O P - S F N E T - Volume 15, Number 4 – July 15, 2008

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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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or to: listproc@nist.gov

Today's Topics:

Calendar of Events:

July 21-25, 2008:
Workshop "Elliptic integrable systems, isomonodromy problems, and hypergeometric functions", Hausdorff Center for Mathematics, Bonn, Germany 15.1 #2
http://www.hausdorff-center.uni-bonn.de/elliptic-integrable-systems

July 21-25, 2008:
Fourteenth International Conference on Difference Equations and Applications (ICDEA2008), Bahçeşehir University, İstanbul, Turkey
http://icdea.bahcesehir.edu.tr/about.htm

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/

August 21-23, 2008

20th International Congress of Jangjeon Mathematical Society, Bursa, Turkey 15.4 #1
http://www20.uludag.edu.tr/~icjms20/

August 25--29, 2008

International Conference Approximation & Computation - Faculty of Electronic Engineering, University of Nis, Nis, Serbia
http://www.ams.org/mathcal/info/2008_aug25-29_nis.html

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/

September 10, 2008

Nonlinear Differential Equations, A Tribute to the work of Patrick Habets & Jean Mawhin on the occasion of their 65th birthdays Académie Royale de Belgique, Brussels, Belgium.
http://www.ams.org/mathcal/info/2008_sep10_brussels.html

September 15-19, 2008:

SIMAI Congress (Italian Society for Applied and Industrial Mathematics), in cooperation with SIAM, Rome, Italy 15.2, #3
http://www.simai.eu

September 16--20, 2008

International Conference of Numerical Analysis and Applied Mathematics 2008 (ICNAAM 2008)-Honoring John Butcher on the occasion of his 75th birthday - Hotel Kypriotis Village-Kypriotis Panorama-Kypriotis International Conference Center, Psalidi, Kos, Greece.
http://www.ams.org/mathcal/info/2008_sep16-20_kos.html

September 19--26, 2008

Harmonic Analysis and Approximations, IV (International Conference) - Tsaghkadzor, Armenia.
http://math.sci.am/conference/sept2008/conf.html

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

October 5--12, 2008

International Conference on Differential Equations, Function Spaces, and Approximation Theory: Dedicated to the 100th anniversary of the birthday of S. L. Sobolev - Sobolev Institute of Mathematics, Novosibirsk, Russia.
http://math.nsc.ru/conference/sobolev100/english/

October 11-13, 2008:

International Conference on Applied Mathematics and Approximation Theory honoring P.L. Butzer on the occasion of his 80th birthday, Memphis, Tennessee, USA
15.1 #6
http://www.msci.memphis.edu/AMAT2008/

October 20-22, 2008

International Conference on Analysis and Its Applications - Aligarh Muslim University, Aligarh, India.
http://www.amudirectory.com/ICAA08 . For update information:
http://ICAA-08.tripod.com

November 5-7, 2008

Fractional Differentiation and its Applications - Ankara, Turkey.
http://www.cankaya.edu.tr/fda08/

December 15-16, 2008:

Rolling Waves in Leuven - a workshop on the occasion of Adhemar Bultheel's 60th Birthday, Leuven, Belgium
15.2, #2
http://www.cs.kuleuven.be/~raf/ade2008/

April 19--26, 2009

NoDIA-2009: Nonlinear Differential Equations, Integrability and Applications - Cape Town, South Africa.
http://www.sm.luth.se/~norbert/nodia09.html

June 8-12, 2009

Sixth International Conference on Computational Methods and Function Theory, Ankara, Turkey. 15.4 #2
http://www.bilkent.edu.tr/~cmft/

Topic #1 ---------- OP-SF NET 15.4 ---------- July 15, 2008

From: Tom Koornwinder T.H.Koornwinder@uva.nl
Subject: Jangjeon Congress

The 20th International Congress of Jangjeon Mathematical Society,

Bursa, Turkey, 21-23 August 2008, see
http://www20.uludag.edu.tr/~icjms20/
The proposed conference aims to bring together all the researchers working in various fields of Mathematics, Mathematical Physics and related areas such as Analysis, Non-linear Analysis, Number Theory, p-adic Analysis, Special Functions, q-Analysis, Mathematical Physics and their applications.

