

OP - SF NET - Volume 16, Number 6 – November 15, 2009

Editors:

Diego Dominici
Martin Muldoon

dominid@newpaltz.edu
muldoon@yorku.ca

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

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

Please send contributions to: poly@siam.org
Subscribe by mailing to: poly-request@siam.org
or to: listproc@nist.gov

Today's Topics:

1. Message from the Chair
2. Conference in honor of Willard Miller, Jr.
3. Conference on Lattice Path Combinatorics
4. Proceedings of conference in honor of Walter Gautschi
5. Overview of Maratea conferences
6. Book on the H-Function
7. ICM speakers - addendum
8. Passings of Gel'fand and Gohberg
9. MathSciNet Citations
10. Preprints in arXiv.org
11. About the Activity Group
12. Submitting contributions to OP-SF NET

Calendar of Events:

December 14-18, 2009

Brownian motion and random matrices - American Institute of Mathematics, Palo Alto, California

<http://aimath.org/ARCC/workshops/brownianrmt.html>

January 13-16, 2010

Joint Mathematics Meetings, San Francisco, California, USA

http://www.ams.org/amsmtgs/2124_intro.html

May 27-28, 2010

From $A = B$ to $Z = 60$, a conference in honor of Doron Zeilberger's 60th birthday,
Rutgers University, Piscataway, NJ, USA 16.5 #1

<http://math.rutgers.edu/events/Z60/>

July 4-7, 2010

Seventh international conference on Lattice Path Combinatorics and Applications, Siena, Italy
http://www.unisi.it/eventi/lattice_path_2010

July 12-16, 2010

SIAM Annual Meeting, Pittsburgh, Pennsylvania, USA
<http://www.siam.org/meetings/an10/index.php>

August 19-27, 2010

International Congress of Mathematicians, Hyderabad, India
<http://www.icm2010.org.in/>

September 17-19, 2010

Symmetry, Separation, Super-integrability and Special Functions (S4) Conference, in honor of Willard Miller on the occasion of his retirement, University of Minnesota, Minneapolis, MN, USA, 16.6 #1
<http://math.umn.edu/conferences/s4/>

Topic #1 ----- OP-SF NET 16.6 ----- November 15, 2009

From: Francisco Marcellán pacomartc@ing.uc3m.es
Subject: Message from the Chair

During the 10th International Symposium on Orthogonal Polynomials, Special Functions and Applications held in Leuven, Belgium during July 20-24, 2009, we organized an informal meeting of the members of our SIAM Activity Group.

Francisco Marcellán, Peter Clarkson, and Diego Dominici, as Officers of the Activity Group, gave an overview of activities during the period January 2008-July 2009.

1. - We have around 140 members scattered about in more than 20 countries. A special emphasis on the attraction of people from developing countries would be welcome. In particular, there is an interesting and increasing activity in OPSFA in both Latin American and African countries, which can be strongly supported by us in order to share our expertise with them, both from a scientific and organizational approach. For example, the number of Tunisian mathematicians attending the Leuven Symposium was very impressive (18 people) and they offered the structure of some Tunisian universities for the organization of either a Summer School in 2011 or a version of the OPSFA Symposium in 2013. In Latin America, we should explore the opportunities offered by countries like Venezuela, where every year a Summer School in Mathematics is organized by the Venezuela Mathematical Association in Universidad de los Andes (Mérida) with a successful participation of postgraduate students (around 70 people).

2. - Concerning OP-SF NET, we asked people to send written reports about meetings related to our Activity Group. There is good and updated information in the Calendar of Events, but comments and remarks about how the meeting succeeded, both from a scientific and social point of view, are very important for our external visibility. Comments about books, monographs, and other contributions would also be welcome.

3. - SIAM does not offer serious financial support to our Activity Group despite our individual annual contributions. One of the reasons seems to be the small membership in comparison with other Activity Groups. In the SIAM Annual Meetings, neither Special Sessions nor Activity Group events are supported; everybody attending must pay registration fees and this discourages participation in such activities. When we asked the SIAM Officers about the possibility of receiving some financial support for our proposals, they told us that the normal way would be to apply to the US National Science Foundation.

