



Forum on Education

American Physical Society

Forum on Education Executive Committee Meeting
Monday, April 14, 2008, 8:00 am – 10:30 am
St Louis Hyatt, Director's Row 23
Minutes

Voting Members Present: Olivia Castellini, Peter Collings, Noah Finkelstein, David Haase, Sam Lightner, Peggy McMahan, Ernie Malamud, Bruce Mason, David Meltzer, John Thompson, Mel Sabella, Larry Woolf

Non-voting Members Present: Jack Hehn, Ted Hodapp, Harvey Leff, Tom Rossing

Visitors: Judy Franz, Ken Heller, Charlie Holbrow

David Haase called the meeting to order at 8:05 am CT

Chair's Report: David Haase

The number of people in the forum is stable and the FEd has one of the highest memberships of the APS Forums. The Excellence in Education Award has been successful, with the second award going to the University of Washington PER Group. In recent years the FEd has been helping to fund conferences related to physics education and physics education research. The forum has also established an APS session at one AAPT meeting each year.

Peggy emphasized the importance of communication between the FEd and the AAPT for the APS sessions, and that this should be formalized.

Minutes: Bruce Mason

The minutes for the July 25 and December 17 teleconferences were approved without comments or changes.

Budget: Bruce Mason (Budgets Attached Below)

Funding for the APS forums has gone up since last year, increasing our income from dues by about \$2,600. (Note: The funding is a \$2,000 base, plus \$5.50 per forum member up to 3% of total APS membership, plus \$3.00 per forum member above 3% of total APS membership. The 2008 APS membership is 46,269, and the FEd membership is 10% of the total. It is second behind Industrial & Applied Physics at 14.6% and Physics & Society at 12.5%.)

Tom questioned the membership breakdown of the Forum, and expressed a need to include more industrial physicists. Ted noted that this is a general concern for

the APS as a whole. The ensuing discussion outlined the need for physics education at all levels to be more responsive to industry, but recruiting industrial physicists to participate in the FEd will require personal contacts.

About $\frac{1}{4}$ of the members of the FEd are also members of FIAP, although these are certainly not all industrial physicists. Ernie, David, Larry, and Bruce will look at the membership break down and report on the status of these connections.

Programs: Ernie Malamud

The program committee was very useful this year. Membership on this committee for next year needs to be arranged.

March Meeting – There were 3 FED only invited sessions, 15 speakers, and one focus session on NSF proposals.

Peter went to one session that was well attended, with 50 – 60. Olivia went to a very well attended session on Physics Demos for Education and Outreach. It included strategies for engaging learners, and guided inquiry for both informal and formal education. It was useful for a broad range of people.

April Meeting – There are a total of 12 sessions (including posters): 4 co-sponsored, 2 focused, 2 contributed, and posters. This is perhaps a little too much.

Peggy went to the joint session with the DNP. There were great comments afterwards. It included an undergrad institution that's all nuclear science, a nuclear REU student, and a report on the Nuclear Science workforce. Ernie reported on several sessions. The Demonstrations Strategies session had 3 good talks and an attendance of 30 – 40 people. There were lots of discussions. The joint session with Physics & Society had a good audience but only one of three speakers could make the meeting. The session on the US particle accelerator school was important because this fills a need other schools can't handle. This session included a thesis prize winner talk and suggestions for improvement in the school. The Doubling session was very well done with at least 60 people. Ted gave a rousing speech. Ken noted that the contributed session, with about 30 people, was very good.

Tom felt the attendance at the sessions was not as good as it could be, noting a session on the History of the Manhattan Project with about 200 people. We need to invite really good speakers to attract audiences. The problem with the number of parallel sessions was noted. It was also noted that co-sponsored sessions can be important for expanding audiences and for noting the central importance of education in all fields of physics.

Noah mentioned that a session on how to write an education proposal conflicted with a Nanotechnology education session. Some people wished they could see both. Ernie said that these conflicts can be changed if the representative to the sorting meetings complains loud enough.