Topic #2 ---------- OP-SF NET 15.4 ---------- July 15, 2008

From: cmft@bilkent.edu.tr
Subject: CMFT2009

Bilkent University, the CMFT International and Local Organizing Committees are pleased to invite you to the sixth international conference on Computational Methods and Function Theory to be held on June 08-12, 2009, in Ankara, Turkey.

For First Announcement, see
http://www.bilkent.edu.tr/~cmft/

The plenary speakers include Richard Askey and Walter Van Assche.

For additional information, please contact cmft@bilkent.edu.tr

Topic #3 ---------- OP-SF NET 15.4 ---------- July 15, 2008

From: OP-SF NET Editors
Subject: Preview of Digital Library of Mathematical Functions

The following announcement appears in the web site of the American Mathematical Society.

The National Institute of Standards and Technology (NIST) has released a five-chapter preview of the online Digital Library of Mathematical Functions (DLMF). The full DLMF is designed to be a modern successor to the 1964 Handbook of Mathematical Functions. The preview is a fully functional beta-level release of 5 of the 36 chapters. The DLMF is designed to be the definitive reference work on the functions of applied mathematics that occur very frequently in mathematical modeling of physical phenomena, providing precise definitions, alternate representations, illustrations of how the functions behave, and relationships between functions. The DLMF also provides various visual aids, including interactive Web-based tools for rotating and zooming in on three-dimensional representations. The complete DLMF, with 31 additional chapters providing

information on mathematical functions (from Airy to Zeta), is expected to be released in early 2009.

Readers are invited to comment on the operation of the Web site which can be viewed at http://dlmf.nist.gov/.

Topic #4 ---------- OP-SF NET 15.4 ---------- July 15, 2008

From: Stefan Becuwe stefan.becuwe@ua.ac.be
Subject: New book on continued fractions and special functions

Handbook of Continued fractions for Special functions.
(Springer Verlag, 2008, ISBN 978-1-4020-6948-2)

Authors: A. Cuyt, V. Brevik Petersen, B. Verdonk, H. Waadeland, W.B. Jones

Special functions are pervasive in all fields of science. The most well-known application areas are in physics, engineering, chemistry, computer science and statistics. Because of their importance, several books and websites and a large collection of papers are devoted to these functions.

Of the standard work on the subject, the "Handbook of mathematical functions with formulas, graphs and mathematical tables" edited by Milton Abramowitz and Irene Stegun, the American National Institute of Standards and Technology claims to have sold over 700 000 copies (over 150 000 directly and more than fourfold that number through commercial publishers)!

But so far no project has been devoted to the systematic study of continued fraction representations for these functions. This handbook is the result of such an endeavour. We emphasise that only 10% of the continued fractions contained in the new handbook, can also be found in the Abramowitz and Stegun project or at special functions websites! And it remains a recommended addition to the NIST revision "Digital library of special functions".

At www.cfsf.ua.ac.be several symbolic and numeric computing capabilities developed in the wake of the new handbook are offered. Among other things, handbook readers can dynamically recompute the handbook tables, to satisfy their personal needs. Also all series and continued fraction representations listed in the handbook are made available in a Maple library.

See http://www.springer.com/math/analysis/book/978-1-4020-6948-2

Topic #5 ---------- OP-SF NET 15.4 ---------- July 15, 2008

From: OP-SF NET Editors
Subject: New Handbook of Special Functions

From the Web site of CRC Press www.crcpress.com

Yury A. Brychkov: Handbook of Special Functions: Derivatives, Integrals, Series and Other Formulas

List Price: $99.95
ISBN: 9781584889564
ISBN 10: 158488956X
Publication Date: 5/28/2008
Number of Pages: 704

- Provides special function formulas needed to solve problems in physics, applied mathematics, and engineering

- Presents derivative formulas of the nth order and first derivatives

- Covers new classes of integrals, finite sums, and infinite series

- Discusses hypergeometric functions, Meijer G functions, and complete elliptic integrals

Because of the numerous applications involved in this field, the theory of special functions is under permanent development, especially regarding the requirements for modern computer algebra methods. The Handbook of Special Functions provides in-depth coverage of special functions, which are used to help solve many of the most difficult problems in physics, engineering, and mathematics. The book presents new results along with well-known formulas used in many of the most important mathematical methods in order to solve a wide variety of problems. It also discusses formulas of connection and conversion for elementary and special functions, such as hypergeometric and Meijer G functions.