4. - The role of an Activity Group can be enhanced by a SIAM Journal, but this is not our situation. SIAM Journal of Mathematical Analysis, our traditional connection with SIAM, changed its scope substantially several years ago to become a journal focused on Partial Differential Equations and Applied Mathematics with almost no contributions on OPSF. Hence, very few people working on our subject have been involved recently in the Editorial Board and thus we have not had real participation in Editorial activities inside SIAM. This is a very difficult situation whose solution seems to be unclear in the short term unless we decide to take another approach to the question. Some people suggested the possibility of promoting a SIAM journal with a closer relation to OPSFA.

5. - Most of the SIAM Activity Groups promote an Award/Prize to recognize excellent contributions to their thematic framework. Several years ago, we proposed a Gabor Szegö Award but the response from the SIAM Officers was not enthusiastic, based on the low financial contribution of our Group to the SIAM budget. So we cannot expect success on this front in the short term.

The participants were very disappointed with these assessments and many suggested starting a discussion about the future of our Group. OP-SF NET would be a natural place to receive inputs from our members and colleagues in order to make a decision during the coming year. In November 2010, a new Officer list must be elected. This will give all of us an opportunity to decide whether we have a future as a real SIAM Activity Group.

Francisco Marcellán, Chair
November 2009

Topic #2 ----- OP-SF NET 16.6 ----- November 15, 2009

From: OP-SF NET Editors

Subject: Conference in honor of Willard Miller, Jr.

Symmetry, Separation, Super-integrability and Special Functions (S⁴) Conference

School of Mathematics, University of Minnesota, Minneapolis MN, USA

September 17-19, 2010

Organizing committee:

Ernie Kalnins, Niky Kamran, Pavel Winternitz, and Peter Olver

This conference is in honor of Willard Miller, Jr., who will be retiring from the University of Minnesota. We will celebrate and honor Willard's career and his many wide-ranging research contributions.

Invited Speakers:

- Dick Askey (University of Wisconsin)
- Sergio Benenti (University of Torino, Italy)
- Charles Boyer (University of New Mexico)
- Peter Clarkson (University of Kent, UK)
- Costas Daskoyannis (Aristotle University of Thessaloniki, Greece)
- Roberto Floreanini (INFN, Trieste, Italy)
- Mourad Ismail (University of Central Florida)
- Tom Koornwinder (University of Amsterdam, The Netherlands)
- Jonathan Kress (University of New South Wales, Australia)
- Ray McLenaghan (University of Waterloo, Canada)
- Anatoly Nikitin (Institute of Mathematics of National Academy of Sciences, Ukraine)
- Frank Olver (University of Maryland)
- Jiri Patera (Université de Montreal, Canada)
- Stefan Rauch-Wojciechowski (Linköping University, Sweden)
- George Pogosyan (Joint Institute for Nuclear Research, Russia)
- Sarah Post (Université de Montreal, Canada)
- Greg Reid (University of Western Ontario, Canada)
- Dennis Stanton (University of Minnesota)
- Alexander Turbiner (UNAM, Mexico)
- Luc Vinet (Université de Montreal, Canada)
- Bernardo Wolf (Cuernavaca, Mexico)

Further details will be found at the web site

<http://math.umn.edu/conferences/s4/>

Topic #3 ----- OP-SF NET 16.6 ----- November 15, 2009

From: OP-SF NET Editors
Subject: Conference on Lattice Path Combinatorics

LATTICE PATH COMBINATORICS AND APPLICATIONS
July 4-7, 2010, Siena, Italy

Second Announcement

The seventh international conference on Lattice Path Combinatorics and Applications will take place at the Santa Chiara College of the University of Siena, Italy, from Sunday, July 4, 2010 to Wednesday, July 7, 2010.

