O P–S F N E T – Volume 22, Number 5 – September 15, 2015

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

http://math.nist.gov/opsf

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Calendar of Events:

September 28–30, 2015
International Conference on Analysis, Applications and Computations, In
Memory of Lee Lorch, Fields Institute, Toronto, Canada
http://www.fields.utoronto.ca/programs/scientific/15–16/analysisapplications

October 4–30, 2015
International Workshop and Latin–American School on Foundations of Complexity,
Nonadditive Entropies and Nonextensive Statistical Mechanics, Rio de Janeiro, Brazil
http://www.cbpf.br/~complex

October 9–11, 2015
Midwestern Workshop on Asymptotic Analysis,
Indiana University, Bloomington, Indiana, USA
http://math.iupui.edu/~maxyatts/workshop

January 6–9, 2016

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

AMS Special Session on Special Functions and q-Series,
 Organized by Richard Askey, Mourad E. H. Ismail, and Erik Koelink,
 http://jointmathematicsmeetings.org/meetings/national/jmm2016/2181_program_ss31.html#title

AMS Special Session on Recent Advances in Orthogonal Polynomials and Special Functions,
 Organized by Xiang–Sheng Wang,
 http://jointmathematicsmeetings.org/meetings/national/jmm2016/2181_program_ss17.html#title

June 27 – July 1, 2016

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

July 3–9, 2016

Symmetries and Integrability of Difference Equations 12,
Hôtel Le Chanteclerc, Saint Adèle, Québec, Canada
http://www.crm.umontreal.ca/2016/SIDE12/index.php

July 11–15, 2016

OPSF–S6 Summer School on Orthogonal Polynomials and Special Functions,
Dedicated to the memory and legacy of Frank W. J. Olver,
Norbert Weiner Center for Harmonic Analysis and Applications,
University of Maryland, College Park, Maryland, USA
https://wis.kuleuven.be/events/OPSFA

June 26–30, 2017

OPSF–S7 Summer School on Orthogonal Polynomials and Special Functions,
University of Kent, Canterbury, UK
http://www.kent.ac.uk/smsas/personal/opsfa

July 3–7, 2017

14th International Symposium on Orthogonal Polynomials, Special Functions and
Applications (OPSFA14), University of Kent, Canterbury, UK
http://www.kent.ac.uk/smsas/personal/opsfa

July 10–19, 2017

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

From: Daniel Lozier (daniel.lozier@nist.gov)
Subject: Reaction to SIAM's Evaluation of OPSFA-13

The attendees' opinion of the OPSFA13 technical program was mostly positive or very positive (see Figures 2,3 below). The talks were generally of high quality but in some cases the speakers should have provided an introduction for non-experts. The plenary and minisymposium talks were interesting and well-focused on the conference themes. It was mentioned that many outstanding researchers attended the conference.

The biggest complaint was high cost, especially of the registration fee. There was a strong feeling it should have provided reductions for minisymposium speakers (especially those who are not members of SIAM) and retired people. Snacks should have been included at the coffee breaks, the banquet should have been cheaper (perhaps including wine which was rather high at $10 per glass) or free, something more than just the program booklet (a carrying bag?), and a low-cost excursion should have been included. Opinions of the hotel were generally positive though some stayed at cheaper alternatives (I should say I thought the hotel rate of $125 to be quite reasonable for the Washington area).

44% of the attendees were attracted by the conference themes, and 59% because they were speakers or organizers. Most of them heard about the conference from friends and colleagues but others in different ways – including 3.7% from NA-Net, nearly as many as from SIAM's own web page (5.6%). They came mostly for networking opportunities, while nearly 1/3 came because of the location. I suspect the location was attractive because it was the first OPSFA meeting in the USA, and not because it was at NIST or in the Washington area.

Table 1: Summary of Meeting Registrations by Rate Category for FA15

Registration Category	Pre-Reg	On-Site	Total	Paid	Free
COMPLIMENTARY	10	0	10	0	10
INVITED SPEAKER	11	0	11	0	11
SIAM ACTIVITY GROUP MEMBER	32	0	32	32	0
SIAM MEMBER	30	0	30	30	0
SIAM NON-MEMBER	69	0	69	69	0
NSF POSTDOC	3	0	3	3	0
NSF STUDENT	1	0	1	1	0
STUDENT	9	0	9	9	0
STUDENT TRAVEL AWARD	8	0	8	8	0
ONE DAY MONDAY	7	0	7	7	0
ONE DAY TUESDAY	3	0	3	3	0
ONE DAY WEDNESDAY	1	0	1	1	0
ONE DAY THURSDAY	9	0	9	9	0
ONE DAY FRIDAY	1	0	1	1	0
TOTALS	194	0	194	173	21

The conference was well attended, 194 registrations (see Table 1), close to our projection of 200. It seems most attendees were plenary or minisymposium speakers or co-authors; there were no contributed talks. They liked the minisymposium format, and I suspect it contributed to the good attendance. But it also contributed to the frequently expressed

complaint that there were too many parallel sessions. This latter problem was exacerbated by having multiple talks by one individual in one, or more than one, minisymposium session.

NIST as the venue was sometimes criticized for excessive bureaucracy, difficult logistics, and not being near hotels and restaurants. I suspect the badging process and the networking restrictions were part of the reason for these criticisms. Interestingly, no one mentioned the bus service so it seems to have been satisfactory. There were complaints about the coffee service, especially the lack of snacks, and about the high cost of the advance meal tickets, although the opinion of the cafeteria was generally positive.

There was considerable dissatisfaction with SIAM's management of the conference. The registration and minisymposium organizing procedures were confusing, the registration costs were not readily apparent on the SIAM web page, the procedures for joining SIAM and the SIAG were not clear, and the budget in the program booklet wasn't a convincing explanation of the actual costs of the conference (see Figure 1). It was suggested that a better job could have been done in announcing the topics and names of the minisymposium organizers.