Topic #6 ---------- OP-SF NET 15.4 ---------- July 15, 2008

From: Juri Rappoport jmrap@landau.ac.ru
Subject: Teaching materials in higher and computational mathematics

Juri Rappoport, Russian Academy of Sciences and Moscow Aviation Technology Institute "MATI" (Russian State Technological University) named for K. E. Tsiolkovsky, has published six new Russian language textbooks for courses in higher and computational mathematics:

1. J.M.Rappoport, "MAPLE in the course of mathematical analysis. Instructions for the practical studies on the theme "Taylor formula"", M., MATI, 2003, 16 pages.

2. J.M.Rappoport, "MAPLE in the course of mathematical analysis. Instructions for the practical studies on the theme "Power series in numerical computations"", M., MATI, 2004, 20 pages.

3. J.M.Rappoport, "Approximation of functions. Tau method.", Practical studies on the course "Computational mathematics"", M., MATI, 2007, 12 pages.

4. J.M.Rappoport, "Systems of differential equations. Tau method.", Practical studies on the course "Computational mathematics", M., MATI, 2007, 16 pages.

5. J.M.Rappoport, "Modified Bessel functions of complex order", Practical studies on the course "Equations of mathematical physics", M., MATI, 2007, 12 pages.

6. J.M.Rappoport "The methods of computation and tables of modified Bessel functions", M., MATI, 2008, 128 pages (with the recommendation of the Russian Academy of Sciences).

The basic ideas of the course of computational mathematics (the methods of numerical approximation of functions, interpolation methods, numerical quadratures, methods of numerical solution of differential equations and their systems) are introduced in the last book by the example of modified Bessel function computation. Some tables of these functions are presented also. The textbook will be of interest to Ph.D.students and physicists who study the theory of Bessel functions as well as in courses on the computation of special functions.

There are many mathematical formulas in these books so they may be very helpful not only to Russian students but also to English-speaking University students. The textbooks are available on request from the author: jmrap@landau.ac.ru.

Topic #7 ---------- OP-SF NET 15.4 ---------- July 15, 2008

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 May and June 2008.

http://front.math.ucdavis.edu/0805.4761
Title: Sobolev spaces with respect to measures in curves and zeros of Sobolev orthogonal polynomials
Authors: José M. Rodríguez, José M. Sigarreta
Categories: math.FA Functional Analysis (math.CA Classical Analysis and ODEs)
Comments: 24 pages, latex
MSC: 41A10, 46E35, 46G10

http://front.math.ucdavis.edu/0805.3516
Title: Linear Statistics of Point Processes via Orthogonal Polynomials
Authors: E. Ryckman
Categories: math.PR Probability Theory (physics.math-ph Mathematical Physics)
Comments: Added references, corrected typos. To appear, J. Stat. Phys

http://front.math.ucdavis.edu/0805.3026
Title: Cesàro means of Jacobi expansions on the parabolic biangle
Authors: Wolfgang zu Castell, Frank Filbir, Yuan Xu
Categories: math.CA Classical Analysis and ODEs
MSC: 42C10; 33C50

http://front.math.ucdavis.edu/0805.2640
Title: Orthogonal Trigonometric Polynomials: Riemann-Hilbert Analysis and Relations with OPUC
Authors: Jinyuan Du, Zhihua Du
Categories: physics.math-ph Mathematical Physics (math.CV Complex Variables)
Comments: 38 pages
MSC: 42A05 (Primary); 42C05 (Secondary)

http://front.math.ucdavis.edu/0805.2111
Title: Quadrature formulas for integrals transforms generated by orthogonal polynomials
Authors: Rafael G. Campos, Francisco Dominguez Mota, E. Coronado
Categories: math.NA Numerical Analysis
Comments: 3 figures, 11 pages
MSC: 33C45, 33C47, 44A20, 65D32

http://front.math.ucdavis.edu/0805.1980
Title: The dbar steepest descent method for orthogonal polynomials on the real line with varying weights
Authors: K. T. -R. McLaughlin, P. D. Miller
Categories: math.CA Classical Analysis and ODEs (math.PR Probability Theory)
Comments: 39 pages, 4 figures

http://front.math.ucdavis.edu/0806.3531
Title: Matrix valued polynomials generated by the scalar-type Rodrigues' formulas
Authors: Rodica D. Costin
Categories: math.CA Classical Analysis and ODEs
Comments: 13 pages
MSC: 05E35

