O P – S F N E T – Volume 14, Number 6 – November 15, 2007

Editors:

Diego Dominici   dominicd@newpaltz.edu
Martin Muldoon   muldoon@yorku.ca

Today's Topics:

1. Election results
2. Job Postings
3. Ramanujan Conference
4. Report on Granada Meeting, September 2007
5. AMS-SIAM Special Session on Asymptotic Methods
6. Conference on Approximation Theory in Brazil
7. SIDE 8 in Quebec
8. Yerevan Conference on Group Theoretical Methods in Physics
9. Plovdiv Conference on Applied Mathematics and Computing
10. IWOPA'08 in honor of Guillermo López Lagomasino
11. SIGMA Issue on Dunkl operators
12. Passing of Eugene Tomer
13. Call for Nominations - SIAM Activity Group on Optimization Prize
14. Call for Nominations - W. T. and Idalia Reid Prize
15. Call for Nominations - George Polya Prize
16. Preprints in arXiv.org
17. About the Activity Group
18. Submitting contributions to OP-SF NET

Calendar of Events:

2007

December 12-15, 2007: Joint Meeting of the American Mathematical Society and the New Zealand Mathematical Society including Special Session on Special Functions and Orthogonal Polynomials   14.2 #5 14.5 #3
http://www.mcs.vuw.ac.nz/%7Emathmeet/amsnzms2007/index.shtml

December 20-22, 2007: International Conference on Number Theory, Theoretical Physics and Special Functions, University at Kumbakonam, Tamilnadu, India
                                                                                                                14.6 #3

http://www.sastra.edu/icntsf/

2008

January 6-9, 2008: Joint Mathematics Meetings including the AMS-SIAM Special Session on Asymptotic Methods in Analysis with Applications, San Diego, California
http://www.ams.org/amsmtgs/2109_program_ss18.html#title

January 14 – July 4, 2008: Program: Combinatorics and Statistical Mechanics, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom
http://www.newton.cam.ac.uk/programmes/CSM/

March 2-7, 2008: Ninth International Conference "Approximation and Optimization in the Caribbean" (APPOPT'2008)'' San Andres Island, Colombia.
http://matematicas.univalle.edu.co/~appopt2008/?seccion=anuncio&idioma=EN

May 15-17, 2008: Twelfth International Conference Devoted to the Memory of Academician Mykhailo Kravchuk (Krawtchouk) (1892-1942) Kyiv, Ukraine. Information: Ukraine, 03056, Kyiv-56, Peremohy Ave. 37, National Technical University of Ukraine (KPI), Phys.-Math. Departments, Corpus 7, Room 437, M. Kravchuk Conference, N. Virchenko; tel. (380) 44 454-97-40; e-mail: kravchukconf.@yandex.ru
http://www.ams.org/mathcal/info/2008_may15-17_kyiv.html

June 3-9, 2008: CONSTRUCTIVE THEORY OF FUNCTIONS
Campos do Jordão, Brazil, June 3-9, 2008
http://www.ibilce.unesp.br/CTF-08   14.6, #6

June 16–26 2008: Foundations of Computational Mathematics, City University of Hong Kong at Hong Kong, China

WORKSHOP A6
　　Special functions and orthogonal polynomials
　　ORGANISERS: Peter Clarkson, Guillermo Lopez, Mourad Ismail & Ed Saff

WORKSHOP B1
　　Asymptotic analysis
　　ORGANISERS: Arno Kuijlaars & Roderick Wong

http://www.damtp.cam.ac.uk/user/na/FoCM/FoCM08/

June 22 – 28, 2008: 8th International Conference on Symmetries and Integrability of Difference Equations (SIDE 8), Ste-Adele, Quebec, Canada　　　　　　14.6, #7
http://www.crm.umontreal.ca/SIDE8/index_e.shtml

June 22-28, 2008**:** Combinatorics 2008 - Costermano, Verona, Italy.
http://combinatorics.ing.unibs.it/

August 12-18, 2008: Fifth International Conference of Applied Mathematics and Computing, Plovdiv, Bulgaria　　　　　　　　　　　　　　　　14.6, #9
http://math.uctm.edu/conference2008/

August 13-19, 2008: XXVII International Colloquium on Group Theoretical Methods in Physics (Group-27), Yerevan, Armenia　　　　　　　　　　14.6, #8
http://theor.jinr.ru/~group27/

September 8-12, 2008: International Workshop on Orthogonal Polynomials and Approximation Theory, in honor to the 60th Birthday of Guillermo López Lagomasino, Madrid. Spain　　　　　　　　　　　　　　　14.6, #10
http://www.uc3m.es/iwopa08/

October 4-5, 2008: AMS Fall Western Section Meeting
Vancouver, Canada, including Special Session on *Special Functions and Orthogonal Polynomials,* organized by Mizanur Rahman and Diego Dominici,
http://www.ams.org/amsmtgs/2139_program_ss2.html#title

Topic #1 ----------- OP-SF NET 14.6 ----------- November 15, 2007
From: OP-SF Editors
Subject: Election Results

As a result of the recent elections in our Activity Group, the new officers (January 1, 2008 to December 31, 2010) are as follows:

Chair	Francisco J. Marcellán
Vice Chair	Peter A. Clarkson
Secretary	Daniel W. Lozier
Program Director	Peter A. McCoy

Topic #2 ----------- OP-SF NET 14.6 ----------- November 15, 2007
From: OP-SF Editors
Subject : Job Postings

Readers are invited to use OP-SF NET to post announcements of positions such as internships, post-doctoral positions and regular positions in the general areas of orthogonal polynomials and special functions. We have had such announcements in the past but without an attempt to be systematic. At the same time, this is not an appropriate outlet for general job advertisements. If in doubt, contact the editors to whom announcements should be sent.