I agree strongly with the criticism of the budget. First, it does not break out either the NIST or the NSF financial contribution. In the case of NIST, this consisted of a cash grant of $30,000, plus paid registration for several attendees (even the conference co-organizer!). NIST also provided free of charge to SIAM all onsite conference services (no SIAM staff were present at any time) and all A/V equipment and services. Because of this it is hard to understand why the budget shows $40,565 for Conference Labor; $7500 for Supplies, Staff Travel (!), Freight, and Miscellaneous; $12,439 for Administrative; $6633 for Accounting/Distribution and Shipping (the only shipping was program books and related material to NIST, which could have been covered either here or in the Freight category); and $4739 for Other SIAM Services. These items add up to $71,876, an amount far exceeding the approximately $10,000 for bus service, which seems to be the only genuine cost to SIAM in addition to (mostly) overhead costs. SIAM has not disclosed the amount of the NSF contribution, which was taken from an NSF block grant to SIAM that is provided (as I understand it) to support SIAM conference activities.

Figure 1: SIAM OPSFA13 Budget

I also agree that there were too many parallel sessions. We could have reduced this to some degree by restricting speakers to just one presentation, and by reducing the length of talks to meet SIAM's usual guidelines. Having contributed paper presentations, which are shorter than minisymposium presentations, would have helped but we wanted to give all speakers equal time. Possibly also we could have rejected some of the minisymposia with overlapping themes. These steps might not have been enough to allow time for an excursion and they might have had the side effect of reducing attendance at the conference.

Evaluation Form

The 13th International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA13)
June 1 - 5, 2015
National Institute of Standards and Technology
Meeting Attendance Total: 194
Survey Response Total: 54 (82.22% Male; 17.78% Female)

How did you hear about the meeting?

59.26% Friends and Colleagues
16.67% Other
9.26% Other Electronic
5.56% SIAM Web Page
3.70% Online Program
3.70% NA – Net
1.85% Call for Papers Postcard
0.00% SIAM News

Which medium did you use to register?

81.48% On-line Form
12.96% E-mail
5.56% Fax
0.0% Telephone
0.0% Postal mail

Please check the two most important factors in the technical program that influenced your decision to attend this year's meeting?

59.26% Minisymposium Organizer/Speaker
44.44% Conference Themes
31.48% Co-author/speaker of accepted presentation
25.93% Plenary speakers
7.41% Other
5.56% Organizing Committee

Please check the two most important logistical factors that influenced your decision to attend this year's meeting.

48.08% Networking Opportunities
32.69% Location
32.69% Conference Dates
26.92% Expenses being covered by my employer
23.08% Other
3.85% Registration fees
1.92% Job Opportunities

For each question below, please select the option that matches your opinion:

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1. Technical program was excellent	24.53%	**43.40%**	20.75%	9.43%	1.89%
2. Plenary talks interesting/well -presented	31.48%	**53.70%**	11.11%	3.70%	0.00%
3. Minisymposia interesting/well-focused on topics related to conference themes	37.04%	**57.41%**	3.70%	1.85%	0.0%
4. I acquired information that will be useful in my research in my job responsibilities	29.63%	**51.85%**	16.67%	0.00%	1.85%
5. Registration process was easy	18.52%	**37.04%**	14.81%	22.22%	7.41%
6. The book exhibits were valuable	3.70%	9.26%	**50.00%**	29.63%	7.41%

Suggestions for technical program (e.g. minisymposia topics, meeting themes):

- This was fine.
- Well done!
- I value the idea of minisymposia -- much better than traditional concurrent sessions. Its realization was not ideal though because some closely related themes were running on a concurrent basis.
- Minisymposia should be coordinated. I was shocked that people gave two or even three talks at the conference, due to the fact they were asked at several minisymposia.
- Less parallel sessions. There were too many clashes
- Decrease the number of parallel sessions
- Too many parallel sessions
- More Math Knowledge Management could be worthwhile.
- The plenary speaker list should have included names such as Martinez-Finkelshtein, Lubinsky, Marcellan, Simon, Totik, Wong, and Grunbaum.
- The process of organizing mini-symposia was cumbersome, some people were contacted several times and gave several talk, others were not contacted at all. No one knew which mini-symposia will be organized and by whom.
- 1-D and milti-D Numerical integration
- The plenary speakers should be asked to prepare their talk so that the 1st half is understandable by a large audience.

- Give plenary speakers the message to cover the area broadly speaking, not too much highly specialised material
- Less minisymposia topics. The number of parallel sessions was very high.

What was the most important feature of this OPSFA meeting? The least important?

- The talks were, generally, quite good.
- Mini-symposium on the legacy of Ramanujan
- Most important is social gathering.
- Very high cost is the most notable feature of this meeting.
- The plenary talks and the minisymposia were equally important. The least important feature was probably the display of Wolfram posters in the hallway
- Logistics was somewhat critical. Access to NIST seems to be quite bureaucratic.
- Most important: networking. Least important: none.
- Most important: meeting colleagues
- Some plenary talks are most important. NIST details are least important
- Minisymposia
- The ability to meet the OPSF community directly. Least important: the banquet---it was pricey and I did not go.
- The most important feature was the fact that many outstanding researchers in the field attend this conference.
- High quality scientific presentations.
- Chance to talk to other experts.
- The topics
- Most important: High level talks
- Meeting colleagues, discussing research. Least important is the location
- The excellence of the Plenary speakers as well as the updated topics of the special sessions

Did you learn anything useful? Will it have an impact on your research programs?

- Yes, I learned a lot of useful information for my own research program.
- Yes
- Clearly, I have gained some new mathematical knowledge about recent novelties on the topics of my interests from the talks and chats with colleagues.
- Yes.
- The minisymposium sessions were very interesting and a good opportunity to share and learn new ideas
- Yes. Yes
- Yes
- Yes, quite a lot. It will have a real impact on what I look at in connection with 3 ideas, and I'll help at least one other in connection with a book, and others I'll be writing to.
- Yes, I learned much that will be useful to my research.
- Yes.
- Yes and yes.
- Yes, some
- Yes
- Do not know yet.
- Not very much
- Not explicitly learning but contact with research colleagues is essential

Additional comments/suggestions are welcome, including comments about the SIAM Conferences Web page.

