodica D. Costin, Hyejin Park, Wilhelm Schlag

<http://arxiv.org/abs/1510.05575>

A measure and orientation preserving homeomorphism of a cube with Jacobian equal -1 almost everywhere
Paweł Goldstein, Piotr Hajłasz

<http://arxiv.org/abs/1510.05576>

Optimization for Gaussian Processes via Chaining
Emile Contal, Cédric Malherbe, Nicolas Vayatis

<http://arxiv.org/abs/1510.05770>

Generalized Stieltjes transforms of some probability distributions
Nizar Demni

<http://arxiv.org/abs/1510.06003>

Root-counting measures of Jacobi polynomials and topological types and critical geodesics of related quadratic differentials
Boris Shapiro, Alexander Solynin

<http://arxiv.org/abs/1510.06282>

On an Inequality Related to a Certain Fourier Cosine Series
Wolfgang Gabcke

<http://arxiv.org/abs/1510.06313>

Order of Magnitude of Fourier Coefficients for Almost Periodic Functions
Alec Train, Rohit Jain, Will Carlson

<http://arxiv.org/abs/1510.06333>

Exploring Riemann's Functional Equation
Michael Milgram

<http://arxiv.org/abs/1510.06420>

Weighted energy problem on the unit sphere
Mykhailo Bilogliadov

<http://arxiv.org/abs/1510.06435>

Special function identities from superelliptic Kummer varieties
Adrian Clingher, Charles F. Doran, Andreas Malmendier

<http://arxiv.org/abs/1510.06602>

Uniform asymptotic behaviour of Jacobi- s_n near a singular point. The Lost formula from handbooks for elliptic functions
Oleg Kiselev

<http://arxiv.org/abs/1510.06692>

On Scottish Book Problem 157
Kevin Beanland, Paul Humke, Trevor Richards

<http://arxiv.org/abs/1510.07019>

Dispersion Estimates for the Discrete Laguerre Operator
Aleksey Kostenko, Gerald Teschl

<http://arxiv.org/abs/1510.07324>

A generalized Kontsevich–Vishik trace for Fourier Integral Operators and the Laurent expansion of ζ -functions
Tobias Hartung, Simon Scott

<http://arxiv.org/abs/1510.07661>

Hypergeometric Functions and Relations to Dwork Hypersurfaces
Heidi Goodson

<http://arxiv.org/abs/1510.08599>

Zeros of quasi-orthogonal Jacobi polynomials
Kathy Driver, Kerstin Jordaan

<http://arxiv.org/abs/1510.08658>

Dimension hopping and families of strictly positive definite zonal basis functions on spheres
R.K. Beatson, W. zu Castell

<http://arxiv.org/abs/1510.08876>

Feynman integral in $\mathbb{R}^1 \oplus \mathbb{R}^m$ and complex expansion of ${}_2F_1$
Mykola A. Shpot, Tibor K. Pogány

<http://arxiv.org/abs/1510.09067>

Laplace equations, conformal superintegrability and Bôcher contractions
E. Kalnins, W. Miller Jr, E. Subag

<http://arxiv.org/abs/1510.09148>

Lebedev's type index transforms with the modified Bessel functions
Semyon Yakubovich

Topic #8 ——— OP – SF Net 22.6 ——— November 15, 2015

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) and Kerstin Jordaan (kerstin.jordaan@up.ac.za).

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 or to see a link to the archive of all messages, 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:

Society for Industrial and Applied Mathematics
3600 University City Science Center
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e-mail: service@siam.org
WWW : <http://www.siam.org>

Topic #9 _____ OP – SF Net 22.6 _____ November 15, 2015

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 or kerstin.jordaan@up.ac.za.

Contributions to OP-SF NET 23.1 should be sent by January 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 (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 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
Diego Dominici, OP–SF Talk moderator
Bonita Saunders, Webmaster and OP–SF Talk moderator

Thought of the month

“The study of mathematics, like the Nile, begins in minuteness but ends in magnificence”

Charles Caleb Colton

Historical events for the 15th of November (part 2). See what famous, interesting and notable events happened throughout history on November 15. 2015 Holly Holm defeats UFC Champion Ronda Rousey in an upset in Melbourne, Australia. 2015 France launches air strikes on Isis stronghold Raqqa in Syria in wake of terror attack on Paris. 2015 Federation Cup Women's Tennis, Prague, Czech Republic: Czech pair Karolína Plíšková & Barbora Strýcová beats Anastasia Pavlyuchenkova & Elena Vesnina of Russia 4-6, 6-3, 6-2 for a 3-2 win and 9th title for the home country. 2017 Australian postal vote on same-sex marriage revealed - 61% vote yes. 2017 Argentine submarine San Juan goes missing in the Atlantic after reporting mechanical failure

Volume 21, Number 11 "November 2015. Table of Contents. About The Cover. [PDF - 8.22 MB - 228 pages]. Volume 21, Number 10 "October 2015. Table of Contents. About The Cover. [PDF - 8.11 MB - 207 pages]. Past Issues Volume 26, Number 6 "June 2020 Volume 26, Number 5 "May 2020 Volume 26, Number 4 "April 2020 Volume 26, Number 3 "March 2020 Volume 26, Number 2 "February 2020 Volume 26, Number 1 "January 2020 Volume 25, Number 12 "December 2019 Volume 25, Number 11 "November 2019 Volume 25, Number 10 "October 2019 Volume 25, Number 9 "September 2019 Volume 25, Number 8 "August 2019 Volume 25, Number 7 "July 2019 Volume 25, Number 6 "June 2019 Volume 25, Number 5 "May 2019 Volume 25, Number 4 "April 2019 Volume 25, Number 3 "March 2019 Volume 25, Number 2 "February 2019 Volume 25, Number 1 "January 2019 Volume 24, Number 12 "December 2018 Volume 24, Number 11 "November 2018 Volume 24, Number 10 "October 2018 Volume 24, Number 9 "September 2018 Volume 24, Number 8 "August 2018 Volume 24, Number 7 "July 2018 Volume 24, Number 6 "June 2018 Volume 24, Number 5 "May 2018 Volume 24, Number 4 "April 2018 Volume 24, Number 3 "March 2018 Volume 24, Number 2 "February 2018 Volume 24, Number 1 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Basin Research - Volume 22, Issue 6, 2010. Navigate this Journal. About. We address this challenge by quantifying the volume and granulometric characteristics of sediment exported from modern rivers draining across active normal faults in the Central Apennines in Italy. We demonstrate that catchments undergoing a transient response to tectonics are associated with significant volumetric export of material derived primarily from the zone upstream of the fault, producing bimodal grain-size distributions with elevated D84 values within the transient reach.