APS Report: Ted Hodapp

Cathy Mader (mader@aps.org) and Ted are organizing an REU Workshop for REU site directors June 11 – 13. The goals are to discuss activities that can improve the experiences, work on evaluation, and increase the diversity of participants. This is planned for schools that host NSF REU's. There was discussion of including others, including those interested in starting an REU program, programs at national labs, and small schools that send students to REU sites. The focus is on NSF programs, in part because of the funding, and it needs to be a manageable size for the first round. Ted and Jack noted that several other disciplines are already doing this and physics is behind the curve. Jack also noted that the SPS strongly supports this and feels that the Nucleus and Compadre can be used for both data collection and dissemination. It is hoped that the results of this workshop can be reported at a session at an APS meeting next year. It would be good for the science divisions to know more about this.

The PTEC Conference, held at the end of February and early March in Austin, was a sell-out. One focus was the replication of the UTeach program at the University of Texas. There are thoughts of matching the PTEC efforts with similar efforts in Chemistry and Math. The next PTEC meeting will be before the March Meeting in Pittsburgh. It may be in collaboration with Project Kaleidoscope.

PhysTEC has created its first annual Newsletter. It is to go to funders, PhysTEC sites, and PTEC institutions. The goal is to keep the information about the project fresh and available. Michael Marder is involved and has addressed the Executive Board. PhysTEC has added four new sites and is waiting on a renewal proposal.

A meeting was held at the ACP last summer on under-represented groups, to share programs and find operational ways to collaborate with other societies such as the National Society of Black Physicists and National Society of Hispanic Physicists. Education was a central issue. The AAPT was included. A follow up to this meeting is needed.

The APS and AAPT are holding their joint meeting in February of 2010 in Washington DC. A problem is that the NSBP and NSHP regularly meet in February at this time. It may be possible to connect the meetings, but that has not yet been finalized. The NSBP and NSHP have contracted with the Omni Shoreham in DC. The members of the Executive Committee felt that combining these meetings would bring important audiences to the meetings.

Ted and Charlie discussed the organization of the joint meeting. The APS will start working on this after the current (April) meeting. Dick Peterson is working on the meeting program for AAPT.

There has been an effort, in conjunction with Gary White and the SPS, to get students to the APS meetings. There is a special day for students at the current APS meeting, including undergraduate research. The hope is to bring in local students. There have been fewer students than desired, but it is a start. The chemists tend to do this better having up to 3,000 students out of 15,000 attendees at a meeting.

Judy Franz announced she that is retiring in the Spring at the most recent Executive Board meeting. A task force has started the search for a replacement.

At the executive board meeting, a task force was created on journal pricing. The goal is to create plan for the APS assuming zero income from journals. Right now the journal income is supporting programs, including education. At the Summer Board Retreat, Education and Diversity will be important topics. There is a continuing strong call for more APS efforts in education, but this must be done with the consideration of a possible lack of revenue from the journals. Ted is creating a white paper on potential goals.

Charlie asked how this was related to the request for a Physics Education Research decadal study by the National Academy of Sciences that Joe Redish and Noah have been pursuing. Ted has sent comments on this and there is an overlap between goals, but these are different efforts. The request for the Decadal Study is going to the National Academy soon.

POPA has created a report on Nuclear Forensics. A report on the Nuclear workforce may be coming out. Energy efficiency may be another report. All of these reports should include education materials to give the physics background. These may be similar to IoP or AIP FAQ sheets. There should be more activities and learning materials.

The APS is doing a membership survey in the Fall. If FEd wants education questions in the survey, now is the time to try to get these in. Trish Lettieri, Membership director, is running this.

The Optical Society of America is working to have 2010 be the Year of the Laser. AAPT is participating in this as well.

Cathy Mader has been a great help to APS education programs as a sabbatical appointment. Ted would like to continue to host people interested in such a position. Those who may know of candidates should get in touch with Ted.

The Doubling Initiative has continued to progress. The goal is to bring in members of the group from last year to update the initiative and set the continuing agenda.

AAPT Report: Harvey Leff and Charlie Holbrow

Charlie has jumped into the position of Executive Officer. All collaborations should continue.

The APS sponsored sessions at the AAPT meetings were discussed. Because there was a session in the winter 2008 there will not be a session in Edmonton. The next session will be in Ann Arbor, summer of 2009. The winter 2009 meeting will be with the AAAS, so this would not be a good choice.

