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

http://math.nist.gov/opsf

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Editors:
Howard S. Cohl howard.cohl@nist.gov
Sarah Post spost@hawaii.edu

Topics:

Calendar of Events:

March 28-29 2019
Fifth Orthonet Meeting
(V Congreso de la Red de Polinomios Ortogonales y Teoría de Aproximación)
Universidad Pública de Navarra, Pamplona, Spain
http://www.unavarra.es/congreso-orthonet

May 27-29, 2019
Recent Advances in Scientific Computation
On the 25th anniversary of the Electronic Transactions on Numerical Analysis (ETNA)
Santa Margherita di Pula outside Cagliari, Sardinia, Italy
http://bugs.unica.it/ETNA25/

June 16-20, 2019
Elliptic integrable systems, special functions and quantum field theory
Nordic Institute for Theoretical Physics (NORDITA), Stockholm, Sweden
http://www.nordita.org/elliptic2019

July 15–19, 2019

International Congress on Industrial and Applied Mathematics (ICIAM 2019)
Minisymposium on "Multivariate Orthogonal Polynomials: Theory and Applications",
Organized by Paco Marcellán, Maite Pérez and Yuan Xu,
Campus de Blasco Ibáñez, Universitat de València, València, Spain
https://iciam2019.org

July 22–26, 2019

International Symposium on Orthogonal Polynomials, Special Functions & Applications (OPSFA–15)
RISC, Johannes Kepler University, Linz, Austria
http://www.risc.jku.at/conferences/opsfa2019/

September 1–7, 2019

The 2nd International Conference on Symmetry
Special Session on "Special Functions and Orthogonal Polynomials",
Organized by Howard S. Cohl and Roberto S. Costas–Santos,
Centro de Ciencias de Benasque Pedro Pascual, Benasque, Spain
http://benasque.org/2019symmetry

September 14–15, 2019

AMS Fall Central Sectional Meeting
Special Session on "Special Functions and Orthogonal Polynomials"
University of Wisconsin–Madison, Madison, Wisconsin, USA
http://www.ams.org/meetings/sectional/2267_program.html

July 6–10, 2020

SIAM Annual Meeting, held jointly with CAIMS
(Canadian Applied and Industrial Mathematics Society)
Sheraton Centre Toronto Hotel, Toronto, Ontario, Canada
https://www.siam.org/Conferences/CM/Main/an20

Topic #1 ——— OP – SF Net 26.2 ——— March 15, 2019

From: Walter Van Assche (walter.vanassche@kuleuven.be)
Subject: Announcement: **Thomas Bothner** as 2019 Gábor Szegő prize winner

Gábor Szegő prize 2019

The selection committee of the Gábor Szegő prize 2019 has decided unanimously to award the Gábor Szegő prize 2019 to Thomas Bothner for his paper, *Transition asymptotics for the Painlevé II transcendent*, Duke Math. J. 166 (2017), no. 2, 205–324. He deserves the prize for "his truly brilliant contributions to the recent advances in Riemann–Hilbert techniques at the boundary between the theory of special functions and applications to mathematical physics".

The selection committee was impressed with his list of 18 publications in very good to top journals. Other works of Thomas Bothner which deserve to be mentioned are his paper with Marco Bertola, *Zeros of large degree Vorob'ev-Yablonski polynomials via a Hankel determinant identity*, Internat. Math. Res. Notices 2015, no. 19, 9330–9399, and his joint paper with Alexander Its and I. Krasovsky, *On the asymptotic behavior of a log gas in the bulk scaling limit in the presence of a varying external potential I*, Comm. Math. Phys. 337 (2015), 1397–1463.

Thomas Bothner received his PhD in Mathematics in May 2013 from Purdue University under the supervision of Alexander Its. After that he held post-doctoral positions at the Centre de Recherches Mathématiques Montréal working with Marco Bertola and at the University of Michigan, Ann Arbor, where he was a James Van Loo post-doctoral fellow working with Jinho Baik and Peter Miller. He joined King's College London as a Lecturer in Analysis in the Department of Mathematics in September 2018.