- This was the first OPSFA meeting in the USA. The cost to attend was too high. The registration fee was ridiculous considering what we got for it. When the conference has been in Europe, the registration fees were reasonable. A banquet was often a part of the fees. And the banquet was much better than the one for OPSFA '13. Furthermore, not that it matters a lot to me, but wine was always gratis in Europe for the banquet but not at OPSFA '13. Furthermore, there was always an excursion planned in Europe (or Tunisia) that was interesting and affordable. Why the organizers didn't plan for an excursion into Washington is beyond me. You should know that the Europeans, in general, were not happy with the cost or the organization. At coffee breaks, there were no snacks (OK by me but I heard numerous complaints from others). In short, nobody can put on a conference as well as the Europeans do; it's unfortunate that so many people were dissatisfied with OPSFA '13.
- The registration fee is excessive and prohibitively expensive. And not a single cookie! Find cheaper venues, scale back the welcome reception, forget the banquet, cut the registration fees in half, and put out a few cookies during the breaks. The NIST cafeteria was actually quite nice and reasonably priced. The lunch tickets were unnecessary and certainly not worth $15.90.

Figure 2: SIAM OPSFA13 Evaluation Form

- The 12 talks in the Ramanujan mini-symposium were terrific. Wadim Zudilin's talk was superb. Ismail's talk was also excellent.

- There were overlaps of related minisymposia (e.g., on number theory and on Ramanujan-influenced mathematics) -- this should be better avoided in the future.

- The way SIAM organizes their meetings is not suitable for this smaller scale meeting.

- Registration fees were high

- The only OPSFA conference attended which did not provide snacks with coffee breaks. Also, no excursion. Notable considering the very high registration fee.

- The registration procedure was not quite clear and overall the conference was extremely pricy in comparison with the service given

- Imho way too expensive, especially in cases like me (invited speaker for minisymposium, non SIAM member). SIAM should revise its pricing policy if there is interest of contributions from "outside" in the future.

- Having minisymposia encouraged people to give more than one presentation. More general theming and a restriction of one presentation per person would have been better

- Outrageous registration fees. For $540 from each participant, coffee breaks did not have even a single cookie. I've never seen such minimal treatment at any of many conferences I have attended.

- The registration fee was absolutely disproportioned. They did not give any material (only the book of abstracts), the coffee breaks were awful and the conference dinner was a robbery. I do not understand how you spend more than $20,000 in food for the conference. It was totally unreal. SIAM (or anybody else) clearly did a very good business with this conference. I hope the next OPSFA organization is not involved at all with SIAM.

- Good but expensive compare to previous conferences of this theme

- The registration fees were obscene, especially in light of what we received for them.

- Too many parallel sessions Too high conference costs

- The matter of joining the SIG and getting a discount was confusing; actually so was joining SIAM to get effectively the same price as otherwise (but a (partial) year's membership). The SIAM Conferences Web page irritated me in that it did not seem willing to tell me what registration costs would be until I could be poised to sign up. I think that's not very open, and discourages me from looking into going to other SIAM meetings.

- The registration fee was much too high and not justified by the budget printed in the conference book.

- Publish the list of mini-symposia and the names of their organizers right away.

- Advance payment for the lunches was set up with an insecure web site for providing a credit card; I had to do this by phone with customer service

- Reduce the registration fee to HALF of what was charged. This is a mathematics meeting and we do not have the huge grants that engineers have to pay such high fees. 2. Have a half day excursion to some interesting place with a tour guide. This certainly helps to enhance social interaction. 3. The coffee breaks were poorly organized, and not respectable. SIAM could do much better.

- Registration fee was high. No reduction for retired participants.

- The conference was very expensive for what it offered. The conference site was not a good option (far from hotels and difficult to access),

- Registration fees are too high, conference banquet fee MUCH too high, costs need to be lowered or sponsorship secured

- Ridiculously high registration fee

Did you stay at the Courtyard Gaithersburg Marriott Washingtonian Center?

Yes 60.87%
No 39.13%

If you stayed at the Courtyard Gaithersburg Marriott Washingtonian Center, please rate the following statements

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Hotel registration was easy	35.48%	**48.39%**	9.68%	6.45%	0.00%
Checking into the hotel was easy	**51.61%**	41.94%	6.45%	0.00%	0.00%
The hotel staff was helpful	**45.16%**	41.94%	9.68%	3.23%	0.00%
The accommodations were good	35.48%	**48.39%**	9.68%	3.23%	3.23%
It was easy to find places to meet with others	22.58%	**48.39%**	19.35%	6.45%	3.23%
It was close to restaurants	25.81%	**48.39%**	16.13%	6.45%	3.23%

If you did not stay at the Courtyard Gaithersburg Marriott Washingtonian Center, where did you stay?

- Nearby hotel.

- My daughter's home in Rockville.

- Sheraton Rockville Hotel

- SpringHill Suites Gaithersburg 9715 Washingtonian Blvd. Gaithersburg, MD 20878

- Motel 6 (to reduce the very considerable overall costs at least somewhat).

- Holiday inn

- Comfort Inn

- An extended Stay not that far away. It worked fine to appear for the 7:30 but to NIST and the Washingtonian area had lots of parking and places to wait.

- The Holiday Inn Gaithersburg.

- In Berkeley, CA. I gave a talk by videoconference.

- Motel 6

- with relatives

- Holiday inn Gaithersburg

- It is expensive.

- home

- I am local

Figure 3: SIAM OPSFA13 Evaluation Form (cont.)

Topic #2 —— OP – SF Net 22.5 —— September 15, 2015

From: Daniel Lozier (daniel.lozier@nist.gov)
Subject: Story by Willard Miller, Jr. in the SIAM NEWS on OPSFA-13

See link for the September 2015 SIAM NEWS article by Willard Miller, Jr. in which he offers his observations on the technical program of OPSFA-13. Miller also reflects on the importance and value of special functions in scientific applications. For example, he describes the award of the SIAM Gábor Szegő Prize to Karl Liechty for his original work on the asymptotic analysis of orthogonal polynomials arising in models from statistical mechanics, in particular the six-vertex model and a model of non-intersecting random paths.