http://front.math.ucdavis.edu/0806.1861
Title: Power-law deformation of Wishart-Laguerre ensembles of random matrices
Authors: G. Akemann, P. Vivo
Categories: physics.math-ph Mathematical Physics (physics.hep-th High Energy Physics - Theory; physics.stat-mech Statistical Mechanics)
Comments: 28 pages, 9 figures

http://front.math.ucdavis.edu/0806.1528
Title: The Christoffel-Darboux Kernel
Authors: Barry Simon
Categories: math.SP Spectral Theory
Comments: To appear in "Perspectives in PDE, Harmonic Analysis and Applications" in honor of V.G. Maz'ya's 70th birthday, to be published in Proceedings of Symposia in Pure Mathematics (Dorina Mitrea and Marius Mitrea, editors)
MSC: 34L40, 47-02, 42C05

http://front.math.ucdavis.edu/0806.0055
Title: Skew orthogonal polynomials and the partly symmetric real Ginibre ensemble
Authors: Peter J. Forrester, Taro Nagao
Categories: physics.math-ph Mathematical Physics
Comments: 21 pages

http://front.math.ucdavis.edu/0806.3590
Title: Hypergeometric formulas for lattice sums and Mahler measures
Authors: Mathew D. Rogers
Categories: math.NT Number Theory
Comments: 28 pages
MSC: 33C20; 33C05; 11M41

http://front.math.ucdavis.edu/0806.3249
Title: Zero-free regions for multivariate Tutte polynomials (alias Potts-model partition functions) of graphs and matroids
Authors: Bill Jackson, Alan D. Sokal
Categories: math.CO Combinatorics (physics.math-ph Mathematical Physics)
Comments: LaTeX2e, 49 pages, includes 5 Postscript figures
MSC: 05C15 (Primary); 05A20, 05B35, 05C99, 05E99, 82B20 (Secondary)

http://front.math.ucdavis.edu/0805.4366
Title: Analytic approximation of matrix functions in L^p
Authors: L. Baratchart, F. L. Nazarov, V. V. Peller
Categories: math.FA Functional Analysis (math.CA Classical Analysis and ODEs; math.CV Complex Variables)
Comments: 43 pages
MSC: 47B35; 30D55; 30E10

http://front.math.ucdavis.edu/0805.3135
Title: Essays on the theory of elliptic hypergeometric functions
Authors: V. P. Spiridonov
Categories: math.CA Classical Analysis and ODEs (physics.math-ph Mathematical Physics)
Comments: 62 pages

http://front.math.ucdavis.edu/0805.2274
Title: A note on the Voigt profile function
Authors: G. Pagnini, R. K. Saxena
Categories: physics.math-ph Mathematical Physics
Comments: Submitted to: J. Phys. A: Math. Gen

http://front.math.ucdavis.edu/0805.1273
Title: Bell Polynomials and k-generalized Dyck Paths
Authors: Toufik Mansour, Yidong Sun
Categories: math.CO Combinatorics
Comments: 15pages, 1 figure. To appear in Discrete Applied Mathematics
MSC: 05A05;05A15
Journal reference: (DOI)

http://front.math.ucdavis.edu/0805.1699
Title: An Asymptotic Formula for the Sequence ||exp(i n h(t))||_A
Authors: Bogdan M. Baishanski, Jan Hlavacek
Categories: math.CV Complex Variables
MSC: 41A60, 42A16

http://front.math.ucdavis.edu/0806.0859
Title: Summation formula over the zeros of the associated Legendre function with a physical application
Authors: A. A. Saharian
Categories: physics.math-ph Mathematical Physics (physics.gr-qc General Relativity and Quantum Cosmology; physics.hep-th High Energy Physics - Theory)
Comments: 18 pages
MSC: 81T20; 83C47; 33E30

http://front.math.ucdavis.edu/0806.1694
Title: Transcendence of the Gaussian Liouville number and relatives
Authors: Peter Borwein, Michael Coons
Categories: math.NT Number Theory
Comments: 17 pages
MSC: 11J81; 11A05

http://front.math.ucdavis.edu/0805.2745
Title: On the distribution of imaginary parts of zeros of the Riemann zeta function, II
Authors: Kevin Ford, K. Soundararajan, Alexandru Zaharescu
Categories: math.NT Number Theory