Topic #3 ----------- OP-SF NET 14.6 ----------- November 15, 2007
From: Tom Koornwinder thk@science.uva.nl
Subject : Ramanujan Conference

An International Conference on Number Theory, Theoretical Physics and Special Functions will be held at Srinivasa Ramanujan Centre, an off campus centre of SASTRA University at Kumbakonam, Tamilnadu, India on December 20-22, 2007. The Srinivasa Ramanujan Commemorative Lecture will be held there on December 22, to mark the 121st birth anniversary of Srinivasa Ramanujan. Ben Green, the winner of the 2007 SASTRA-Ramanujan Award, will deliver the lecture on that day. See for further information
http://www.sastra.edu/icntsf/

Topic #4   -----------   OP-SF NET 14.6   -----------   November 15, 2007
From: Lance L. Littlejohn Lance_Littlejohn@baylor.edu
Subject: Report on Granada Meeting, September 2007

Report on the "Special Functions, Information Theory, and Mathematical Physics"
meeting in honor of Professor Jesús S. Dehesa's 60th birthday in Granada, Spain,
September 17-19, 2007

I have had the great fortune over the past twenty years of having been invited to
several meetings in Spain on orthogonal polynomials, special functions, and their
applications. My first such meeting was in Segovia, Spain in 1986 (OPSFA2); this is
when I first met my colleagues and good friends, Francisco (Paco) Marcellán and
Jesús S. Dehesa. Both of these mathematicians (Jesús is also a Ph.D. physicist)
became the instant 'face' of orthogonal polynomials in Spain and throughout most
of Europe. The impact that both Paco and Jesús have had on the mathematics
scene in Spain is certainly significant: under their influence or tutelage, Spain is
now the home of several world-class mathematicians in special functions and
approximation theory. The September 2007 meeting in Granada was organized to
thank, and to honor, Jesús Dehesa for his many contributions to mathematics and
physics. Among his achievements over the past thirty years, Jesús has made
important contributions to the asymptotic zero distributions of orthogonal
polynomials, differential equations having orthogonal polynomial solutions,
entropy of orthogonal polynomials, as well as his work on the spectrum of Jacobi
matrices.

Organized by former students and colleagues of Dehesa, this meeting was held at the University of Granada from September 17-19, 2007. The main speakers and the titles of their talks were:

Alexander (Sasha) Aptekarev (Keldish Institute for Applied Mathematics, Moscow, Russia)
"Asymptotic theory of orthogonal polynomials entropy"

John Avery (H. C. Ørsted Institute, University of Copenhagen, Denmark)
"Harmonic polynomials, hyperspherical harmonics and atomic spectra"

Lance Littlejohn (Baylor University, Waco, USA)
"Left-definite spectral theory with applications to orthogonal polynomials"

Francisco Marcellán (Carlos III University, Madrid, Spain)
"Jesús S. Dehesa: A shared life with orthogonal polynomials from 1975-2007"

Edward Saff (Vanderbilt University, Nashville, USA)
"Asymptotics of Bergman orthogonal polynomials"

Kalidas Sen (University of Hyderabad, Hyderabad, India)
"Scaling properties of net information measures for bound states of some model potentials"

Constantino Tsallis (Centro Brasiliero de Pesquisas Fisicas, Rio de Janeiro, Brazil)
"On the extensivity of the nonadditive entropy S_q and the generalization of the central limit theorem"

Walter van Assche (Katholieke Universiteit, Leuven, Belgium)
"Dehesa's work on orthogonal polynomials"

Manuel Velarde (Complutense University, Madrid, Spain)
"From polaron to selectron. The coupling of nonlinear elasticity to quantum mechanics and its effect on electric transport"

Walter van Assche and Paco Marcellán shared their talk discussing the work of Jesús Dehesa and his impact in both physics and mathematics. The rest of the plenary talks were well-balanced in reflecting Dehesa's work in physics (Avery, Sen, Tsallis, Velarde) and his contributions in mathematics (Aptekarev, Littlejohn, Marcellán, Saff, van Assche).

The plenary talks were given in the mornings and two parallel sessions ran in the afternoons. Typical of a meeting packed with good participants, it was physically impossible for me to listen to all the talks that I wanted to attend.

The social events in the evenings were also wonderfully organized by the local committee of Juan Carlos Angulo, Carmen García Recio, Rosario Gonzáles Férez, Enrique Ruíz Arriola, Pablo Sánchez Moreno, and Rafael Yánez. A reception was given by the Rector of the University on the first evening. On the penultimate evening of the conference, we were all treated to a wonderful banquet dinner near to the famous La Alhambra. Highlighting the evening were several short after-dinner speeches given by Jesús' former students. Not to be outdone on the last evening of the conference, the participants were taken on a magnificent tour of La Alhambra. Nobody, and I mean nobody, can put on a conference like the Spanish! And the setting of Granada, with the picturesque La Alhambra always high in the background, was absolutely perfect for this particular meeting!

Congratulations, Jesús! More than 100 people attended this conference in your honor. And people attended from near and far not only because of your important contributions to mathematics and physics over the past three decades but also because of your charm, sincerity, hospitality, and wonderful friendly personality! Best wishes to you, Gloria, and your wonderful family!

[The Conference Book including program and abstracts is available at: http://www.ugr.es/~jsd60th/]

Topic #5   -----------   OP-SF NET 14.6   -----------   November 15, 2007
From: OP-SF Editors
Subject : AMS-SIAM Special Session on Asymptotic Methods

An AMS-SIAM Special Session on Asymptotic Methods in Analysis with Applications, organized by **Diego Dominici** and **Peter A. McCoy**, will be held during the Joint Mathematics Meetings in San Diego, CA, January 6-9, 2008. The following are the speakers and titles:

A Γ-convergence Result in Nonlinear Plate Theory.
Cristina Popovici*, North Dakota State University

Difference equations: Asymptotics, Borel summability and applications.
Ovidiu Costin*, The Ohio State University

Integral Formulas for the Asymmetric Simple Exclusion Process.
Craig A Tracy*, UC Davis
Harold Widom, UC Santa Cruz