Topic #3 —— OP – SF Net 22.5 —— September 15, 2015

From: Yuan Xu (yuan@uoregon.edu)
Subject: Minutes of the June 3rd SIAG/OPSF business meeting at OPSFA-13

The meeting was chaired by SIAG-OPSFA Chair, Walter Van Assche. About 40 participants attended the meeting.

Walter started, at 3:05 pm, with general remarks about the affairs of the Activity Group. Below is a list of topics that were discussed:

1. The Activity Group news letter, OP-SF Net, which is the main vehicle for reaching the members. It is currently run by Kerstin Jordaan and Howard Cohl, but they need all the help they can get from the members.

2. Activity group webpage: for which the activity group receives the feedback from Bonita Saunders, the webmaster.

3. Announcements: 2017 Election and Charter Renewal. The chair reports the status of the activity group and the need to increase its membership. Dunkl suggested using reciprocal membership for reaching international members.

4. OPSFA conference: OPSFA-13 was supported by the Activity Group and the NIST Applied and Computational Mathematics Division. Lozier mentioned the interesting idea of using the royalties from the NIST Handbook of Mathematical Functions for running conferences for the Activity Group. The initial discussions with NIST and with Cambridge University Press are encouraging but the outcome is uncertain.

5. Other conferences and events: ICIAM 2015 in Beijing, China, Aug. 10-14, 2015, possible application for 2017 Golub SIAM Summer School, and SIAM Annual Meeting in 2016.

6. SIAM discounts for SIAM and SIAG/OPSF membership for participants. Further discussion on increasing membership and how to reach potential members. The current number of the membership is 155, which is on an upswing over the past 2 years. The Chair shares the statistics of the membership with the group (occupation, demography, gender, student members).

7. Future activities [with factual corrections by the editor]: an OPSF summer school will be held at the University of Maryland, USA in June 2016. Discussion on future summer schools. The next OPSFA conference will be held at the University of Kent in July 2017, and there will be an OPSF summer school in the week before the meeting.

The conference was adjourned at 3:45 pm.

Topic #4 ——— OP – SF Net 22.5 ——— September 15, 2015

From: Peter Clarkson (P.A.Clarkson@kent.ac.uk) and Ana Loureiro (A.Loureiro@kent.ac.uk)
Subject: Announcement: OPSFA-14

The 14th International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA14) will be organised by the School of Mathematics, Statistics and Actuarial Science at the University of Kent, Canterbury, UK. The conference will take place 3–7 July 2017. The conference is the 14th event in the OPSFA series and the first one to take place in the UK.

Conferences in the OPSFA series provide a forum for mathematicians, physicists, computational scientists, and application scientists in other fields to communicate recent research results on various aspects and applications of orthogonal polynomials and special functions related to:

- classical analysis
- approximation theory
- continued fractions
- potential theory
- q-calculus
- asymptotics
- Riemann–Hilbert problems
- random matrix theory
- superintegrability and supersymmetry
- integrable systems
- Painlevé equations
- orthogonal polynomials and special functions of several variables
- orthogonal polynomials associated with root systems
- spherical functions
- orthogonality on the complex plane
- multiple orthogonal polynomials
- Sobolev orthogonal polynomials
- stochastic processes

with possible connections to other disciplines such as

- science and industry
- handbooks
- numerical algorithms and tables
- symbolic computation
- combinatorics
- number theory
- theoretical physics
- probability theory and statistics

More information on the local organising committee, the scientific programming committee and other organisational matters is available at:

http://www.kent.ac.uk/smsas/personal/opsfa.

Topic #5 ———— OP – SF Net 22.5 ———— September 15, 2015

From: Maxim Yattselev (maxyatts@math.iupui.edu)
Subject: Announcement: Midwestern workshop on Asymptotic Analysis

The Midwestern Workshop on Asymptotic Analysis will be held at Indiana University in Bloomington, Indiana, USA, October 9–11, 2015. This is the second workshop of this kind and will hopefully become an annual event.

The goal of the Midwestern Workshop on Asymptotic Analysis is to facilitate interactions between mathematicians working in approximation theory, mathematical physics, potential theory and complex analysis by bringing them together in an informal way for a two day workshop. Orthogonal Polynomials and Special Functions play an important part. Sergey Denisov and Peter Miller are among the speakers this year.

A major objective of the workshop is to expose attending graduate students to different areas of analysis. We hope these meetings will help to strengthen the partnership and increase the collaboration between analysts in the midwest.

More information on the workshop is available at:
[http://math.iupui.edu/∼maxyatts/workshop](http://math.iupui.edu/~maxyatts/workshop).

Topic #6 ———— OP – SF Net 22.5 ———— September 15, 2015

From: Charles Dunkl (cfd5z@virginia.edu)
Subject: Special issue on "Symmetry in orthogonal polynomials" in the journal Symmetry

The journal *Symmetry* (ISSN 2073–8994) is currently running a special issue entitled "Symmetry in Orthogonal Polynomials". Prof. Dr. Charles F. Dunkl, of the Department of Mathematics, University of Virginia, (Charlottesville, VA, USA), is serving as Guest Editor for this issue. *Symmetry*, an international and interdisciplinary scientific journal, publishes reviews, regular research papers and short notes.

The concept of symmetry has been fundamental and studied for millennia. The ancient geometers already knew the five regular solids. For a long time, symmetry was a part of the discipline of geometry, but in more recent times it has become very important in analysis, mathematical physics, and of course, group theory. Symmetry is a key tool in analyzing functions of several variables. In this special issue we aim to present the newest developments in the interaction of symmetry and orthogonal polynomials, in areas such as quantum physics, combinatorics, and classical analysis problems dealing with convergence of polynomial expansions. Prospective topics include more precise formulas, approximation theorems about expansions in orthogonal polynomials of several variables, dependence on the parameters of a weight function, vanishing properties of specific polynomials (such as Jack and Macdonald), and so on. We encourage submission of suitable manuscripts. The submission deadline is 29 February 2016.