Comments: 16 pages, 3 figures
MSC: 11M26; 11K38

http://front.math.ucdavis.edu/0805.2772
Title: Integral representations for a generalized Hermite linear functional
Authors: R. S. Costas-Santos, Ridha Sfaxi
Categories: math.CA Classical Analysis and ODEs (math.GM General Mathematics)
Comments: 4 figures
MSC: 42C05, 30E20, 33B15

http://front.math.ucdavis.edu/0806.4333
Title: The Ratio Monotonicity of the Boros-Moll Polynomials
Authors: William Y. C. Chen, Ernest X. W. Xia
Categories: math.CO Combinatorics (math.CA Classical Analysis and ODEs)
Comments: 15 pages

http://front.math.ucdavis.edu/0806.3641
Title: Recurrence Relations for Strongly q-Log-Convex Polynomials
Authors: William Y. C. Chen, Larry X. W. Wang, Arthur L. B. Yang
Categories: math.CO Combinatorics
Comments: 15 pages

http://front.math.ucdavis.edu/0806.3468
Title: The role of binomial type sequences in determination identities for Bell polynomials
Authors: Miloud Mihoubi
Categories: math.CO Combinatorics (math.NT Number Theory)
Comments: 15 pages
MSC: 11B65, 11B73

http://front.math.ucdavis.edu/0806.2686
Title: Symmetric polynomials, p-norm inequalities, and certain functionals related to majorization
Authors: Ivo Klemes
Categories: math.CA Classical Analysis and ODEs
Comments: LaTeX file, 43 pages (1 figure, included as code in LaTeX file). Previously submitted to a refereed journal in February 2007. This file is a slightly updated version, dated April 2007
MSC: 52A40 (Primary) 42A05 (Secondary)

http://front.math.ucdavis.edu/0806.1809
Title: Coefficients of squares of Newman polynomials
Authors: Mihail N. Kolountzakis
Categories: math.NT Number Theory (math.CO Combinatorics)
MSC: 11B34

http://front.math.ucdavis.edu/0806.1405
Title: The complementary polynomials and the Rodrigues operator. A distributional study

Authors: R. S. Costas-Santos
Categories: math.CA Classical Analysis and ODEs (physics.math-ph Mathematical Physics)
MSC: 33C45, 34B24, 42C05

http://front.math.ucdavis.edu/0806.0871
Title: Elliptic Littlewood identities
Authors: Eric M. Rains
Categories: math.CO Combinatorics (math.CA Classical Analysis and ODEs)
Comments: 39 pages, LaTeX

http://front.math.ucdavis.edu/0806.0805
Title: Recurrence relations for powers of q-Fibonacci polynomials
Authors: Johann Cigler
Categories: math.CO Combinatorics (math.GM General Mathematics)
MSC: 11B39; 05A30

http://front.math.ucdavis.edu/0806.0495
Title: Recursive Polynomial Remainder Sequence and its Subresultants
Authors: Akira Terui
Categories: math.AC Commutative Algebra
Comments: 30 pages. Preliminary versions of this paper have been presented at CASC 2003 (arXiv:0806.0478 [math.AC]) and CASC 2005 (arXiv:0806.0488 [math.AC])
MSC: 13P99; 68W30
Journal reference: *Journal of Algebra, Vol.* 320, No. 2, pp. 633-659, 2008 (DOI)

http://front.math.ucdavis.edu/0806.0044
Title: The Riemann Hypothesis for Function Fields over a Finite Field
Authors: Machiel van Frankenhuijsen
Categories: math.NT Number Theory (math.AG Algebraic Geometry)
Comments: 30 pages, 2 figures all \o's are now \mathcal{O}
MSC: 11G20; 11R58, 14G15, 30D35

http://front.math.ucdavis.edu/0805.4682
Title: Averages of Euler products, distribution of singular series and the ubiquity of Poisson distribution
Authors: Emmanuel Kowalski
Categories: math.NT Number Theory
Comments: 31 pages
MSC: 11P32, 11N37, 11K65

http://front.math.ucdavis.edu/0805.3194
Title: Accurate Evaluation of Polynomials
Authors: Brian M. Sutin
Categories: math.NA Numerical Analysis
Comments: 8 pages + 2 figures
MSC: 65-04; 65Y20

http://front.math.ucdavis.edu/0805.1618
Title: Bernstein operators for exponential polynomials
Authors: J. M. Aldaz, O. Kounchev, H. Render
Categories: math.CA Classical Analysis and ODEs
Comments: A very similar version is to appear in Constructive Approximation
Journal reference: (DOI)