Efficient evaluation of propagation and scattering of high-frequency acoustic and electromagnetic waves.
Oscar P Bruno*, Applied and Computational Mathematics, Caltech

On the Shortest Queue Version of the Erlang Loss Model.
Charles Knessl*, University of Illinois at Chicago
Haishen Yao, Queensborough Community College, CUNY

Asymptotic estimation of $\xi^{(2n)}(1/2)$: Proof of a conjecture of Farmer and Rhoades.
Mark W Coffey*, Colorado School of Mines

Asymptotics in the NIST Digital Library of Mathematical Functions.
Daniel W. Lozier*, National Institute of Standards and Technology

Sampling Expansions for a Class of Analytic Functions and Their Asymptotics.
Ahmed I Zayed*, DePaul University

Effective Computation of Bessel Functions.
Jonathan M. Borwein*, Dalhousie University

Asymptotics and Connection Formulae for the Painlev\'e Equations.
Peter A Clarkson*, University of Kent, Canterbury, UK

A Turning-Point Theory for Second-Order Difference Equations.
Roderick Wong*, City University of Hong Kong

Liouville-Green (WKB) asymptotics for second-order systems of difference equations.
Renato Spigler*, Università ``Roma Tre''

Nonlinear integral-equation formulation of orthogonal polynomials.
Eli Ben-Naim*, Los Alamos National Laboratory

Imaginary Axis Coverage of the Stability Domains of Adams Multistep Methods.
Michelle L Ghrist*, U.S. Air Force Academy
Jonah A Reeger, Rice University

Topic #6   -----------   OP-SF NET 14.6   -----------   November 15, 2007

From: Dimitar Dimitrov dimitrov@ibilce.unesp.br
Subject:: Conference on Approximation Theory in Brazil

CONSTRUCTIVE THEORY OF FUNCTIONS
Campos do Jordão, June 3-9, 2008

This will be the next in the series of conferences "**Constructive Theory of functions**", traditionally organized in Varna, Bulgaria, and held in 1970, 1977, 1981, 1984, 1987, 1991, 2002 and 2005. For the first time the conference will change its usual location and will take place in the beautiful Brazilian mountain resort Campos do Jordão.

Conference URL: www.ibilce.unesp.br/CTF-08

SPECIAL GUEST: Marcelo Viana, IMPA, Rio de Janeiro

PLENARY SPEAKERS:
Kamen Ivanov, Bulgarian Academy of Sciences
Doron Lubinsky, Georgia Institute of Technology
Francisco J. Marcellán Español, Universidad Carlos III de Madrid
Gradimir Milovanović, University of Niš
Franz Peherstorfer, Johannes Kepler University
Szilard Revesz, Hungarian Academy of Sciences
Edward Saff, Vanderbilt University

SCIENTIFIC COMMITTEE:
Borislav Bojanov, University of Sofia
Carl de Boor, University of Wisconsin, Madison
Ronald DeVore, University of South Carolina
Dimitar K. Dimitrov, State University of São Paulo UNESP
Allan Pinkus, Technion
Blagovest Sendov, Bulgarian Academy of Sciences

Topic #7   -----------   OP-SF NET 14.6   -----------   November 15, 2007
From: Louis Pelletier pelletl@CRM.UMontreal.CA
Subject: SIDE 8 in Quebec

8TH INTERNATIONAL CONFERENCE ON SYMMETRIES AND INTEGRABILITY OF
DIFFERENCE EQUATIONS (SIDE 8)

FIRST ANNOUNCEMENT

Hotel Mont-Gabriel, Ste-Adele, Quebec, Canada
June 22 - 28, 2008

SIDE 8 is the eighth in a series of biennial conferences devoted to Symmetries and
Integrability of Difference Equations and related topics: ordinary and partial
difference equations, analytic difference equations, orthogonal polynomials and
special functions, symmetries and reductions, difference geometry, integrable
discrete systems on graphs, integrable dynamical mappings, discrete Painleve
equations, singularity confinement, algebraic entropy, complexity and growth of
multivalued mapping, representations of affine Weyl groups, quantum mappings
and quantum field theory on the space-time lattice, and related topics.

SIDE1 took place in Esterel, in Quebec, Canada, May 22-29, 1994. The event was so
successful that it gave rise to the series since held in the United Kingdom, Italy,
Japan, France, Finland, Germany, and Australia.

SIDE 8 will take place at Hotel Mont-Gabriel, in Ste-Adele, Quebec, Canada (the
Laurentian area near Montreal), from June 22, 2008 (arrival day) to June 28, 2008 in
the afternoon (departure day).

Organizing Committee
   * P. Winternitz (Chairman, CRM, Montreal)
   * J. Harnad (CRM, Concordia)
   * V. Hussin (CRM, Montreal)
   * D. Levi (Rome TRE)
   * P. Olver (Minnesota)
   * L. Vinet (Montreal)

International Advisory Committee (coincides with SIDE steering committee)

   * Frank Nijhoff (Chairman, Leeds)
   * Alexander Bobenko (TU Berlin)
   * Basil Grammaticos (Paris VII)

* Jarmo Hietarinta (Turku)
  * Nalini Joshi (Sydney)
  * Decio Levi (Rome TRE)
  * Vassilis Papageorgiou (Patras)
  * Junkichi Satsuma (Aoyama)
  * Yuri Suris (TU Munich)
  * Claude Viallet (CNRS, Paris VI)
  * Pavel Winternitz (CRM, Montreal)

The conference will be divided into 9 thematic sessions. Some space will be left for talks not fitting into any of the sessions, but fitting into the general theme of the SIDE conferences.