There needs to be better communication in organizing the APS/AAPT sessions. A committee should be organized to do this, including the FEd Program Chair, a representative of the division hosting the session, and the AAPT Program

Committee chair. This is the vice President of AAPT, currently David Cook. DPP will be doing the session for July 2009, with Andrew Post-Wicker as the contact. Peter will organize this.

Budget discussion and priorities: David Haase

The discussion of priorities for how FEd funds should be spent was continued from the December 17 teleconference. The fact that newsletters are no longer printed and mailed has allowed the FEd to create a surplus. There was general agreement with Ernie's list of priorities – (1) newsletters, (2) meeting sessions, (3) travel for FEd Ex. Committee members and operation of the Forum, and (4) re-granting opportunities such as conferences and mini-grants. There have been several conferences supported over the past few years including Physics on the Road, PER conferences, and Gordon Research Conferences. The Excellence in Physics Education Award has been funded so this will not be a cost in the future. About 6 Mini-grants of \$500 have been funded over the past 5 years.

Several members felt that the FEd needs no reserves and should spend all income. Bruce felt that there should be a fixed reserve equivalent to a year's operation to handle fluctuations, and then all funds can be spent. The reserve could easily be large enough at the end of this year.

There were concerns about funds spent on conferences that impact only a small part of the FEd membership. PER Conferences, for example, are aimed at a narrow but important part of the FEd membership. The PER community is working to build connections between the APS and AAPT. GRC's have had a somewhat broader audience than the PER conferences. It was agreed that we should support requests of this sort if the funds are available, but this should not be automatic. The FEd Executive Committee needs guidelines for considering these requests. It is the last of the 4 main priorities.

There should be written guidelines for support for FEd Executive Committee members' travel to FEd-related meetings. Reasonable costs should be covered, with the understanding that those who would go to meetings anyway should support their own travel, if possible.

The FEd should support invited speakers coming to the meetings. We tend to be more generous than other divisions and forums about this. The organizers of sessions need to be aware of what can be supported, including travel and registration. Judy stated that an APS member who would attend anyway should not be supported, but we can offer to pay those who would not normally attend. Also, speakers who are only attending to give their talk do not need to register.

David will organize a budget guidelines committee to write up guidelines. This is to be done by July.

APS Executive Officer: Judy Franz

Judy mentioned that she will retire at the end of her 3rd 5 year term. She appreciated the well organized and well attended sessions the FEd has organized.

David asked about Leo Kadanoff's letter, the FEd response, and any impact it might have. Judy felt the letter had a good emphasis, but all presidents have been supportive of education. This is not a contentious issue with the APS.

Journals are an important part of the APS and $\frac{3}{4}$ of the budget. The future is uncertain because Open Access has no business model. If there is no net income from journals, programs can't grow much, but they can continue. There have been some changes in the past few years, in particular lobbying, education programs, and outreach. International programs haven't grown as much. There are no large changes currently planned.

There was a discussion of engaging more of the APS and FEd members in education and outreach efforts. The Physics Quest program that has provided resources to 10,000 to 15,000 teachers is an example where this might happen. Teachers' day at APS meetings is an example of where physicists are contributing now. Perhaps APS members can be connected with the teachers, but professional physicists need training to be effective in this role. Research talks will not do. Perhaps the Forum can help make connections. Also holding workshops and sessions at meetings to help engage those interested could be a task the FEd undertakes. Ed Lee and Jessica Clark are the contacts for these programs. Connecting to professional development activities at universities is another possible direction.

Miscellaneous Topics: All

Peter mentioned the organization of a program committee for the coming year. He has been approached by two divisions to co-sponsor sessions. There will be plenty of topics but organizers for sessions are needed. These often come from the program committee. There will be two conference calls to work on the program, and it should be done by August. Please volunteer.

Ernie suggested a session on informal science education. This involves communicating physics at an undergraduate level. The work of David Ehrenstein, and Physical Review Focus is an example.

Peggy has requested a \$500 Mini-grant for teacher workshops in SD in connection with the deep underground science lab. This will be for wall charts and other materials. David and Bruce approved this request. Ernie noted that we need to better advertise the availability of these grants.

Jack noted that the Fellowship committee needs to be announced.