Topics to be covered include (but are not limited to)

Lattice path enumeration
Plane Partitions
Young tableaux
q-calculus
Orthogonal polynomials
Random walks
Nonparametric statistical inference
Discrete distributions and urn models
Queueing theory
Analysis of algorithms
Graph Theory and Applications
Self-dual codes and unimodular lattices
Bijections between paths and other combinatoric structures

Scientific Committee

G. Andrews (Pennsylvania State University, USA)
N. Balakrishnan (McMaster University, Canada)
C. Krattenthaler (Wien University, Austria)
R. Pinzani (University of Florence, Italy)
S. Rinaldi (University of Siena, Italy)
Ch. A. Charalambides (University of Athens, Greece)
D. Zeilberger (Rutgers University, USA)
G. Schaeffer (CNRS, France)
A. Godbole (East Tennessee State University, USA)
A. Krinik (California State University)

Coordinator: Sri Gopal Mohanty, McMaster University, Canada

Contact: latticepath@unisi.it

Important Dates

March 31st, 2010: deadline for submission of extended abstracts

April 30th, 2010: communication of acceptance

May 15th, 2010: deadline for early registration and final version of extended abstract due

July 4th-7th, 2010: Lattice Path Combinatorics and Applications 2010

Further information

All important information concerning Lattice Path Combinatorics 2010 can be found on the conference web site at

http://www.unisi.it/eventi/lattice_path_2010

Topic #4 ----- OP-SF NET 16.6 ----- November 15, 2009

From: OP-SF NET Editors

Subject: Proceedings of conference in honor of Walter Gautschi

Numerical Algorithms (vol 45, 2007, nos. 1-4) has published the proceedings of a conference in honor of Walter Gautschi. The editors are Stefano de Marchi, Michela Redivo-Zaglia and Marco Vianello. This was the first Dolomites Workshop on Constructive Approximation, held in Alba di Canazei, Italy in September 2006.

See the description of the Conference by Martin Buhmann in AT-NET Bulletin No. 136:

<http://tinyurl.com/at-netGautschi>

Topic #5 ----- OP-SF NET 16.6 ----- November 15, 2009

From: OP-SF NET Editors

Subject: Overview of Maratea conferences

At the site

www.dm.uniba.it/faat2009/abstracts/marateaconferences.pdf

you can find "The Maratea Conferences on Functional Analysis and Approximation Theory from 1989 to 2009 - an overview". This gives very complete information, including programs, on this series of conferences.

If you are tired of coffee breaks in windowless corridors, check out the picture on page 39!

Topic #6 ----- OP-SF NET 16.6 ----- November 15, 2009

From: OP-SF NET Editors
Subject: Book on the H-Function

The following information is from the web site
<http://www.springer.com/physics/book/978-1-4419-0915-2>

The H-Function

Theory and Applications

Mathai, A.M., **Saxena**, Ram Kishore, **Haubold**, Hans J.
Springer-Verlag, 2010, XIV, 270 p., Hardcover, 99.95 Euro
ISBN: 978-1-4419-0915-2

About this book

The topics of special H-function and fractional calculus are currently undergoing rapid changes both in theory and application. Taking into account the latest research results, the authors delve into these topics as they relate to applications to problems in statistics, physics, and engineering, particularly in condensed matter physics, plasma physics, and astrophysics.

The book sets forth the definitions, contours, existence conditions, and particular cases for the H-function, then explores the properties and relationships among the Laplace, Fourier, Hankel, and other transforms. From here, the H-functions are utilized for applications in statistical distribution theory, structures of random variables, generalized distributions, Mathai's pathway models, and versatile integrals. Functions of matrix argument are introduced with a focus on real-valued scalar functions when the matrices are real or Hermitian positive-definite. The text concludes with important recent applications to physical problems in reaction, diffusion, reaction-diffusion theory and statistics, and superstatistics. Generalized entropies as well as applications in astrophysics are dealt with.

Over the last few years, material in this book has been added to various courses and developed to meet the needs of scholars at the PhD level. All exercises in the book have been used to probe the knowledge and ability of mathematics, statistics, and physics to students and researchers.

Written for: Researchers and graduate students applying fractional calculus to problems in astrophysics, math, statistics, and engineering
Keywords:

- Disordered systems
- Dynamical systems theory
- Fractional calculus
- Mathai pathway models
- Reaction diffusion applied mathematics
- Stochastic theory
- applications H-functions
- applied mathematics
- statistical distribution applications

Table of contents

On The H-Function with Applications.- H-Function in Science and Engineering.- Fractional Calculus.- Applications in Statistics.- Functions of Matrix Argument.- Applications in Astrophysics Problems.- Glossary.- Author Index.- Subject Index.