The prize will be awarded at the upcoming OPSFA conference in Hagenberg, Austria, July 22-26, where Thomas Bothner will give a plenary talk.

Gábor Szegő (1895-1985)

Thomas Bothner

Selection Committee:
Walter Van Assche, chair SIAG/OPSF, University of Leuven, Belgium
Sarah Post, University of Hawaii at Manoa, Hawaii, USA
Bonita Saunders, NIST, Gaithersburg, Maryland, USA
David Gómez-Ullate, Universidad de Cádiz, Spain
Andrei Martínez Finkelshtein, Baylor University, Texas, USA, and Universidad de Almería, Almería, Spain.

Topic #2 ——— OP - SF Net 26.2 ——— March 15, 2019

From: Christoph Koutschan (christoph.koutschan@ricam.oeaw.ac.at)
Subject: Announcement: OPSFA-15 (July 2019) in Hagenberg, Austria

The 15th Symposium on Orthogonal Polynomials and Special Functions and Applications (OPSFA-15) will take place in Hagenberg, Austria, from July 22 to July 26, 2019. It is organized by the Research Institute for Symbolic Computation (RISC). The conference venue is the campus of the University of Applied Sciences in Hagenberg. Hagenberg (im Muehlkreis) is a small town in Upper Austria, surrounded by green hills and located halfway between Salzburg and Vienna. We cordially invite all interested colleagues to come to Austria and attend this meeting!

The conference features plenary lectures given by Peter Clarkson, Christian Krattenthaler, Irina Nenciu, Veronika Pillwein, Mikhail Sodin, Alan Sokal, Armin Straub, Luc Vinet, and the Gábor Szegő Prize winner, Thomas Bothner.

The contributed talks will be organized in topical sessions ("mini-symposia"). For those who are interested in giving a talk, please check the list of mini-symposia which topic

fits best and contact the respective organizers. If none of the topics is suitable, the talk can also be presented in the general session for contributed talks. We are also accepting posters for display at the meeting. In both cases, contact the conference chair. In any case, submissions should be sent until May 15, 2019.

The early registration fee (until June 30) is 300 EUR. A reduced registration fee of 190 EUR is available for students and for participants from developing countries. In addition, they are eligible to apply to have their registration fee waived (this selection is made by the scientific committee). If you would like to apply, please send a CV, a recommendation letter, and a short statement describing your situation to the conference chair, no later than April 30, 2019.

The registration fee covers lunches, coffee breaks, and a welcome reception on Sunday evening, since participants are expected to arrive on Sunday. It also includes the excursion on Wednesday afternoon to the lovely medieval city of Freistadt, and the conference dinner. Moreover, we organize a complimentary shuttle service from Linz airport / Linz train station to the conference hotel on Sunday (July 21), and in the opposite direction on Friday afternoon (July 26) and Saturday morning (July 27). The accommodation can be booked via the conference registration form at a rate of 44 EUR per night in a single room, including breakfast. The hotel is in walking distance to the lecture rooms.

For more information (program, travel instructions, registration, etc.), please visit the website http://www.risc.jku.at/conferences/opsfa2019 or contact the organizers directly in case of specific questions. We are looking forward to welcome you in Hagenberg in July!