You may send your manuscript now or up until the deadline. Submitted papers should not be under consideration for publication elsewhere. We also encourage authors to send a short abstract or tentative title to the Editorial Office in advance (symmetry@mdpi.com). For further reading, please follow the link to the Special Issue Website at:
http://www.mdpi.com/journal/symmetry/special_issues/orthogonal_polynomials.

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Many MDPI journals have increased their impact factor in 2014, see: https://www.mdpi.com/about/announcements/631. MDPI publishes peer-reviewed, open access journals; the full list is available at http://www.mdpi.com. The Editorial Board members are all leading, active scholars. All MDPI journals maintain rapid, yet rigorous, peer-review, manuscript handling, and editorial processes.

Topic #7 ———— OP – SF Net 22.5 ———— September 15, 2015

From: Walter van Assche (Walter.VanAssche@wis.kuleuven.be)
Subject: Special issue on OPSFA in the journal SIGMA

The journal Symmetry, Integrability and Geometry: Methods and Applications (SIGMA) (ISSN 1815-0659) is publishing a special issue on "Orthogonal Polynomials, Special Functions and Applications". The deadline for paper submissions is January 31, 2016.

More information on this special issue, the guest editors, and the submission procedure can be found at http://www.emis.de/journals/SIGMA/OPSFA2015.html.

Topic #8 ———— OP – SF Net 22.5 ———— September 15, 2015

From: Zuhair Nashed (M.Nashed@ucf.edu)
Subject: Conference book: "Frontiers of Orthogonal Polynomials and q-Series"

A book consisting of contributed chapters on topics in orthogonal polynomials, q-series, and related topics will be published by World Scientific Publishing in summer of 2016. The book is entitled "Frontiers of Orthogonal Polynomials and q-Series". It will be edited by Xin Li and M. Zuhair Nashed of the University of Central Florida, Orlando, Florida. The book will be mainly based on the "International Conference on Orthogonal Polynomials and q-Series", which was held in Orlando, May 10 -12, 2015. The conference was dedicated to Dr. Mourad Ismail on his 70th birthday. The conference consisted of 35 keynote and invited lectures. Plenary talks were given by Professors Richard Askey and Dennis Stanton. The talks were excellent and the conference was a great success.

The proposed edited book will consist of about 25–30 chapters and is expected to be approximately 450 pages. The main themes are two topics in which Mourad has made fundamental contributions: Orthogonal Polynomials and q-Series. There will also be papers on important topics in number theory, combinatorics, approximation theory, and mathematical physics related to orthogonal polynomials and q-series. An effort will be made by the editors to coordinate the chapters, and to provide links and cross references among the various chapters, where they exist.

The following types of contributions are solicited:

1. Expository–research papers that review significant contributions in a particular area, provide perspectives, historical remarks, critical retrospective assessment, useful bibliography, and possibly open problems.

2. Historical and critical expositions that trace certain developments in orthogonal polynomials, q-series, approximation theory, number theory, mathematical physics, or other topics related to the themes of the conference.

3. Original research papers on cutting–edge research in orthogonal polynomials and q-series.

In addition to contributions from the invited speakers who made presentations at the conference, we are inviting contributions from mathematicians who were initially invited to give lectures at the conference, but were not able to participate due to various reasons. We also welcome proposals for contributions from various mathematicians and scientists to the extent that space allows.

Contributions to the book need not be the same as the lecture at the conference, so long as they are within the scope of topics of the conference. The reason for this is that some of the talks were based on papers that have been published recently. Extended abstracts and a summary of a paper or papers published recently are not suitable nor acceptable for inclusion in the proposed book.

Our aim is to have a volume that would highlight trends and important directions of research on orthogonal polynomials, q-series, and related topics in number theory, mathematical physics, and computational/applied harmonic analysis. We strive for a book that would inspire young researchers and provide pleasant memories for the older generations of researchers in these fields.

Topic #9 ——— OP – SF Net 22.5 ——— September 15, 2015

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 July and August 2015.

http://arxiv.org/abs/1505.05682
From Schoenberg coefficients to Schoenberg functions
Christian Berg, Emilio Porcu

http://arxiv.org/abs/1507.00031
On generalized (p, q)-elliptic integrals
Barkat Ali Bhayo, Li Yin

http://arxiv.org/abs/1507.00147
Bivariate Chebyshev-I Weighted Orthogonal Polynomials on Simplicial Domains
Mohammad A. AlQudah

http://arxiv.org/abs/1507.00286
Hyperbolic development and inversion of signature
Terry Lyons, Weijun Xu

http://arxiv.org/abs/1507.00494
Nonnegative Trigonometric Polynomials and Sturms Theorem
Man Kam Kwong

http://arxiv.org/abs/1507.00807
A Hardy-Littlewood Integral Inequality on Finite Intervals with a Concave Weight
Horst Alzer, Man Kam Kwong

http://arxiv.org/abs/1507.00810
A Refinement of Vietoris Inequality for Cosine Polynomials
Horst Alzer, Man Kam Kwong

http://arxiv.org.abs/1507.00914
Character Sums, Gaussian Hypergeometric Series, and Hyperelliptic Curves
Mohammad Sadek

http://arxiv.org/abs/1507.01104
Cross-product of Bessel functions: monotonicity patterns and functional inequalities
Árpád Baricz, Saminathan Ponnusamy, Sanjeev Singh

http://arxiv.org/abs/1507.01505
Chebyshev-type Quadratures for Doubling Weights
Shoni Gilboa, Ron Peled

http://arxiv.org/abs/1507.01582
Differential Equations, Associators, and Recurrences for Amplitudes
Georg Puhlfuerst, Stephan Stieberger

http://arxiv.org/abs/1507.01622
Zeros of polynomials orthogonal with respect to a signed weight
M. Benabdallah, M. J. Atia, R. S. Costas-Santos