http://front.math.ucdavis.edu/0805.1554
Title: A finiteness property for preperiodic points of Chebyshev polynomials
Authors: Su-Ion Ih, Thomas J. Tucker
Categories: math.NT Number Theory
Comments: 12 pages
MSC: 11G05; 11G35, 14G05

http://front.math.ucdavis.edu/0805.1274
Title: Identities involving Narayana polynomials and Catalan numbers
Authors: Toufik Mansour, Yidong Sun
Categories: math.CO Combinatorics
Comments: 13 pages,6 figures
MSC: 05A05;05A15

http://front.math.ucdavis.edu/0805.1046
Title: On the Markov sequence problem for Jacobi polynomials
Authors: Eric A. Carlen, Jeffrey S. Geronimo, Michael Loss
Categories: math.CA Classical Analysis and ODEs (math.FA Functional Analysis)
MSC: 31B10, 33C45, 37A40

http://front.math.ucdavis.edu/0805.0415
Title: Some conjectures about q-Fibonacci polynomials
Authors: Johann Cigler
Categories: math.CO Combinatorics (math.GM General Mathematics)
MSC: 11B39; 05A30

http://front.math.ucdavis.edu/0805.0166
Title: Bethe ansatz solutions to quasi exactly solvable difference equations
Authors: Ryu Sasaki, Wen-Li Yang, Yao-Zhong Zhang
Categories: physics.math-ph Mathematical Physics (nlin.SI Exactly Solvable and Integrable Systems; physics.hep-th High Energy Physics - Theory; physics.quant-ph Quantum Physics)
Comments: 22 pages, Latex file
Report number: YITP-08-33

http://front.math.ucdavis.edu/0805.0770
Title: Sutherland-type Trigonometric Models, Trigonometric Invariants and Multivariate Polynomials
Authors: K. G. Boreskov, A. V. Turbiner, J. C. Lopez Vieyra
Categories: physics.math-ph Mathematical Physics (math.RT Representation Theory; math.SP Spectral Theory; physics.hep-th High Energy Physics - Theory)
Comments: 17 pages, to appear in Contemporary Mathematics
Report number: IHES/P/08/32

http://front.math.ucdavis.edu/0805.4079
Title: Landau levels and Riemann zeros
Authors: German Sierra, Paul K. Townsend
Categories: physics.math-ph Mathematical Physics (math.NT Number Theory; physics.hep-th High Energy Physics - Theory; physics.mes-hall Mesoscopic Systems and Quantum Hall Effect; physics.quant-ph Quantum Physics)
Comments: 4 pages, 2 figures
Report number: IFT-UAM/CSIC08-26, DAMTP-2008-46

http://front.math.ucdavis.edu/0806.0934
Title: Prime pairs and Zeta's zeros
Authors: Jacob Korevaar (University of Amsterdam)
Categories: math.NT Number Theory
Comments: 30 pages, 2 figures
MSC: 11P32; 11M26

http://front.math.ucdavis.edu/0806.0786
Title: Upper bounds for the moments of zeta prime rho
Authors: Micah B. Milinovich
Categories: math.NT Number Theory
Comments: submitted for publication
MSC: 11M06, 11M26

http://front.math.ucdavis.edu/0806.2491
Title: The q-WZ Method for Infinite Series
Authors: William Y. C. Chen, Ernest X. W. Xia
Categories: math.CO Combinatorics
Comments: 17 pages

http://front.math.ucdavis.edu/0806.3508
Title: Gazeau-Klauder coherent states for hypergeometric type operators
Authors: Nicolae Cotfas
Categories: physics.math-ph Mathematical Physics
Comments: 16 pages. More details available at
http://fpcm5.fizica.unibuc.ro/~ncotfas/
MSC: 33C45; 81R30

http://front.math.ucdavis.edu/0806.1878
Title: Mock Jacobi forms in basic hypergeometric series
Authors: Soon-Yi Kang
Categories: math.NT Number Theory (math.CO Combinatorics)
Comments: 13 pages
MSC: 11F37; 11F50; 05A17; 33D15

http://front.math.ucdavis.edu/0806.0857
Title: A new (?) continued fraction expansion for the reciprocal of a q-series
Authors: Helmut Prodinger
Categories: math.CO Combinatorics