Topic #7 ----- OP-SF NET 16.5 ----- September 15, 2009

From: OP-SF NET Editors
Subject: ICM speakers - addendum

In our most recent issue (OP-SF NET 16.5, Topic #7), Tom Koornwinder mentioned that Arno Kuijlaars, Alexander Its, Fedor Nazarov and Alexei Borodin will be invited sectional speakers at ICM (International Congress of Mathematicians), Hyderabad, India, August 19-27, 2010. He informs us that he forgot to mention that **Eric Rains** will speak in the combinatorics section

See <http://www.icm2010.org.in/speakers.php>

for more information on speakers.

Topic #8 ----- OP-SF NET 16.6 ----- November 15, 2009

From: Tom Koornwinder
Subject: Passings of Gel'fand and Gohberg

I.M. Gel'fand (1913-2009) and I. Gohberg (1928-2009), two giants of 20th century mathematics, died during October. Gelfand contributed to many subjects including special functions. MathSciNet gives 42 hits for papers by him with "hypergeometric" in the title. His paper "General theory of hypergeometric functions" (Russian), Dokl. Akad. Nauk SSSR 288 (1986), no. 1, 14-18, laid the foundation for what are now called Gelfand hypergeometric functions or A-hypergeometric functions. For further information on Gel'fand, see <http://e-math.ams.org/news/home-news.html#gelfand>

Gohberg was a very broad and productive analyst, in particular in operator theory. But his work touches on orthogonal polynomials. As a student of Krein, some of his work dealt with Krein's matrix-valued orthogonal polynomials. Gohberg concentrated on the case of the unit circle and with indefinite inner product. See some of the chapters in I. Gohberg, P. Lancaster and L. Rodman, "Indefinite linear algebra and applications", Birkhäuser, 2005. For more information on Gohberg, see http://en.wikipedia.org/wiki/Israel_Gohberg

Topic #9 ----- OP-SF NET 16.6 ----- November 15, 2009

From: Tom Koornwinder
Subject: MathSciNet Citations

MathSciNet has a new feature with Citations. Apart from Author Citations and Journal Citations, three other choices are now possible. In particular, one may choose: Search by Subject. Then choose for Subject Classification 33 and click on Search. With Publication Type "All", the top ten turn out to be books, with Andrews-Askey-Roy first and Gasper & Rahman (1990) second. But Andrews-Askey-Roy is beaten by the sum of Gasper & Rahman (1990) and Gasper & Rahman (2004). Gasper & Rahman, in their turn, are beaten by the sum of Watson, Bessel functions (1944) and *idem* (1995).

With Publication Type "Journals", Charles Dunkl is the winner with the paper that introduced the Dunkl operators: "Differential-difference operators associated to reflection groups", Trans. Amer. Math. Soc. 311 (1989), 167-183. (By the way, this high score is not the merit of the review, since the late Waleed Al-Salam only provided an author's summary.) Eric Opdam is second with his paper "Harmonic analysis for certain representations of graded Hecke algebras", Acta Math. 175 (1995), 75-121. It is remarkable that 6 papers in the top ten deal with special functions associated with root systems.

It should be borne in mind that MathSci Net did not begin to systematically include full bibliographies with reviews until about 2000. To that extent some of the older items are under-valued in these comparisons.

Topic #10 ----- OP-SF NET 16.6 ----- November 15, 2009

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

The following preprints related to the fields of orthogonal polynomials and special functions were posted or cross-listed to one of the subcategories of arXiv.org mostly during September and October 2009.

<http://arxiv.org/abs/0909.1286>

New hypergeometric series solutions to the general Heun equation
Authors: [R. Sokhoyan](#), [D. Melikdzanian](#), [A. Ishkhanyan](#)

<http://arxiv.org/abs/0909.1988>

Special Functions: Integral properties of Jack polynomials, hypergeometric functions and invariant polynomials
Authors: [Jose A. Diaz-Garcia](#)

<http://arxiv.org/abs/0909.3002>

On the regulator of Fermat motives and generalized hypergeometric functions

Authors: [Noriyuki Otsubo](#)

<http://arxiv.org/abs/0909.4793>

An elliptic hypergeometric integral with $W(F_4)$ symmetry

Authors: [Fokko J. van de Bult](#)

<http://arxiv.org/abs/0910.0093>

An invariance group for a linear combination of two Saalschützian ${}_4F_3(1)$ hypergeometric series