http://arxiv.org/abs/1507.01712
Spectral functions related to some fractional stochastic differential equations
Mirko D'Ovidio, Enzo Orsingher, Ludmila Sakhno

http://arxiv.org/abs/1507.01821
Doubling Hahn polynomials: classification and applications
Roy Oste, Joris Van der Jeugt

http://arxiv.org/abs/1507.01848
On sums of powers of cosecs
J. S. Dowker

http://arxiv.org/abs/1507.02017
Asymptotic laws for the spatial distribution and the number of connected components of zero sets of Gaussian random functions
Fedor Nazarov, Mikhail Sodin

http://arxiv.org.abs/1507.02193
A note on an integral associated with the Kelvin ship-wave pattern
R. B. Paris

http://arxiv.org/abs/1507.02386
Fine structure in the large n limit of the non-hermitian Penner matrix model
Gabriel Álvarez, Luis Martínez Alonso, Elena Medina

http://arxiv.org/abs/1507.02515
A Remark on reverse Littlewood-Paley, restriction and Kakeya
Anthony Carbery

http://arxiv.org/abs/1507.02547
Extensions of Positive Definite Functions: Applications and Their Harmonic Analysis
Palle Jorgensen, Steen Pedersen, Feng Tian

http://arxiv.org/abs/1507.02624
Non-harmonic cones are Heisenberg uniqueness pairs for the Fourier transform on $\mathbb{R}^n$
R. K. Srivastava

http://arxiv.org/abs/1507.02995
The non-symmetric Wilson polynomials are the Bannai-Ito polynomials
Vincent X. Genest, Luc Vinet, Alexei Zhedanov

http://arxiv.org/abs/1507.03426
Matrix-valued orthogonal polynomials related to the quantum analogue of $(SU(2) \times SU(2), \text{diag})$
Noud Aldenhoven, Erik Koelink, Pablo Román

http://arxiv.org/abs/1507.03749
Diophantine properties of the zeros of (monic) polynomials the coefficients of which are the zeros of Hermite polynomials
Oksana Bihun, Francesco Calogero

http://arxiv.org.abs/1507.04123
Carlitz q-Bernoulli numbers and continued fractions
Frédéric Chapoton, Jiang Zeng

http://arxiv.org/abs/1507.04193
Integrability and conformal data of the dimer model
Alexi Morin-Duchesne, Jorgen Rasmussen, Philippe Ruelle

http://arxiv.org/abs/1507.04769
Mitigating the Curse of Dimensionality: Sparse Grid Characteristics Method for Optimal
Feeback Control and HJB Equations
Wei Kang, Lucas C. Wilcox

http://arxiv.org/abs/1507.04812
Uniform polynomial approximation with A^* weights having finitely many zeros
Kirill A. Kopotun

http://arxiv.org/abs/1507.04813
Extremal Polarization Configurations for Integrable Kernels
Brian Simanek

http://arxiv.org.abs/1507.04840
Proof of the Wilf–Zeilberger Conjecture
Shaoshi Chen, Christoph Koutschan

http://arxiv.org/abs/1507.04981
Uniform asymptotic approximations for the Lamé and Mathieu functions and their respec-
tive eigenvalues with a large parameter
Karen Ogilvie, Adri B. Olde Daalhuis

http://arxiv.org/abs/1507.04984
Rigorous asymptotics for the Lamé and Mathieu functions and their respective eigenval-
ues with a large parameter
Karen Ogilvie, Adri B. Olde Daalhuis

http://arxiv.org/abs/1507.05261
Perturbed Hankel determinant, correlation functions and Painlevé equations
Min Chen, Yang Chen, Engui Fan

http://arxiv.org/abs/1507.05291
A non–homogeneous local Tb theorem for Littlewood–Paley g_λ^*–function with L^p–testing
condition
Mingming Cao, Qingying Xue

http://arxiv.org/abs/1507.05430
Some sharp inequalities for the Toader-Qi mean
Zhen-Hang Yang

http://arxiv.org/abs/1507.05567
On quasi–periodicity properties of fractional integrals and fractional derivatives of peri-
odic functions
Iván Area, Jorge Losada, Juan J. Nieto

http://arxiv.org/abs/1507.05840
Large GCD sums and extreme values of the Riemann zeta function
Andriy Bondarenko, Kristian Seip

http://arxiv.org/abs/1507.05919
Quantum spin chains with fractional revival
Vincent X. Genest, Luc Vinet, Alexei Zhedanov

http://arxiv.org/abs/1507.05934
Unconditional and quasi-greedy bases in L_p with applications to Jacobi polynomials Fourier series
Fernando Albiac, José L. Ansorena, Óscar Ciaurri, Juan L. Varona

http://arxiv.org/abs/1507.06101
On a family of Laurent polynomials generated by 2x2 matrices
Victor Katsnelson

http://arxiv.org/abs/1507.06445
Pitt's inequalities and uncertainty principle for generalized Fourier transform
Dmitry Gorbachev, Valery Ivanov, Sergey Tikhonov

http://arxiv.org/abs/1507.06557
Quantum Curve and the First Painlevé Equation
Kohei Iwaki, Axel Saenz

http://arxiv.org/abs/1507.06681
New hypergeometric formulae to π arising from M. Roberts hyperelliptic reductions
Giovanni Mingari Scarpello, Daniele Ritelli

http://arxiv.org/abs/1507.07149
Irregular Riemann–Hilbert correspondence, Alekseev–Meinrenken dynamical r-matrix and Drinfeld twist
Xiaomeng Xu

http://arxiv.org/abs/1507.07187
Hardy space theory on spaces of homogeneous type via orthonormal wavelet bases
Yongsheng Han, Ji Li, Lesley Ward

http://arxiv.org/abs/1507.07391
Supercongruences for truncated hypergeometric series and p-adic gamma function
Rupam Barman, Neelam Saikia

http://arxiv.org/abs/1507.07401
Integrable solutions of inhomogeneous refinement type equations on intervals
Rafał Kapica, Janusz Morawiec