Topic #3 ——— OP - SF Net 26.2 ——— March 15, 2019

From: Howard S. Cohl (howard.cohl@nist.gov) and
Roberto S. Costas-Santos (rscosa@gmail.com)
Subject: Announcement: Special Session on OPSF at Symmetry in Benasque, Spain

Dear Colleagues: We invite you to attend a special session on "Symmetry in Special Functions and Orthogonal Polynomials" at the 2nd International Conference on Symmetry at the Centro de Ciencias de Benasque Pedro Pascual, on 1-7 September 2019 in Benasque, Spain. If you are interested in speaking in our special session, then please contact:

Howard Cohl, Applied and Computational Mathematics Division, NIST;
howard.cohl@nist.gov
Roberto Costas-Santos, Departamento de Física y Matemáticas, Universidad de Alcalá;
rscosa@gmail.com

Scope: Special functions; Orthogonal polynomials; q-series and q-calculus; Generalized, basic, elliptic, and Kaneko-Macdonald hypergeometric series; Addition theorems and eigenfunction expansions; Definite and indefinite integrals of special functions; Global analysis on Riemannian and pseudo-Riemannian manfiolds; Applications of special functions and orthogonal polynomials; Mathematical knowledge management of OPSF.

You may also contribute to the corresponding Special Issue on "Symmetry in Special Functions and Orthogonal Polynomials" in the journal Symmetry with guest editors:
Howard S. Cohl; Charles F. Dunkl; Roberto S. Costas-Santos; Hans Volkmer; Loyal Durand

Topic #4 ——— OP - SF Net 26.2 ——— March 15, 2019

From: Barry Simon (bsimon@caltech.edu)
Subject: Public Request from **Barry Simon** to OPUC Workers for AMS Volume Update

The American Mathematical Society (AMS) has agreed to publish a second edition of my two volume *Orthogonal Polynomials on the Unit Circle* (OPUC) book. I don't expect to start on this until March of 2019 and I expect it to take 2-3 years to complete. There has been substantial new literature since 2005 when those books appeared and I have learned of earlier literature that I missed (such as the earlier introduction of Cantero-Moral-Velázquez (CMV) matrices in the numerical linear algebra literature). The AMS and I are expecting to add 150-200 pages to Volume 1 and 50-100 pages to Volume 2. While I may discuss in some places, orthogonal polynomials on the real line (OPRL) theory and more general OP topics, that will be very limited and the focus will be on OPUC.

I am making a public request to workers in this and related areas to please let me know of work by you and others related to the general theory of OPUC that you would like me to consider in this new project. Don't hesitate to tell me about pre-2005 work that I might have missed. I also welcome any list of typos (or worse) you might have for the first edition. My email is bsimon@caltech.edu. And please pass this on to others.

Topic #5 ——— OP - SF Net 26.2 ——— March 15, 2019

From: Lothar Reichel (reichel@math.kent.edu)
Subject: Table of Contents for Special Volume 50 in ETNA dedicated to **Walter Gautschi**

The Electronic Transactions on Numerical Analysis (ETNA), Volume 50 (2018), was recently completed. This Special Volume of ETNA, dedicated to Walter Gautschi on the occasion of his 90th birthday, was edited by Gradimir V. Milovanović and Lothar Reichel.

You may find the Special Volume online at this link.
Below is the table of contents of the Special Volume:

Topic #6 ——— OP – SF Net 26.2 ——— March 15, 2019

From: James McLaughlin (jmclaughlin@wcupa.edu)
Subject: Report on: AMS Special Session on Continued Fractions by **James McLaughlin**

Report on the AMS Special Session on Continued Fractions, held on Thursday January 17, 2019 at the Joint Mathematics Meetings, Baltimore, MD.

Report by James McLaughlin (jmclaughlin2@wcupa.edu), one of the co-organizers.

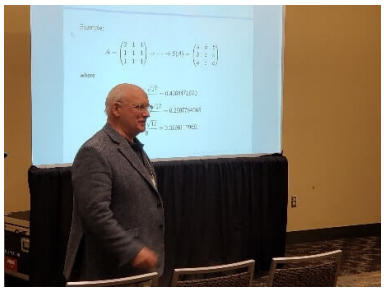
This special session was the eighth in a series of special sessions, which have been held at the Joint Mathematics Meetings roughly every two years, beginning in 2004. These special sessions were initially co-organized by James McLaughlin and Nancy Wyshinski, but they were joined in 2017 by Geremias Polanco, and the organizing team was extended to four with the addition of Barry Smith for JMM 2019.