Comments: I would like to get feedback from specialists
MSC: 05A30

http://front.math.ucdavis.edu/0805.4586
Title: The Riemann-Hilbert approach to a generalized sine kernel
Authors: N. Kitanine (LPTM), K. K. Kozlowski (Phys-ENS), J. M. Maillet (Phys-ENS), N. A. Slavnov (SMI), V. Terras (Phys-ENS, LPTA)
Categories: physics.math-ph Mathematical Physics
Comments: 67 pages

http://front.math.ucdavis.edu/0805.3847
Title: Stability of the Periodic Toda Lattice: Higher Order Asymptotics
Authors: Spyridon Kamvissis, Gerald Teschl
Categories: nlin.SI Exactly Solvable and Integrable Systems (physics.math-ph Mathematical Physics)
Comments: 21 pages

http://front.math.ucdavis.edu/0805.0446
Title: Moment determinants as isomonodromic tau functions
Authors: M. Bertola
Categories: nlin.SI Exactly Solvable and Integrable Systems
Comments: 24 pages

http://front.math.ucdavis.edu/0806.0271
Title: On the Linearization of the First and Second Painleve' Equations
Authors: N. Joshi, A. V. Kitaev, P. A. Treharne
Categories: math.CA Classical Analysis and ODEs
Comments: 17 pages, 2 figures
MSC: 33E17, 34M25, 34M55

http://front.math.ucdavis.edu/0805.3823
Title: Fractional Calculus: Integral and Differential Equations of Fractional Order
Authors: Rudolf Gorenflo, Francesco Mainardi
Categories: physics.math-ph Mathematical Physics (math.CV Complex Variables; math.HO History and Overview; physics.stat-mech Statistical Mechanics)
Comments: 56 pages, 7 figures/eps files
MSC: 26A33, 33E12, 33E20, 44A20, 45E10, 45J05
Journal reference: *A. Carpinteri and F. Mainardi (Editors): Fractals and Fractional Calculus in Continuum Mechanics, Springer Verlag, Wien and New York* 1997, pp. 223-276.,

http://front.math.ucdavis.edu/0805.1717
Title: Minkowski question mark function and its generalizations, associated with p-continued fractions: fractals, explicit series for the dyadic period function and moments
Authors: Giedrius Alkauskas
Categories: math.NT Number Theory (math.CV Complex Variables)
Comments: 37 pages, 6 figures
MSC: 11A55 (Primary), 26A30, 28A80, 32A05 (Secondary)

http://front.math.ucdavis.edu/0806.1466
Title: Quantum Painlevé Equations: from Continuous to Discrete
Authors: Hajime Nagoya, Basil Grammaticos, Alfred Ramani
Categories: math.QA Quantum Algebra (math.CA Classical Analysis and ODEs; nlin.SI Exactly Solvable and Integrable Systems)
Comments: Published in SIGMA (Symmetry, Integrability and Geometry: Methods and Applications) at http://www.emis.de/journals/SIGMA/
Journal reference: *SIGMA* 4 (2008), 051, 9 pages (DOI)

http://front.math.ucdavis.edu/0805.2905
Title: q-Difference equations of KdV type and "Chazy-type" second-degree difference equations
Authors: Chris M. Field, Nalini Joshi, Frank W. Nijhoff
Categories: nlin.SI Exactly Solvable and Integrable Systems
Comments: 14 pages, 2 figures

http://front.math.ucdavis.edu/0806.3940
Title: A completeness study on a class of discrete, 'two by two' Lax pairs
Authors: Mike Hay
Categories: nlin.SI Exactly Solvable and Integrable Systems
Comments: 24 pages, 22 (very small) figures

http://front.math.ucdavis.edu/0806.1826
Title: Fractional differential equations: alpha-entire solutions, regular and irregular singularities
Authors: Anatoly N. Kochubei
Categories: math.CA Classical Analysis and ODEs (physics.math-ph Mathematical Physics)
Comments: 20 pages
MSC: 26A33; 34M99

http://front.math.ucdavis.edu/0806.0892
Title: On Zeros of Certain Entire Functions
Authors: Ruiming Zhang
Comments: 8 pages
[The last item in http://staff.science.uva.nl/~thk/art/comment/ has some interesting comments on this article. -Eds.]

Topic #8 ---------- OP-SF NET 15.4 ---------- July 15, 2008

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 #9 ---------- OP-SF NET 15.4 ---------- July 15, 2008

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 15.5 should be sent by September 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 (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