Sessions and Session Organizers:

1."Geometry of discrete and continuous Painleve equations" Masatoshi Noumi, Yasuhiro Ohta

2."Discrete integrable systems and isomonodromy transformations" Alexei Borodin

3."Yang-Baxter maps" Alexander P. Veselov

4."Integrable isospectral flows and numerical methods" Arieh Iserles

5."Algebraic aspects of discrete equations" Alexander Mikhailov, Frank Nijhoff

6."Singularity confinement, algebraic entropy and Nevanlinna theory" Basile Grammaticos, Alfred Ramani

7."Discrete differential geometry" Alexander Bobenko, Yuri Suris

8."Special functions as solutions of difference and q-difference equations" Mourad E.H. Ismail, Walter Van Assche

9."Continuous symmetries of discrete equations. Theory and computational applications" Decio Levi, Pavel Winternitz

In general all talks will be allotted 30 minutes, including discussion, but the session organizers can make exceptions. Poster sessions will be organized. There will be no parallel sessions.

Some financial support, mainly for graduate students will be available.

For further information, registration forms, title and abstract submission, please see our website:
http://www.crm.umontreal.ca/SIDE8/index_e.shtml

For information on the SIDE series see:
http://vanha.physics.utu.fi/theory/SIDE/

Topic #8   -----------   OP-SF NET 14.6   -----------   November 15, 2007
From: Tom Koornwinder thk@science.uva.nl
Subject: Yerevan Conference on Group Theoretical Methods in Physics
See
http://theor.jinr.ru/~group27/
XXVII International Colloquium on
Group Theoretical Methods in Physics
(Group-27), Yerevan, Armenia, 13-19 August, 2008.
One of the topics is "Lie groups, representation theory and special functions"

Topic #9   -----------   OP-SF NET 14.6   -----------   November 15, 2007
From: Tom Koornwinder thk@science.uva.nl
Subject: Plovdiv Conference on Applied Mathematics and Computing

See
http://math.uctm.edu/conference2008/
Fifth International Conference of Applied Mathematics and Computing,
Plovdiv, Bulgaria, 12-18 August, 2008.
The conference has sessions on Special Functions and on Fractional Calculus.

Topic #10   -----------   OP-SF NET 14.6   -----------   November 15, 2007
From: Hector Pijeira hpijeira@math.uc3m.es
Subject: IWOPA'08 in honor of Guillermo López Lagomasino

I send the following information on the International Workshop on Orthogonal Polynomials and Approximation Theory.

Meeting: **IWOPA'08, International Workshop on Orthogonal Polynomials and Approximation Theory 2008**, in honor of the 60th Birthday of **Guillermo López Lagomasino**

Place: Universidad Carlos III de Madrid, Spain

Dates: September 8 to 12, 2008

Web Page: http://www.uc3m.es/iwopa08/

Topic #11 -----------   OP-SF NET 14.6   ----------- November 15, 2007
From: OP-SF NET editors
Subject: Special SIGMA Issue on Dunkl Operators and Related Topics

From: http://emis.library.cornell.edu/journals/SIGMA/Dunkl_operators.html

SIGMA (Symmetry, Integrability and Geometry: Methods and Applications) will publish a special issue on Dunkl Operators and related Topics. The Guest Editors for this special issue are

Charles Dunkl (University of Virginia, USA)
Peter Forrester (University of Melbourne, Australia)
Marcel de Jeu (Leiden University, the Netherlands)
Margit Rösler (Technische Universität Clausthal, Germany)
Yuan Xu (University of Oregon, USA)

The original Dunkl operators and the associated Laplacian were defined by Charles F. Dunkl in papers published in 1989 and 1988 respectively, The Dunkl operators and their various modifications have stimulated considerable developments in a number of fields. There have been applications in classical analysis, mathematical physics, special functions, Lie theory, quantum groups, algebra, probability theory, and geometry.

This issue is devoted to the 20th anniversary of Dunkl operators.

Possible topics for papers include

- orthogonal polynomials and approximation theory in several variables;
- special functions associated with root systems;

- integral transforms and Fourier analysis;
- exactly solvable quantum-mechanical models of Calogero-Moser-Sutherland type;
- Hecke and Cherednik algebras and their representations;
- quantum groups;
- complex reflection groups and Clifford algebra;
- random processes.

Papers in these or related topics, and which involve Dunkl operators or their generalizations, are solicited for this special issue.

See the web site

 http://emis.library.cornell.edu/journals/SIGMA/Dunkl_operators.htm

for further information on submission of papers.

Topic #12 ----------- OP-SF NET 14.6 ----------- November 15, 2007
From: OP-SF NET Editors
Subject: Passing of Eugene Tomer

Tom Koornwinder informed us of the sad news of the death of Eugene "Gene" Tomer on July 2, 2007 at his home in San Francisco. During the years 1992-1995, Eugene was editor of the printed Newsletter of the OP-SF Activity Group. At the end of Eugene's term, Charles Dunkl, Chair of the Activity Group, wrote (Newsletter, vol 6, no. 1):

> "On behalf of the members and officers I express our gratitude and appreciation for the accomplishments and hard work that Eugene performed as editor of the Newsletter of this Activity Group. He first volunteered his services in 1992 and swiftly moved us from a small annual letter that George Gasper and I put together to a beautifully produced quarterly Newsletter. Eugene also designed the logo for the group, a design based on Chebyshev polynomials, and incorporated it into an attractive masthead for the newsletter. The Newsletter played a large part in the growth of the group's membership with sizable delegations from many different countries. Eugene held the Newsletter to high professional standards of accuracy and carefully edited material By the latter half of 1994 he began to feel that he had done his share of the work in getting the group under way and that others should pick up the load. He expressed to

me strongly his opinion that the group should do more to get involved with the applications of mathematics, for example, in astrophysics, physics and the sciences that depend on special function solutions of differential equations. The officers accept this challenge and hope that the slate of candidates for the coming election of officers for the 1996-1998 term is a good beginning. We are all grateful for the contribution that Eugene made toward the functioning and success of the group and wish him well in his future endeavours. "

Topic #13   -----------   OP-SF NET 14.6   ----------- November 15, 2007
From: J. M. Littleton Littleton@siam.org
Subject: Call for Nominations - SIAM Activity Group on Optimization Prize

The SIAM Activity Group on Optimization Prize (SIAG/OPT Prize) will be awarded at the SIAM Conference on Optimization (OP08) to be held May 10-13, 2008, in Boston, Massachusetts. The SIAG/OPT Prize is awarded to the author(s) of the most outstanding paper on a topic in optimization published in English in a peer-reviewed journal. The eligibility period is the four calendar years preceding the year of the conference.