Continued fractions have connections with many areas of mathematics. These areas include number theory (topics include transcendence questions, irrationality measures, Pell's equation, approximation theory, class numbers, Diophantine equations), basic hypergeometric series (q-continued fractions), cryptography (the continued fraction factoring algorithm), ergodic theory, orthogonal polynomials, dynamical systems, applied mathematics (topics include phyllotaxis, birth-death processes), combinatorics (permutation patterns, Motzkin paths) and special functions. The rationale for this series of special sessions is our belief is that continued fraction people from different fields will benefit greatly from bringing the techniques, methods and knowledge from different fields of continued fractions together in a collection of talks devoted to the general field of continued fractions.

The schedule of talks in the most recent special session was as follows:

8:00 a.m. *Matrix scaling and a problem in number theory.*
Melvyn B. Nathanson, Lehman College (CUNY)

Recently, there has been renewed interest in alternate minimization algorithms to generate doubly stochastic matrices, and their generalization to operator scaling. This talk will describe a problem in Diophantine approximation that these algorithms suggest.

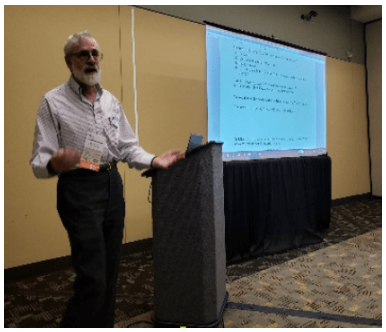


Melvyn B. Nathanson

9:00 a.m. *Periodicity of Certain Generalized Continued Fractions*.
Steven H. Weintraub, Lehigh University

We have previously considered continued fractions with "numerator" a positive integer N, which we refer to as cfN expansions. In particular, let E be a positive integer that is not a perfect square. For $N > 1$, $\sqrt{E}$ has infinitely many cfN expansions. There is a natural notion of the "best" cfN expansion of. We have conjectured, based on extensive numerical evidence, that such a best expansion is not always periodic. From this evidence, it is difficult to predict for which N this expansion will be periodic. We show here that for any such E, there are infinitely many values of N for which this expansion is indeed periodic, more precisely, periodic of period 1 or 2, and we obtain formulas for a subset of these expansions in terms of solutions to Pell's equation $x^2 - Ey^2 = 1$.

10:00 a.m. *Hybrid Continued Fractions and p-adic algorithms, with some applications to cryptography and "unimaginable" numbers*.
Antonino Leonardis, Università della Calabria

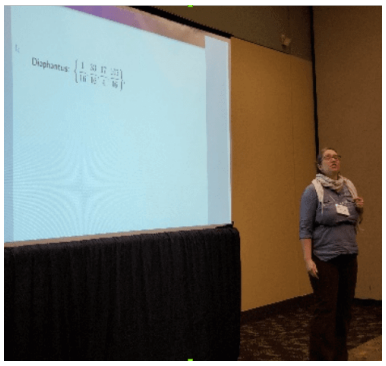


Steven H. Weintraub

This work will continue the author's previous studies on continued fractions and Heron's algorithm, as from his former JMM 2017 presentation. Extending the notion of continued fraction to the p-adic fields, one can find continued fractions which converge in both real and p-adic topologies to the "same" quadratic irrational number, some of which are given by the Heron's algorithm. The definition can be possibly generalized to other global fields, as left as an open question. We will end the part on hybrid convergence with many numerical examples. After that, we will recall the basic algorithms on the p-adic fields studied by the author and see some applications of theirs to computer science: applying Heron's algorithm to quickly compute p-adic square roots, finding new elementary cryptography procedures and some methods to get pseudo-random numbers, calculate last digits of some peculiar very big numbers.