David recognized the efforts of the FEd Executive Committee members who are leaving and introduced the new members who are now joining. He welcomed Ernie as the incoming chair and noted his experience with the FEd.

Ernie mentioned the importance of discussing the newsletter. David agreed, and it was recommended that a teleconference be arranged as soon as possible focused on this topic.

Introductory Remarks: Ernie

The FEd covers many aspects of physics education, including middle and high school, undergraduates, the doubling initiative, teacher's days, and recruiting and retaining teachers. These all need attention.

Outreach to the public that helps raise the awareness and interest in science is another crucial role for the FEd. Science centers are playing an important role in this. Making and keeping connections between the APS and these efforts is important. Similarly, work with the AAPT and the APS sessions at the AAPT meetings should be continued. He is looking forward to the Ann Arbor meeting with the DPP.

The newsletter is a concern. Deadlines need to be met, with the spring issue available at the April meeting, the summer issue at the summer AAPT meeting, and fall issue available before December. There is no dialog, discussion, or controversy in the newsletter. He feels the format should go back to more of a newsletter and an exchange of ideas and differences. We need to understand how well read it is in its current form.

Ernie thanked David for his efforts. He also thanked Bruce and all the outgoing FEd committee members.

The meeting was adjourned at 10:45 am CT.

**APS Forum on Education
Budget Report 01/01/07 - 12/31/07**

Item	Rev/Exp	Total	Balance	2006 (Tot)
Balance Jan 1, 2007		6,673.32	6,673.32	16,717.61
Projected Revenue				
Dues	16,877.50			
Meeting Revenue, March	1,296.00			
Meeting Revenue, April	906.00			
Investment Income	916.66			
Revenue		19,996.16	26,669.48	19,334.17
Meeting Expenses				
Meeting Expenses: Equipment	(344.85)			
Ex. Comm. Meeting	(410.19)			
FEd/Ex. in Ed. Award Reception	(1,679.34)			
Award Travel: Holbrow, Smith-Williams	(1,586.28)			
Award Promotion	(533.10)			
Fee Waivers: Christian, Holbrow, Matis, Smith-Williams, Zaleskiewicz	(1,500.00)			
April Meeting Fellows Dinner	(219.35)			
Meeting Expenses		(6,273.11)		(12,764.45)
FEd Exec Comm. Travel				
Travel: Cummings	(989.04)			
Travel: Haase	(497.99)			
Travel: Malamud	(730.26)			
Travel: Mason	(529.17)			
Travel: Meltzer	(1,542.68)			
Travel: Norris	(874.34)			
FEd Exec Comm. Travel		(5,163.48)		(9,446.73)
PER Conference		(3,000.00)		(3,025.00)
Supplies/Postage		(30.00)		(82.88)
Phone		(322.65)		
Excellence in Teaching Award				(4,059.40)
Total Expenses		(14,789.24)		(29,378.46)
Balance			11,880.24	6,673.32

Projected Revenue/Expenses 2007

Excellence in Education Funds: 117,032.52

**APS Forum on Education
Budget Report 01/01/08 - 02/29/08**

Item	Rev/Exp	Total	Balance
Balance Jan 1, 2008		11,880.24	11,880.24
Projected Revenue			
Dues	19,408.00		
Investment Income	116.91		
Revenue		19,524.91	31,405.15
Program/Sorting Travel		(272.80)	
Haase, April Meeting	(272.80)		
Gordon Conference		(3,000.00)	
Total Expenses		(3,272.80)	
Balance			28,132.35

Projected Revenue/Expenses 2008

Item	Rev/Exp	Total	Balance
Balance		28,132.35	28,132.35
Revenue			
Meeting March	1,200.00		
Meeting April	900.00		
Investment Income	1,000.00		
Total Revenue		3,100.00	
Meeting Expenses			
A/V and Equipment	(500.00)		
Ex Comm Meeting	(600.00)		
Reception	(2,000.00)		
Fee Waivers (Fellows & Speakers)	(3,000.00)		
Meeting Expenses		(6,100.00)	
FEd Ex Comm Travel		(6,000.00)	
Program/Sorters Travel		(1,200.00)	
Printing		(1,000.00)	
Supplies/Postage		(200.00)	
Phone		(300.00)	
Total Expenses		(14,800.00)	
Balance			16,432.35