Candidate papers must bear a publication date in the 2004-2007 calendar years and must contain significant research contributions to the field of optimization, as commonly defined in the mathematical literature, with direct or potential applications.

The award will consist of a plaque and a certificate containing the citation. At least one of the prize recipients is expected to attend the award ceremony and present the paper at the conference.

Nominations, including a letter of nomination and a bibliographic citation of the paper, should be addressed to Professor Robert Vanderbei, Chair, SIAG/OPT Prize Committee and sent by January 15, 2008, to J. M. Littleton at littleton@siam.org. Inquiries should be addressed to littleton@siam.org. Complete calls for nominations for SIAM prizes can be found at www.siam.org/prizes/nominations.php .

Topic #14 ----------- OP-SF NET 14.6 ----------- November 15, 2007

From: J. M. Littleton Littleton@siam.org
Subject: Call for Nominations – W. T. and Idalia Reid Prize

The W. T. and Idalia Reid Prize is awarded for research in, or other
contributions to, the broadly defined areas of differential equations
and control theory. The prize may be given either for a single notable
achievement or for a collection of such achievements. Committee Chair H. T.
Banks wishes to stress the breadth of the eligible fields.

The prize will be awarded at the SIAM Annual Meeting to be held July 7 – 11, 2008,
in San Diego, California. The award consists of an engraved medal and a $10,000
cash prize. The prize recipient is requested to present a lecture at the meeting.
SIAM will reimburse reasonable travel expenses for the recipient to attend the
meeting and give the lecture.

Nominations, including a description of achievement(s), should be addressed to
Professor H. T. Banks, Chair, W. T. and Idalia Reid Prize Committee and sent by
December 15, 2007, to J. M. Littleton at littleton@siam.org. Inquiries should be
addressed to littleton@siam.org. Complete calls for nominations for SIAM prizes
can be found at www.siam.org/prizes/nominations.php.

Topic #15 ----------- OP-SF NET 14.6 ----------- November 15, 2007

From: J. M. Littleton Littleton@siam.org
Subject: Call for Nominations – George Polya Prize

The George Polya Prize honors the memory of George Polya and is given in even-
numbered years for notable contributions in two alternating categories. The 2008
award will be given for a notable application of combinatorial theory. The prize is
broadly intended to recognize specific recent work.

The award will be presented at the SIAM Annual Meeting to be held July 7 – 11,
2008, in San Diego, California. The award will consist of an engraved medal and a
$20,000 cash prize. Travel expenses to the award ceremony will be provided by
the prize fund.

Nominations, including a description of achievement(s), should be addressed to Dr.
Rolf Moehring, Chair, George Polya Prize and sent by December 31, 2007, to J. M.
Littleton at littleton@siam.org. Complete calls for nominations for SIAM prizes can

be found at http://www.siam.org/prizes/nominations.php. Inquiries should be addressed to littleton@siam.org.

Topic #16 ----------- OP-SF NET 14.6 ----------- November 15, 2007
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 2007.

http://front.math.ucdavis.edu/0710.5360
Title: Elementary evaluations of some Euler sums
Authors: Donal F. Connon

http://front.math.ucdavis.edu/0710.5234
Title: Abstract interpolation problem in Nevanlinna classes
Authors: Vladimir Derkach
Categories: math.CA Classical Analysis and ODEs
Comments: LaTeX, 35 pages
MSC: 47A57 (Primary); 30E05, 47A06, 47B25, 47B32 (Secondary)

http://front.math.ucdavis.edu/0710.4930
Title: Extensions of discrete classical orthogonal polynomials beyond the orthogonality
Authors: R. S. Costas-Santos, J. F. Sánchez-Lara
Categories: math.CA Classical Analysis and ODEs
MSC: 33C45, 26C05

http://front.math.ucdavis.edu/0710.3981
Title: The importance of the Selberg integral
Authors: Peter J. Forrester, S. Ole Warnaar
Categories: math.CA Classical Analysis and ODEs (math.CO Combinatorics; math.QA Quantum Algebra; physics.math-ph Mathematical Physics)
Comments: 43 pages
MSC: 00-02; 33-02

http://front.math.ucdavis.edu/0710.3389
Title: Positivity of Turán determinants for orthogonal polynomials
Authors: Ryszard Szwarc

Categories: math.CA Classical Analysis and ODEs
MSC: 42C05, 47B39
Journal reference: *in Harmonic Analysis and Hypergroups, (K.A. Ross et al., ed.)*
Delhi 1995, Birkhauser, Boston-Basel-Berlin, 1997, 165-182

http://front.math.ucdavis.edu/0710.2856
Title: An asymptotic integral representation for Carleman orthogonal polynomials
Authors: Erwin Miña-Díaz
Categories: math.CA Classical Analysis and ODEs (math.CV Complex Variables)
Comments: 24 pages, 2 figures

http://front.math.ucdavis.edu/0710.2134
Title: Discrete entropies of orthogonal polynomials
Authors: A. I. Aptekarev, J. S. Dehesa, A. Martinez-Finkelshtein, R. Yañez
Categories: math.CA Classical Analysis and ODEs (cs.IT Information Theory; physics.math-ph Mathematical Physics)
Comments: 26 pages, 6 figures
MSC: 33C45; 41A58; 42C05; 94A17

http://front.math.ucdavis.edu/0710.1131
Title: On the Use of Integrals to Evaluate Series of Rational Terms
Authors: Costas J. Efthimiou
Categories: math.CA Classical Analysis and ODEs
Comments: 9 pages, no figures

http://front.math.ucdavis.edu/0710.1127
Title: The values of an Euler sum at negative integers and relation to a convolution of Bernoulli numbers
Authors: Khristo N. Boyadzhiev, H. Gopalkrishna Gadiyar, R. Padma
Categories: math.CA Classical Analysis and ODEs (math.NT Number Theory)
MSC: 33B99, 11M41, 11B68

http://front.math.ucdavis.edu/0710.1124
Title: Apostol-Bernoulli functions, derivative polynomials and Eulerian polynomials
Authors: Khristo N. Boyadzhiev
Categories: math.CA Classical Analysis and ODEs (math.NT Number Theory)
MSC: 11B68, 11C08, 11M35, 33B99.