Authors: [Ilia D. Mishev](#)

<http://arxiv.org/abs/0910.1914>

Dyson's constant for the hypergeometric kernel

Authors: [O. Lisovyy](#)

<http://arxiv.org/abs/0910.3087>

General transformations between the Heun and Gauss hypergeometric functions

Authors: [Galina Filipuk](#), [Raimundas Vidunas](#)

<http://arxiv.org/abs/0909.1655>

Higher order matching polynomials and d-orthogonality

Authors: [Dan Drake](#)

<http://arxiv.org/abs/0909.1824>

Polynomials with no zeros on the bidisk

Authors: [Greg Knese](#)

<http://arxiv.org/abs/0909.1985>

Uniform Asymptotics for Discrete Orthogonal Polynomials with Respect to Varying Exponential Weights on a Regular Infinite Lattice

Authors: [Pavel Bleher](#), [Karl Liechty](#)

<http://arxiv.org/abs/0909.3184>

Large Degree Asymptotics of Generalized Bernoulli and Euler Polynomials

Authors: [Jose Luis Lopez](#), [Nico M. Temme](#)

<http://arxiv.org/abs/0909.3668>

Infinitely many shape invariant discrete quantum mechanical systems and new exceptional orthogonal polynomials related to the Wilson and Askey-Wilson polynomials

Authors: [Satoru Odake](#), [Ryu Sasaki](#)

<http://arxiv.org/abs/0909.4352>

Meixner polynomials of the second kind and quantum algebras representing $su(1,1)$

Authors: [Gábor Hetyei](#)

<http://arxiv.org/abs/0909.5512>

Shifted Jacobi polynomials and Delannoy numbers

Authors: [Gábor Hetyei](#)

<http://arxiv.org/abs/0909.5581>

Hankel determinants of generalized q-exponential polynomials

Authors: [Johann Cigler](#)

<http://arxiv.org/abs/0909.5626>

The global parametrix in the Riemann-Hilbert steepest descent analysis for orthogonal polynomials

Authors: [Arno Kuijlaars](#), [Man Yue Mo](#)

<http://arxiv.org/abs/0909.0617>

Asymptotics for a generalization of Hermite polynomials

Authors: [M. Alfaro](#), [J.J. Moreno-Balcazar](#), [A. Pena](#), [M.L. Rezola](#)

<http://arxiv.org/abs/0909.0619>

Orthogonal polynomials associated with an inverse quadratic spectral transform

Authors: [M. Alfaro](#), [F. Marcellan](#), [A. Pena](#), [M.L. Rezola](#)

<http://arxiv.org/abs/0909.0684>

Iterated Bernstein polynomial approximations

Authors: [Zhong Guan](#)

<http://arxiv.org/abs/0909.0979>

Exponential Polynomials, Stirling Numbers, and Evaluation of Some Gamma Integrals

Authors: [Khristo N. Boyadzhiev](#)

<http://arxiv.org/abs/0909.0995>

Coefficients of cyclotomic polynomials

Authors: [Pingzhi Yuan](#)

<http://arxiv.org/abs/0910.0631>

Orthogonal Polynomials with Respect to Self-Similar Measures

Authors: [Steven M. Heilman](#), [Philip Owrutsky](#), [Robert S. Strichartz](#)

<http://arxiv.org/abs/0910.0987>

Symmetry properties of the generalized higher-order Euler polynomials

Authors: [Taekyun Kim](#)

<http://arxiv.org/abs/0910.1746>

An Operator Approach to the Al-Salam-Carlitz Polynomials

Authors: [William Y. C. Chen](#), [Husam L. Saad](#), [Lisa H. Sun](#)

<http://arxiv.org/abs/0910.1788>

Strong asymptotics for Bergman polynomials over domains with corners

Authors: [Nikos Stylianopoulos](#)

<http://arxiv.org/abs/0910.1858>

Tableaux combinatorics for the asymmetric exclusion process and Askey-Wilson polynomials

Authors: [Sylvie Corteel](#), [Lauren Williams](#)

<http://arxiv.org/abs/0910.1982>

On the coefficients of the cyclotomic polynomials of order three

Authors: [Jia Zhao](#), [Xianke Zhang](#)