Antonino Leonardis

10:30 a.m. *Using Continued Fractions to Solve a Family of Diophantine Equations*.
Eva G. Goedhart, Lebanon Valley College



Eva G. Goedhart

For positive integers a, b, c, k with $k \geq 7$, I will show how the family of Diophantine equations $(a^2cX^k - 1)(b^2cY^k - 1) = (abcZ^k - 1)^2$ has no integer solutions $x, y, z > 1$ with $a^2x^k \neq b^2y^k$ by using the simple continued fraction expansion of possible solutions to contradict known results. While this will be my focus for this presentation, the proof also uses a Diophantine approximation theorem.

Johann Thiel

11:00 a.m. *Maximal and Average Behavior of Elements in (u, v)-Calkin-Wilf Trees*.
Johann Thiel, New York City College of Technology – CUNY

The Calkin-Wilf tree is an infinite binary tree enumerating the positive rationals that has many interesting properties. In particular, one can compute the maximal and average values of elements of a fixed depth in the tree. In this talk we will extend these results to a generalization, due to Nathanson, of the Calkin-Wilf tree referred to as the (u, v)-Calkin-Wilf tree for positive integers u and v.

11:30 a.m. *Nonstandard continued fractions with irrational numerator*.
John R. Greene*, University of Minnesota Duluth

John R. Greene

The simple continued fraction of $\sqrt{n}$ has very nice periodic and palindromic properties. Expansions of the form

$$\sqrt{n} = c_0 + \cfrac{z}{c_1 + \cfrac{z}{c_2 + \cfrac{z}{c_3 + \cdots}}},$$

have the same palindromic properties provided z is a positive integer which is not too large and the expansion is periodic. When z is rational, the palindromic properties are only guaranteed when the expansion is periodic and the c's are sufficiently large compared to z. Here we investigate continued fraction expansions for $\sqrt{a + b\sqrt{m}}$ in the form

$$\sqrt{a + b\sqrt{m}} = c_0 + \cfrac{\sqrt{m}}{c_1 + \cfrac{\sqrt{m}}{c_2 + \cfrac{\sqrt{m}}{c_3 + \cdots}}}.$$

In these cases, when the expansion is periodic, it appears to mimic the simple continued fraction expansion of $\sqrt{n}$ more closely than the two previously mentioned cases.

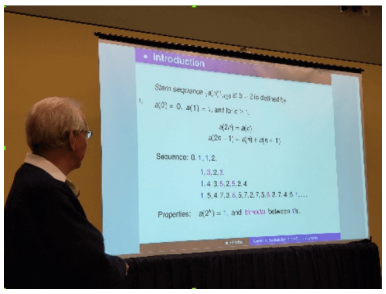
12:00 – 1:00 p.m. *Break*.

Guarav Bhatnagar

1:00 p.m. *Orthogonal polynomials associated with a continued fraction of Hirschhorn.*
Gaurav Bhatnagar, University of Vienna, Austria

We study orthogonal polynomials associated with a continued fraction due to Hirschhorn. Hirschhorn's continued fraction contains as special cases the famous Rogers–Ramanujan continued fraction and two of Ramanujan's generalizations. The orthogonality measure of the set of polynomials obtained has an absolutely continuous component. We find generating functions, asymptotic formulas, orthogonality relations, and the Stieltjes transform of the measure. Using standard generating function techniques, we show how to obtain formulas for the convergents of Ramanujan's continued fractions, including a formula that Ramanujan recorded himself as Entry 16 in Chapter 16 of his second notebook.