http://front.math.ucdavis.edu/0710.0943
Title: On some properties of Riemann zeta function on critical line
Authors: Jan Moser
Categories: math.CA Classical Analysis and ODEs

Comments: paper published in ACTA ARITHMETICA, XXVI (1974)
Journal reference: *ACTA ARITHMETICA, XXVI (*1974), 33-39

http://front.math.ucdavis.edu/0710.0035
Title: On a two variable class of Bernstein-Szego measures
Authors: Antonia M. Delgado, Jeffrey S. Geronimo, Plamen Iliev, Yuan Xu
Categories: math.CA Classical Analysis and ODEs

http://front.math.ucdavis.edu/0710.5902
Title: Converse Sturm-Hurwitz-Kellogg theorem and related results
Authors: S. Tabachnikov
Categories: math.DG Differential Geometry (math.CA Classical Analysis and ODEs)

http://front.math.ucdavis.edu/0710.3956
Title: The solution of a memorable problem by a special artifice of calculation
Authors: Leonhard Euler
Categories: math.HO History and Overview (math.CA Classical Analysis and ODEs)
Comments: 5 pages, 2 figures
MSC: 01A50; 49-03

http://front.math.ucdavis.edu/0710.3078
Title: Multivariable Wilson polynomials and degenerate Hecke algebras
Authors: Wolter Groenevelt
Categories: math.RT Representation Theory (math.CA Classical Analysis and ODEs)
Comments: 30 pages

http://front.math.ucdavis.edu/0710.2167
Title: The connection problem associated with a Selberg type integral and the q-Racah polynomials
Authors: Katsuhisa Mimachi
Categories: physics.math-ph Mathematical Physics (math.CA Classical Analysis and ODEs)

http://front.math.ucdavis.edu/0710.1332
Title: Polyexponentials
Authors: Khristo N. Boyadzhiev
Categories: math.NA Numerical Analysis (math.CA Classical Analysis and ODEs)
Comments: 21 pages
MSC: 33B99, 40A99

http://front.math.ucdavis.edu/0709.4537
Title: On Polar Legendre Polynomials
Authors: Héctor Pijeira Cabrera, José Y. Bello Cruz, Wilfredo Urbina

Categories: math.CA Classical Analysis and ODEs (math.AP Analysis of PDEs)
MSC: 42C05 ; 33C25

http://front.math.ucdavis.edu/0709.4381
Title: Un théorème de Helson pour des séries de Walsh
Authors: Jean-Pierre Kahane (LM-Orsay)
Categories: math.CA Classical Analysis and ODEs
Comments: The paper was written for the 50th anniversary of Henry Helson's article and the 70th anniversary of Yitzhak Katznelson
MSC: 42C10, 42A16, 42A32

http://front.math.ucdavis.edu/0709.3446
Title: The integrals in Gradshteyn and Ryzhik. Part 10: the digamma function
Authors: Luis A. Medina, Victor H. Moll
Categories: math.CA Classical Analysis and ODEs
Comments: 21 pages
MSC: 33B15

http://front.math.ucdavis.edu/0709.3275
Title: Galois groups of the basic hypergeometric equations
Authors: Julien Roques (DMA)
Categories: math.CA Classical Analysis and ODEs

http://front.math.ucdavis.edu/0709.2464
Title: An ultrametric version of the Maillet-Malgrange theorem for non linear q-difference equations
Authors: Lucia Di Vizio (IMJ)
Categories: math.CA Classical Analysis and ODEs (math.NT Number Theory; math.QA Quantum Algebra)
Comments: 12 pages
MSC: 33E99, 39A13

http://front.math.ucdavis.edu/0709.1788
Title: Leonhard Euler and a q-analogue of the logarithm
Authors: Erik Koelink, Walter Van Assche
Categories: math.CA Classical Analysis and ODEs (math.HO History and Overview)
Comments: 13 pages, to appear in Proc. AMS

http://front.math.ucdavis.edu/0709.1610
Title: On q-summation and confluence
Authors: Lucia Di Vizio (IMJ), Changgui Zhang (LPP)
Categories: math.CA Classical Analysis and ODEs (math.QA Quantum Algebra)

Comments: 36 pages
MSC: 34M30, 39A13, 33D05

http://front.math.ucdavis.edu/0709.1466
Title: A sharp bound for the Stein-Wainger oscillatory integral
Authors: Ioannis Parissis
Categories: math.CA Classical Analysis and ODEs
Comments: 11 pages; to appear in Proc. Amer. Math. Soc
MSC: 42A50; 42A45

http://front.math.ucdavis.edu/0709.1213
Title: Locating the zeros of partial sums of exp(z) with Riemann-Hilbert methods
Authors: T. Kriecherbauer, A. B. J. Kuijlaars, K. D. T-R McLaughlin, P. D. Miller
Categories: math.CA Classical Analysis and ODEs (math.CV Complex Variables)
Comments: 13 pages, 3 figures; to appear in proceedings of "Integrable Systems, Random Matrices, and Applications, a conference in honor of Percy Deift's 60th birthday"
MSC: 30C15; 35Q15