<http://arxiv.org/abs/0910.3809>

Spreading lengths of Hermite polynomials

Authors: [P. Sánchez-Moreno](#), [J.S. Dehesa](#), [D. Manzano](#), [R. Yáñez](#)

<http://arxiv.org/abs/0910.4041>

A high order q -difference equation for q -Hahn multiple orthogonal polynomials

Authors: [Jorge Arvesú Carballo](#), [Chiara Esposito](#)

<http://arxiv.org/abs/0910.4188>

Entropic functionals of Laguerre polynomials and complexity properties of the half-line Coulomb potential

Authors: [P. Sanchez-Moreno](#), [J.J. Omiste](#), [J.S. Dehesa](#)

<http://arxiv.org/abs/0910.4223>

On the norms and roots of orthogonal polynomials in the plane and L^p -optimal polynomials with respect to varying weights

Authors: [F. Balogh](#), [M. Bertola](#)

<http://arxiv.org/abs/0910.4673>

A remark about positive polynomials

Authors: [Olga M. Katkova](#), [Anna M. Vishnyakova](#)

<http://arxiv.org/abs/0910.4715>

Some differentiation formulas for Legendre polynomials

Authors: [Radosław Szmytkowski](#)

<http://arxiv.org/abs/0910.5088>

A spectral method based on $(0,2)$ Jacobi polynomials. Application to Poisson problems in a sphere

Authors: [Cornou Jean-Louis](#), [Bonazzola Silvano](#)

<http://arxiv.org/abs/0910.1209>

Exceptional orthogonal polynomials and exactly solvable potentials in position dependent mass Schroedinger Hamiltonians

Authors: [Bikashkali Midya](#), [Barnana Roy](#)

<http://arxiv.org/abs/0909.3682>

An Inequality for Ratios of Gamma Functions

Authors: [Yaming Yu](#)

<http://arxiv.org/abs/0910.5228>

Some conjectures on the zeros of approximates to the Riemann ζ -function and incomplete gamma functions

Authors: [J. Haglund](#)

<http://arxiv.org/abs/0909.2538>

Modified zeta functions as kernels of integral operators

Authors: [Jan-Fredrik Olsen](#)

<http://arxiv.org/abs/0909.3653>

Fermi-Dirac integrals in terms of Zeta Functions

Authors: [Michael Morales](#)

<http://arxiv.org/abs/0909.1694>

Fractions de Bernoulli-Carlitz et opérateurs q-Zeta

Authors: [Frédéric Chapoton](#) (ICJ)

<http://arxiv.org/abs/0910.0664>

On the correlation of shifted values of the Riemann zeta function

Authors: [Vorrapan Chandee](#)

<http://arxiv.org/abs/0910.2052>

A note on the gaps between consecutive zeros of the Riemann zeta-function

Authors: [H. M. Bui](#), [M. B. Milinovich](#), [N. Ng](#)

<http://arxiv.org/abs/0910.2179>

The monodromy conjecture for zeta functions associated to ideals in dimension two

Authors: [Lise Van Proeyen](#), [Willem Veys](#)

<http://arxiv.org/abs/0910.5004>

An Euler-type formula for the Dirichlet beta function at even values and an exact closed-form expression for a class of rational zeta series

Authors: [F. M. S. Lima](#)

<http://arxiv.org/abs/0910.0029>

Functional determinants, generalized BTZ geometries and Selberg zeta function

Authors: [R Aros](#), [D E Diaz](#)

<http://arxiv.org/abs/0909.4232>

Comment on the orthogonality of the Macdonald functions of imaginary order

Authors: [Radoslaw Szmytkowski](#), [Sebastian Bielski](#)

<http://arxiv.org/abs/0910.1492>

An orthogonality relation for the Whittaker functions of the second kind of imaginary order

Authors: [Radoslaw Szmytkowski](#), [Sebastian Bielski](#)

<http://arxiv.org/abs/0910.1737>

Vector interpretation of the matrix orthogonality on the real line

Authors: [A. Branquinho](#), [F. Marcellán](#), [A. Mendes](#)

<http://arxiv.org/abs/0910.2105>

On rational functions orthogonal to all powers of a given rational function on a curve

Authors: [F. Pakovich](#)

<http://arxiv.org/abs/0909.0494>

The Plane Wave Expansion, Infinite Integrals and Identities involving Spherical Bessel Functions