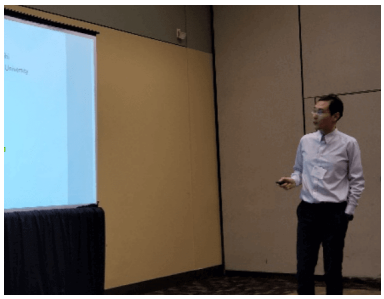
2:00 p.m. *Continued fractions from b-ary Stern polynomials.*
Larry Ericksen, Millville, New Jersey



Larry Ericksen

Lucas sequences, like those of Fibonacci and Pell, are identified within generalized Stern number sequences. Each Stern polynomial analogue in b variables is obtained from recursions and generating functions. Then the associated continued fractions are developed as ratios of consecutive polynomials which involve single terms in their partial numerators.

2:30 p.m. *Matrix Representation for Higher-Order Euler Polynomials.*
Lin Jiu, Dalhousie University

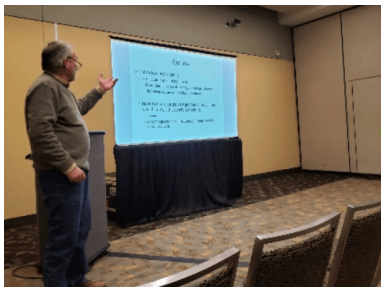


Lin Jiu

We study the Euler polynomials of order p, which are denoted by $E_n^{(p)}(x)$. Define a doubly infinite band matrix $RE^{(p)}$. Then, the left upper $m \times m$ block of $RE^{(p)}$ generates all $E_n^{(p)}(x)$ through its powers, for $n \leq m$. To obtain this matrix representation, the key theorem is to connect the moments of a random variable and the generalized Motzkin numbers, through the same J-fractions. Since recent results recognize $E_n^{(p)}(x)$ as moments of certain random variable, by the key theorem, we can view them also as generalized Motzkin numbers. Then, the matrix representation follows naturally from the lattice path interpretation. An analogue for the Bernoulli polynomials $B_n(x)$, is also obtained.

3:00 p.m. *Some Experimental Evidence Supporting the Littlewood Conjecture.*
Rich Burge, Garden Valley CA

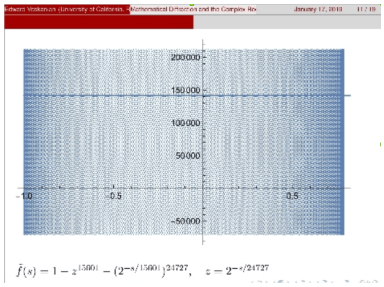
This talk will present a two-dimensional continued fraction algorithm. Among other observations, two hypotheses about the behavior of the algorithm are noted from which the Littlewood conjecture can be deduced. Some experimental evidence supporting the hypotheses will be presented.



Rich Burge

3:30 p.m. *Mathematical Diffraction and the Complex Roots of a Nonlattice Dirichlet Polynomial*.
Edward Voskanian, University of California, Riverside

The discovery of quasicrystals established a new theory of solid state physics, and motivated by the desire to model these new structures also gave rise to the theory of mathematical quasicrystals. The set of complex roots of a nonlattice Dirichlet polynomial are approximated by the roots of a sequence of lattice Dirichlet polynomials determined by a sequence of simultaneous Diophantine approximations. This procedure, developed by Lapidus and van Frankenhuijsen, shows that the complex roots of a nonlattice Dirichlet polynomial have a quasiperiodic structure. The paper "Model Sets: A Survey" by Robert V. Moody suggests that aperiodicity and diffractivity are among the properties considered representative of mathematical quasicrystals, a term not universally defined. In this paper we give a survey of an open problem stated by Lapidus and van Frankenhuijsen asking if the set of complex roots of a nonlattice Dirichlet polynomial can be understood in terms of a suitable generalized mathematical quasicrystal. And, using a measure theoretic idealization of kinematic diffraction developed by A. Hof, a formula for the diffraction measure of a lattice Dirichlet polynomial satisfying a kind of regularity condition is given.



Unfortunately there was no picture of Edward from his talk. This image is from his presentation.

Topic #7 ——— OP - SF Net 26.2 ——— March 15, 2019

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 January and February 2019. This list has been separated into two categories.