http://arxiv.org/abs/1507.07455
Boundary oscillations of harmonic functions in Lipschitz domains
Pavel Mozolyako

http://arxiv.org/abs/1507.07522
Sharp estimates of approximation of periodic functions in Hölder spaces
Yurii Kolomoitsev, Jürgen Prestin

http://arxiv.org/abs/1507.07596
Strong Asymptotics of Hermite–Padé Approximants for Angelesco Systems
Maxim L. Yattselev

http://arxiv.org/abs/1507.07696
Stein characterisations and distributional theory
Robert E. Gaunt

http://arxiv.org/abs/1507.07798
On the Invalidity of Fourier Series Expansions of Fractional Order
Peter Massopust, Ahmed I. Zayed

http://arxiv.org/abs/1507.07808
Properties of the zeros of generalized hypergeometric polynomials
Oksana Bihun, Francesco Calogero

http://arxiv.org/abs/1507.08479
Some approximation results on higher order generalization of Bernstein type operators
defined by (p,q)-integers
M. Mursaleen, Md. Nasiruzzaman

http://arxiv.org/abs/1507.08796
Evolution of Weyl functions and initial–boundary value problems
Alexander Sakhnovich

http://arxiv.org/abs/1508.00056
Pochhammer Symbol with Negative Indices. A New Rule for the Method of Brackets
Ivan Gonzalez, Lin Jiu, Victor H. Moll

http://arxiv.org.abs/1508.00609
Families of orthogonal Laurent polynomials, hyperelliptic Lie algebras and elliptic integrals
Ben Cox, Mee Seong Im

http://arxiv.org/abs/1508.00176
The fastest possible continued fraction approximations of a class of functions
Xiaodong Cao, Yoshio Tanigawa, Wenguang Zhai

http://arxiv.org/abs/1508.00177
Continued fraction expression of the Mathieu series
Xiaodong Cao, Yoshio Tanigawa, Wenguang Zhai

http://arxiv.org/abs/1508.00600
On beta distributed limits of iterated linear random functions
Shaun McKinlay

http://arxiv.org/abs/1508.00648
Integral representation of Weil's elliptic functions
Su Hu, Min-Soo Kim

http://arxiv.org/abs/1508.00863
Asymptotic and structural properties of special cases of the Wright function arising in probability theory
R. B. Paris, V. Vinogradov

http://arxiv.org/abs/1508.01024
A complete monotonicity result involving the q-polygamma functions
Peng Gao

http://arxiv.org.abs/1508.01674
Plane partitions with bounded size of parts and biorthogonal polynomials
Shuhei Kamioka

http://arxiv.org/abs/1508.01731
Certain Family of Some Beta Distributions Arising from Distribution of Randomly Weighted Average
Rasool Roozegar

http://arxiv.org/abs/1508.01793
n a conjecture of Chen-Guo-Wang
Bo Ning, Yu Zheng

http://arxiv.org/abs/1508.01794
Orthogonal polynomials related to some Jacobi-type pencils
Sergey M. Zagorodnyuk

http://arxiv.org/abs/1508.01816
Kibble-Slepian Formula and Generating Functions for $2D$ Polynomials
Mourad E. H. Ismail, Ruiming Zhang

http://arxiv.org/abs/1508.02738
Representation of solutions to the one-dimensional Schrödinger equation in terms of Neumann series of Bessel functions
Vladislav V. Kravchenko, Luis J. Navarro, Sergii M. Torba

http://arxiv.org/abs/1508.03198
Local Fractal Interpolation On Unbounded Domains
Peter R. Massopust

http://arxiv.org/abs/1508.03267
Bounds for the logarithm of the Euler gamma function and its derivatives
Harold G. Diamond, Armin Straub

http://arxiv.org/abs/1508.03274
On an integral equation of Lieb
Ronen Peretz

http://arxiv.org/abs/1508.03948
An asymptotic expansion for the Stieltjes constants
R. B. Paris

http://arxiv.org/abs/1508.04084
On some integrals involving the Hurwitz-type Euler zeta functions
Su Hu, Daeyeoul Kim, Min-Soo Kim

http://arxiv.org/abs/1508.04419
A note on the fractional logistic equation
I. Area, J. Losada, J. J. Nieto

http://arxiv.org/abs/1508.04450
On probabilistic aspects of Chebyshev polynomials
Paweł J. Szabłowski

http://arxiv.org/abs/1508.04723
New a priori estimates for semistable solutions of semilinear elliptic equations
Asadollah Aghajani

http://arxiv.org/abs/1508.04729
Densities of short uniform random walks in higher dimensions
Jonathan M. Borwein, Armin Straub, Christophe Vignat

http://arxiv.org/abs/1508.04738
Dutt-Khare-Varshni Potential and Its Quantized-by-Heun-Polynomials SUSY Partners as Nontrivial Examples of Solvable Potentials Explicitly Expressible in Terms of Elementary Functions
G. Natanson

http://arxiv.org/abs/1508.04746
The Smith Normal Form of a Specialized Jacobi-Trudi Matrix
Richard P. Stanley

http://arxiv.org/abs/1508.04916
Unique positive solution for an alternative discrete Painlevé I equation
Peter A. Clarkson, Ana F. Loureiro, Walter Van Assche

http://arxiv.org/abs/1508.05513
Very accurate approximations for the elliptic integrals of the second kind in terms of Sto-larsky means
Zhen-Hang Yang

http://arxiv.org/abs/1508.05794
Graph Laplacians do not generate strongly continuous semigroups
Thomas Kalmes, Christoph Schumacher

http://arxiv.org/abs/1508.05811
q-Peano Kernel and its Applications
Gülter Budakçı, Halil Oruç

http://arxiv.org/abs/1508.05852
On q-analogue of modified Kantorovich-type discrete-Beta operators
Preeti Sharma, Vishnu Narayan Mishra

http://arxiv.org/abs/1508.06469
Supersymmetric polynomials and the center of the walled Brauer algebra
Ji Hye Jung, Myungho Kim