Authors: [Rami Mehrem](#)

<http://arxiv.org/abs/0910.0365>

On the Computation and Applications of Bessel Functions with Pure Imaginary Indices

Authors: [A. A. Matyshev](#), [E. Fohtung](#)

<http://arxiv.org/abs/0910.2508>

A note on the generalized q-Euler numbers(2)

Authors: [Kyoung-Ho Park](#), [Young-Hee Kim](#), [Taekyun Kim](#)

<http://arxiv.org/abs/0910.3563>

Some congruences involving central q-binomial coefficients

Authors: [Victor J. W. Guo](#), [Jiang Zeng](#)

<http://arxiv.org/abs/0909.2983>

Combinatorial Identities Involving the Mobius Function

Authors: [Mohamed El bachraoui](#), [Mohamed Salim](#)

<http://arxiv.org/abs/0910.1534>

Failed attempt to disprove the Riemann Hypothesis

Authors: [Marek Wolf](#)

<http://arxiv.org/abs/0910.2533>

A nonlinear stationary phase method for oscillatory Riemann-Hilbert problems

Authors: [Yen Do](#)

<http://arxiv.org/abs/0909.1684>

New solutions of Heun general equation

Authors: [Artur Ishkhanyan](#), [Kalle-Antti Suominen](#)

<http://arxiv.org/abs/0909.1686>

Incomplete beta-function expansions of the solutions to the confluent Heun equation

Authors: [Artur Ishkhanyan](#)

<http://arxiv.org/abs/0909.2822>

The Askey scheme as a four-manifold with corners

Author: Tom H. Koornwinder

Topic #11 ----- OP-SF NET 16.6 ----- November 15, 2009

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 140 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, which is transmitted periodically by SIAM. It is provided as a free public service; membership in SIAM is not required. The OP-SF Net Editors are Diego Dominici (dominid@newpaltz.edu) and Martin Muldoon (muldoon@yorku.ca).

To receive the OP-SF NET, send your name and email address to poly-request@siam.org.

Back issues can be obtained at the WWW addresses:

<http://staff.science.uva.nl/~thk/opsfnet>

For several years the Activity Group sponsored a printed Newsletter, most recently edited by Rafael Yanez. Back issues are accessible at:

<http://www.mathematik.uni-kassel.de/~koepf/siam.html>

SIAM has several categories of membership, including low-cost categories for students and residents of developing countries. For current information on SIAM and Activity Group membership, contact:

Society for Industrial and Applied Mathematics

3600 University City Science Center

Philadelphia, PA 19104-2688 USA

phone: +1-215-382-9800

email: service@siam.org

WWW : <http://www.siam.org>

<http://www.siam.org/membership/outreachmem.htm>

Finally, the Activity Group operates an email discussion group, called OP-SF Talk. To subscribe, send the email message

subscribe opsftalk Your Name

to listproc@nist.gov. To contribute an item to the discussion, send email to opsftalk@nist.gov. The archive of all messages is accessible at:

<http://math.nist.gov/opsftalk/archive>

Topic #12 ----- OP-SF NET 16.6 ----- November 15, 2009

From: OP-SF NET Editors

Subject: Submitting contributions to OP-SF NET

To contribute a news item to OP-SF NET, send email to poly@siam.org with a copy to one of the OP-SF Editors dominica@newpaltz.edu or muldoon@yorku.ca. Contributions to OP-SF NET 17.1 should be sent by January 1, 2010.

OP-SF NET is a forum 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, job openings.

Send submissions to: poly@siam.org

Subscribe by mailing to: poly-request@siam.org

or to: listproc@nist.gov

Back issues can be obtained at the WWW addresses:

<http://staff.science.uva.nl/~thk/opsfnet>

<http://www.math.ohio-state.edu/JAT/DATA/OPSFNET/opsfnet.html>

<http://math.nist.gov/opsfnet/archive>

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 (2008-2010) are:

Francisco J. Marcellán , Chair

Peter A. Clarkson, Vice Chair

Daniel W. Lozier, Secretary

Peter A. McCoy, Program Director

The appointed officers are:

Diego Dominici, OP-SF NET co-editor

Martin Muldoon, OP-SF NET co-editor

Bonita Saunders, Webmaster