OP-SF Net Subscriber E-Prints

http://arxiv.org/abs/1901.00142
An expansion for the sum of a product of an exponential and a Bessel function
R. B. Paris

http://arxiv.org/abs/1901.00318
Painlevé V, Painlevé XXXIV and the Degenerate Laguerre Unitary Ensemble
Chao Min, Yang Chen

http://arxiv.org/abs/1901.00907
Combinatorics of (q, y)-Laguerre polynomials
Qiongqiong Pan, Jiang Zeng

http://arxiv.org/abs/1901.00946
Rogers-Ramanujan-Slater Type Identities
James McLaughlin, Andrew V. Sills, Peter Zimmer

http://arxiv.org/abs/1901.00951
Some identities between basic hypergeometric series deriving from a new Bailey-type transformation
James McLaughlin, Peter Zimmer

http://arxiv.org/abs/1901.01109
Asymptotics of Certain q-Series
Ruiming Zhang

http://arxiv.org/abs/1901.01121
Threefold symmetric Hahn-classical multiple orthogonal polynomials
Ana F. Loureiro, Walter Van Assche

http://arxiv.org/abs/1901.01128
Orthogonality of quasi-orthogonal polynomials
Cleonice F. Bracciali, Francisco Marcellán, Serhan Varma

http://arxiv.org/abs/1901.01232
Bounds for modified Lommel functions of the first kind and their ratios
Robert E. Gaunt

http://arxiv.org/abs/1901.01256
An Integral Equation for Riemann's Zeta Function and its Approximate Solution
Michael Milgram

http://arxiv.org/abs/1901.01988
General Multi-sum Transformations and Some Implications
James McLaughlin

http://arxiv.org/abs/1901.03102
Solutions of Darboux Equations, its Degeneration and Painlevé VI Equations
Yik-Man Chiang, Avery Ching, Chiu-Yin Tsang

http://arxiv.org/abs/1901.03368
On Positivities of Certain q-Special Functions
Ruiming Zhang

http://arxiv.org/abs/1901.03453
The Fourier extension method and discrete orthogonal polynomials on an arc of the circle
Jeffrey S. Geronimo, Karl Liechty

http://arxiv.org/abs/1901.03700
Some relations between the Riemann zeta function and the generalized Bernoulli polynomials of level m
Yamilet Quintana, Héctor Torres-Guzmán

http://arxiv.org/abs/1901.03672
Recurrence equations and their classical orthogonal polynomial solutions on a quadratic or q-quadratic lattice
Daniel Duviol Tcheutia

http://arxiv.org/abs/1901.03907
On some properties of moduli of smoothness with Jacobi weights
K. A. Kopotun, D. Leviatan, I. A. Shevchuk

http://arxiv.org/abs/1901.03908
On one estimate of divided differences and its applications
K. A. Kopotun, D. Leviatan, I. A. Shevchuk

http://arxiv.org/abs/1901.03911
Uniform and pointwise shape preserving approximation (SPA) by algebraic polynomials: an update
K. A. Kopotun, D. Leviatan, I. A. Shevchuk

http://arxiv.org/abs/1901.04069
The "Monkey Typing Shakespeare" Problem for Compositions
Shalosh B. Ekhad, Doron Zeilberger

http://arxiv.org/abs/1901.04840
Some Implications of the WP-Bailey Tree
James McLaughlin, Peter Zimmer

http://arxiv.org/abs/1901.04841
Lifting Bailey Pairs to WP-Bailey Pairs
James McLaughlin, Andrew V. Sills, Peter Zimmer

http://arxiv.org/abs/1901.04852
Some remarks on non-symmetric interpolation Macdonald polynomials
Siddhartha Sahi, Jasper Stokman

http://arxiv.org/abs/1901.05133
Integral Factorial Ratios
K. Soundararajan

http://arxiv.org/abs/1901.05326
On a pair of identities from Ramanujan's lost notebook
James McLaughlin, Andrew V. Sills