http://front.math.ucdavis.edu/0709.2214
Title: Rational interpolation and mixed inverse spectral problem for finite CMV matrices
Authors: Leonid Golinskii, Mikhail Kudryavtsev
Categories: math.SP Spectral Theory (math.CA Classical Analysis and ODEs)
Comments: 22 pages, LaTex file
MSC: 15A29; 42C05; 15A57

http://front.math.ucdavis.edu/0709.2073
Title: Strong asymptotics for Christoffel functions of planar measures
Authors: Tom Bloom, Norm Levenberg
Categories: math.CV Complex Variables (math.CA Classical Analysis and ODEs)
MSC: 42C05

http://front.math.ucdavis.edu/0709.1126
Title: Some Monotonicity Properties of Gamma and q-gamma Functions
Authors: Peng Gao
Categories: math.CA Classical Analysis and ODEs
Comments: 18 pages
MSC: 33B15; 33D05

http://front.math.ucdavis.edu/0709.0252
Title: Asymptotic analysis of the Bell polynomials by the ray method
Authors: Diego Dominici

Categories: math.CA Classical Analysis and ODEs
Comments: 7 pages, 1 figure
MSC: 34E05, 11B73, 34E20

http://front.math.ucdavis.edu/0709.0557
Title: General observations on series whose terms proceed as the sines and cosines of multiples of angles
Authors: Leonhard Euler
Categories: math.HO History and Overview (math.CA Classical Analysis and ODEs)
Comments: 12 pages. E655
MSC: 01A50

http://front.math.ucdavis.edu/0709.0146
Title: On orthogonal and special orthogonal invariants of a single matrix of small order
Authors: Dragomir Z. Djokovic
Categories: math.AC Commutative Algebra (physics.math-ph Mathematical Physics)
Comments: 13 pages, 3 tables, no figures
MSC: 13A50; 14L35;

http://front.math.ucdavis.edu/0709.0399
Title: The quantum harmonic oscillator on the sphere and the hyperbolic plane
Authors: José F. Cariñena, Manuel F. Rañada, Mariano Santander
Categories: physics.math-ph Mathematical Physics
Comments: 35 pages, 7 figures
MSC: 81Q05, 81R12, 81U15, 34B24
Journal reference: *Ann. Phys.* 322, 2249 (2007)

http://front.math.ucdavis.edu/0709.3580
Title: Charged particle in the field an electric quadrupole in two dimensions
Authors: A. D. Alhaidari
Categories: physics.atom-ph Atomic Physics (physics.gen-ph General Physics)
Comments: 16 pages, 2 Tables, 4 Figures

http://front.math.ucdavis.edu/0710.5050
Title: Solution of the wave equation in a tridiagonal representation space
Authors: E. El Aaoud, H. Bahlouli, A. D. Alhaidari
Categories: physics.quant-ph Quantum Physics
Comments: 13 pages

http://front.math.ucdavis.edu/0710.4085
Title: Solution of the polynomial moment problem
Authors: M. Muzychuk, F. Pakovich

Categories: math.CV Complex Variables (math.DS Dynamical Systems)
Comments: 29 pages

http://front.math.ucdavis.edu/0710.2905
Title: Chiral Random Two-Matrix Theory and QCD with imaginary chemical potential
Authors: G. Akemann
Categories: physics.hep-th High Energy Physics - Theory
Comments: 11 page, 4 figs. Invited talk at ESF workshop Krakow May 2007

http://front.math.ucdavis.edu/0710.1599
Title: Laplace Transforms for Integrals of Markov Processes
Authors: Claudio Albanese, Stephan Lawi
Categories: math.PR Probability Theory (math.FA Functional Analysis)
MSC: 60J60

http://front.math.ucdavis.edu/0710.5655
Title: Classification of integrable Vlasov-type equations
Authors: A. V. Odesskii, M. V. Pavlov, V. V. Sokolov
Categories: nlin.SI Exactly Solvable and Integrable Systems
Comments: latex, 15 pages, to appear in Theoretical and Mathematical Physics

http://front.math.ucdavis.edu/0710.3348
Title: Heavy Flavour Production in Deep--Inelastic Scattering - Two--Loop Massive Operator Matrix Elements and Beyond
Authors: I. Bierenbaum, J. Blümlein, S. Klein
Categories: physics.hep-ph High Energy Physics - Phenomenology
Comments: Proc. XXXI International Conference of Theoretical Physics: Matter To The Deepest, Ustron, Poland, 5-11 September 2007
Report number: DESY 07-096, SFB/CPP-07-71

http://front.math.ucdavis.edu/0710.2576
Title: Transmission resonances for a Dirac particle in a one-dimensional Hulthén potential
Authors: Jian You Guo, Shao Wei Jin, Fu Xin Xu
Categories: physics.math-ph Mathematical Physics
Comments: 7 pages, 6 figures

http://front.math.ucdavis.edu/0710.2575
Title: Scattering of a Klein-Gordon particle by a Hulthén potential
Authors: Jian You Guo, Xiang Zheng Fang, Chuan Mei Xie
Categories: physics.quant-ph Quantum Physics
Comments: 6 pages,8 figures

Title: Factorial ratios, hypergeometric series, and a family of step functions
Authors: Jonathan Bober
Categories: math.NT Number Theory (math.AG Algebraic Geometry; math.CO Combinatorics)
Comments: 23 pages, 2 tables
MSC: 11B65; 11M26; 14M25; 33C20

Title: Overpartition pairs and two classes of basic hypergeometric series
Authors: Jeremy Lovejoy, Olivier Mallet
Categories: math.CO Combinatorics (math.NT Number Theory)
Comments: 31 pages, To appear in Adv. Math
MSC: 11P81; 33D15

Title: Nonextensive statistical mechanics and central limit theorems II – Convolution of q-independent random variables
Authors: Silvio M. Duarte Queiros, Constantino Tsallis
Categories: physics.stat-mech Statistical Mechanics
Comments: 14 pages, 4 figures, and 1 table. To appear in the Proceedings of the conference CTNEXT07, Complexity, Metastability and Nonextensivity, Catania, Italy, 1-5 July 2007, Eds. S. Abe, H.J. Herrmann, P. Quarati, A. Rapisarda and C. Tsallis (American Institute of Physics, 2008) in press