http://arxiv.org/abs/1508.06537
Effect of change in inner product on spectral analysis of certain linear operators in Hilbert Spaces arising from orthogonal polynomials
Anu Saxena

http://arxiv.org/abs/1508.06542
From Morsels to Modern Mathematics
Ivan Badinski, Christopher Huffaker, Nathan McCue, Cameron N. Miller, Kayla S. Miller, Steven J. Miller, Michael Stone

http://arxiv.org/abs/1508.06689
A Hypergeometric Integral with Applications to the Fundamental Solution of Laplace's Equation on Hyperspheres
Richard Chapling

http://arxiv.org/abs/1508.06734
Random matrices with merging singularities and the Painlevé V equation
Tom Claeys, Benjamin Fahs

http://arxiv.org/abs/1508.06814
The cubic szego equation and hankel operators
Sandrine Grellier, Patrick Gerard

http://arxiv.org/abs/1508.06861
q-Bessel Functions and Rogers–Ramanujan Type Identities
Mourad E. H. Ismail, Ruiming Zhang

http://arxiv.org/abs/1508.06906
Integral representations for products of two parabolic cylinder functions with different arguments and orders
Dirk Veestraeten

http://arxiv.org/abs/1508.06947
A proof of two conjectures of Chao–Ping Chen for inverse trigonometric functions
Branko Malesevic, Bojan Banjac, Ivana Jovovic

http://arxiv.org/abs/1508.07191
Product formulas for the relativistic and nonrelativistic conical functions
Martin Hallnäs, Simon Ruijsenaars

http://arxiv.org/abs/1508.07421
The higher order asymptotic expansion of the Krawtchouk polynomials
Aleksei Minabutdinov

http://arxiv.org/abs/1508.07668
Cincinnati lectures on Bellman functions
Leonid Slavin (editor), Vasily Vasyunin

http://arxiv.org/abs/1508.07770
An algebraic interpretation of the multivariate q-Krawtchouk polynomials
Vincent X. Genest, Sarah Post, Luc Vinet

Topic #10 ———— OP – SF Net 22.5 ———— September 15, 2015

From: OP-SF Net Editors
Subject: About the Activity Group

The SIAM Activity Group on Orthogonal Polynomials and Special Functions consists of a broad set of mathematicians, both pure and applied. The Group also includes engineers and scientists, students as well as experts. We have around 155 members scattered about in more than 20 countries. Whatever your specialty might be, we welcome your partici-pation 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 Web-master is Bonita Saunders (bonita.saunders@nist.gov).

The Activity Group sponsors OP-SF NET, an electronic newsletter, and SIAM-OPSF (OP-SF Talk), a listserv, as a free public service; membership in SIAM is not required. OP-SF NET is transmitted periodically through a post to OP-SF Talk. The OP-SF Net Editors are Howard Cohl (howard.cohl@nist.gov) and Kerstin Jordaan (kerstin.jordaan@up.ac.za).

Back issues of OP-SF NET can be obtained at the websites:
https://staff.fnwi.uva.nl/t.h.koornwinder/opsfnet
http://math.nist.gov/~DLozier/OPSFnet

SIAM-OPSF (OP-SF Talk), which was recently moved to a SIAM server, facilitates commu-nication among members and friends of the Activity Group. To subscribe or to see a link the archive of all messages, go to http://lists.siam.org/mailman/listinfo/siam-OPSF and follow the instructions under the sub-heading "Subscribing to SIAM-OPSF". To contribute an item to the discussion, send e-mail to siam-opsf@siam.org. The moderators are Bonita Saunders (bonita.saunders@nist.gov) and Diego Dominici (dominicd@newpaltz.edu).

SIAM has several categories of membership, including low-cost categories for students and residents of developing countries. In addition, there is the possibility of reduced rate membership for the members of several societies with which SIAM has a reciprocity agree-ment; see http://www.siam.org/membership/individual/reciprocal.php. For current in-formation 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
    e-mail: service@siam.org
    WWW : http://www.siam.org

From: OP-SF Net Editors
Subject: Submitting contributions to OP-SF NET and SIAM-OPSF (OP-SF Talk)

To contribute a news item to OP-SF NET, send e-mail to one of the OP-SF Editors
howard.cohl@nist.gov or kerstin.jordaan@up.ac.za.
Contributions to OP-SF NET 22.6 should be sent by November 1, 2015.

OP-SF NET is an electronic newsletter of the SIAM Activity Group on Special Functions and Orthogonal Polynomials. We disseminate your contributions on anything of interest to the special functions and orthogonal polynomials community. This includes announcements of conferences, forthcoming books, new software, electronic archives, research questions, and job openings as well as news about new appointments, promotions, research visitors, awards and prizes. OP-SF Net is transmitted periodically through a post to SIAM-OPSF (OP-SF Talk).

SIAM-OPSF (OP-SF Talk) is a listserv of the SIAM Activity Group on Special Functions and Orthogonal Polynomials, which facilitates communication among members, and friends of the Activity Group. See the previous Topic. To post an item to the listserv, send e-mail to siam-opsf@siam.org.

WWW home page of this Activity Group:
http://math.nist.gov/opsf
Information on joining SIAM and this activity group: service@siam.org

The elected Officers of the Activity Group (2014-2016) are:
    Walter Van Assche, Chair
    Jeff Geronimo, Vice Chair
    Diego Dominici, Program Director
    Yuan Xu, Secretary
The appointed officers are:
    Howard Cohl, OP-SF NET co-editor
    Kerstin Jordaan, OP-SF NET co-editor
    Diego Dominici, OP-SF Talk moderator
    Bonita Saunders, Webmaster and OP-SF Talk moderator

Thought of the month

"The mathematician is only complete in so far as he feels within himself the beauty of the true."

Johann Wolfgang von Goethe in Oswald Spengler, Der Untergang des Abendlandes. Umrisse einer Morphologie der Weltgeschichte, Volume 1, p. 61 (translated in J. Newman, The World of Mathematics, Simon & Schuster, 1956).