http://arxiv.org/abs/1901.05327
A Hardy-Ramanujan-Rademacher-type formula for (r, s)-regular partitions
James McLaughlin, Scott Parsell

http://arxiv.org/abs/1901.05330
Some implications of Chu's ${}_{10}\psi_{10}$ extension of Bailey's ${}_{6}\psi_{6}$ summation formula
James McLaughlin, Andrew V. Sills, Peter Zimmer

http://arxiv.org/abs/1901.05788
On determinant expansions for Hankel operators
Gordon Blower, Yang Chen

http://arxiv.org/abs/1901.05886
A New Summation Formula for WP-Bailey Pairs
James McLaughlin

http://arxiv.org/abs/1901.05887
Some Applications of a Bailey-type Transformation
James McLaughlin, Peter Zimmer

http://arxiv.org/abs/1901.05888
Continued Fraction Proofs of m-versions of Some Identities of Rogers-Ramanujan-Slater Type
Douglas Bowman, James McLaughlin, Nancy J. Wyshinski

http://arxiv.org/abs/1901.05889
Some new Transformations for Bailey pairs and WP-Bailey Pairs
James McLaughlin

http://arxiv.org/abs/1901.05890
General WP-Bailey Chains
James McLaughlin, Peter Zimmer

http://arxiv.org/abs/1901.06251
Lie group classification of second-order delay ordinary differential equations
Vladimir A. Dorodnitsyn, Roman Kozlov, Sergey V. Meleshko, Pavel Winternitz

http://arxiv.org/abs/1901.06275
Approximation theorems for multivariate Taylor-Abel-Poisson means
Jürgen Prestin, Viktor Savchuk, Andrii Shidlich

http://arxiv.org/abs/1901.07168
Some integrals of the Dedekind η function
Mark W. Coffey

http://arxiv.org/abs/1901.07343
Certain results on Euler-type integrals and their applications
S. Jabee, M. Shadab, R. B. Paris

http://arxiv.org/abs/1901.07843
Congruences for q-binomial coefficients
Wadim Zudilin

http://arxiv.org/abs/1901.07908
Factors of some truncated basic hypergeometric series
Victor J. W. Guo

http://arxiv.org/abs/1901.07962
Some new q-congruences for truncated basic hypergeometric series
Victor J. W. Guo, Michael J. Schlosser

http://arxiv.org/abs/1901.08172
In how many ways can I carry a total of n coins in my two pockets, and have the same amount in both pockets?
Shalosh B. Ekhad, Doron Zeilberger

http://arxiv.org/abs/1901.08222
Eigenvectors of Z-tensors associated with least H-eigenvalue with application to hypergraphs
Yi-Zheng Fan, Yi Wang, Yan-Hong Bao

http://arxiv.org/abs/1901.08279
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Topic #8 ——— OP - SF Net 26.2 ——— March 15, 2019

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 spost@hawaii.edu.

Contributions to OP-SF NET 26.3 should be sent by May 1, 2019.

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The elected Officers of the Activity Group (2017-2019) are:

Walter Van Assche, Chair
Andrei Martínez-Finkelshtein, Vice Chair
Sarah Post, Program Director
Yuan Xu, Secretary

The appointed officers are:

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Sarah Post, OP-SF NET co-editor
Diego Dominici, OP-SF Talk moderator
Bonita Saunders, Webmaster and OP-SF Talk moderator

Topic #9 ——— OP - SF Net 26.2 ——— March 15, 2019

From: OP-SF Net Editors
Subject: Thought of the Month by **Robert A. Heinlein**

Anyone who cannot cope with mathematics is not fully human. At best, he is a tolerable subhuman who has learned to wear his shoes, bathe, and not make messes in the house.

Robert A. Heinlein (1978), taken from *The Notebooks of Lazarus Long*, Ace Books.

Contributed by James McLaughlin.