Title: A New Functional Identity for the Riemann's Zeta Function
Authors: Andrea Ossicini
Categories: math.GM General Mathematics
Comments: 8 pages, 2 figure
MSC: 11M35,11B68, 11M06

Title: Frobenius Manifolds as a Special Class of Submanifolds in Pseudo-Euclidean Spaces
Authors: O. I. Mokhov
Categories: math.DG Differential Geometry (math.AG Algebraic Geometry; math.AP Analysis of PDEs; math.SG Symplectic Geometry; nlin.SI Exactly Solvable and Integrable Systems; physics.hep-th High Energy Physics - Theory; physics.math-ph Mathematical Physics)
Comments: 33 pages

http://front.math.ucdavis.edu/0710.0145
Title: Applications of integral transforms in fractional diffusion processes
Authors: Francesco Mainardi
Categories: math.PR Probability Theory (math.CV Complex Variables)
Comments: 11 Pages. Paper with added notes based on an invited lecture: 3rd International ISAAC Congress, Free University of Berlin, 20–25 August 2001 (Subsession 1.3: Integral Transforms and Applications)
MSC: 26A33; 33E12; 44A10;33C60; 44A10, 45K05; 60G18;
Journal reference: *Integral Transforms and Special Functions, Vol* 15, No 6, pp. 477-484 (2004)

http://front.math.ucdavis.edu/0710.1606
Title: Operator Methods, Abelian Processes and Dynamic Conditioning
Authors: Claudio Albanese
Categories: math.PR Probability Theory (math.FA Functional Analysis)
MSC: 60J60

http://front.math.ucdavis.edu/0710.0503
Title: Unified Approach to the Large-Signal and High-Frequency Theory of $p-n$-Junctions
Authors: Anatoly A. Barybin, Edval J. P. Santos
Categories: physics.mtrl-sci Materials Science
Comments: To appear in Semiconductor Science and Technology

http://front.math.ucdavis.edu/0709.4271
Title: A New 3D Potential-Density Basis Set
Authors: Alireza Rahmati, Mir Abbas Jalali
Categories: physics.astro-ph Astrophysics
Comments: 2 pages. To appear in the proceedings of IAU Symposium 245, "Formation and Evolution of Galaxy Bulges," M. Bureau, E. Athanassoula, and B. Barbuy, eds

http://front.math.ucdavis.edu/0710.4981
Title: A note on the p-adic log-gamma functions
Authors: Taekyun Kim
Categories: math.NT Number Theory
Comments: 5 pages
MSC: 11S80, 11B68

http://front.math.ucdavis.edu/0710.2929
Title: Quantum Barnes function as the partition function of the resolved conifold
Authors: Sergiy Koshkin
Categories: math.AG Algebraic Geometry (math.QA Quantum Algebra)

Comments: 47 pages, 7 figures
MSC: 14J32; 14N35; 57M27; 57R56; 81T45

http://front.math.ucdavis.edu/0709.1769
Title: Feynman integrals and difference equations
Authors: S. Moch, C. Schneider
Categories: physics.math-ph Mathematical Physics
Comments: 11 pages latex, 2 figures, Proceedings of the 11th International Workshop on Advanced Computing and Analysis Techniques in Physics Research (ACAT 07), Amsterdam, The Netherlands
Report number: DESY 07-138, SFB/CPP-07-50

http://front.math.ucdavis.edu/0710.5681
Title: q-Hardy-Berndt type sums associated with q-Genocchi type zeta and l-functions
Authors: Yilmaz Simsek
Categories: math.NT Number Theory
Comments: 22 pages
MSC: 11F20, 11B68, 11S40, 30B50, 44A05

http://front.math.ucdavis.edu/0710.5810
Title: Note on q-extensions of Euler numbers and polynomials of higher order
Authors: Taekyun Kim, Leechae Jang, Cheon-Seoung Ryoo
Categories: math.NT Number Theory
Comments: 11 pages
MSC: 11B68, 11S80

http://front.math.ucdavis.edu/0710.5176
Title: The sixth moment of Dirichlet L-functions
Authors: J. B. Conrey, H. Iwaniec, K. Soundararajan
Categories: math.NT Number Theory
Report number: AIM 2007 - 84
MSC: 11M06; 15A52

http://front.math.ucdavis.edu/0710.0037
Title: Notes on a paper of Tyagi and Holm: A new integral representation for the Riemann Zeta function
Authors: Michael Milgram
Categories: math.CA Classical Analysis and ODEs (math.CV Complex Variables)
Comments: 3 pages
MSC: 11B68; 11M06; 33B99

http://front.math.ucdavis.edu/0710.4527
Title: Power law eigenvalue density, scaling and critical random matrix ensembles
Authors: K. A. Muttalib, Mourad E. H. Ismail
Categories: physics.stat-mech Statistical Mechanics (physics.dis-nn Disordered Systems and Neural Networks)
Comments: to be published in Phys. Rev. E

Topic #17 ----------- OP-SF NET 14.6 ----------- November 15, 2007

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 (dominicd@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
  http://www.math.ohio-state.edu/JAT/DATA/OPSFNET/opsfnet.html
  http://cio.nist.gov/esd/emaildir/lists/opsfnet/maillist.html

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

Given the widespread availability of email and the Internet, the need for the printed Newsletter has decreased. Discussions are underway concerning whether an annual printed Newsletter or Annual Report should be instituted.

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 #18 -----------   OP-SF NET 14.6   ----------- November 15, 2007

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 dominicd@newpaltz.edu or muldoon@yorku.ca . Contributions to OP-SF NET 15.1 should be sent by January 1, 2008.

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 (2005-2007) are:

Peter A. Clarkson, Chair

Daniel W. Lozier, Vice Chair

Javier Segura, 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