



# Forum on Education

American Physical Society

**Forum on Education Executive Committee Meeting**  
**Adams Mark Hotel Denver**  
**03/06/07, 8:00 – 11:00 MT**

**Voting Members Present:** Mary Creason (phone), Karen Cummings, Noah Finkelstein, David Haase, Paula Heron, Ernie Malamud, Bruce Mason, Peggy McMahan, David Meltzer, Lawrence Woolf, Peter Zimmerman (phone)

**Voting Members Absent:** Ramon Lopez

**Non-voting Members Present:** Jack Hehn (AIP), Ted Hodapp (APS), Ken Heller (AAPT)

**Guests Present:** Peter Collings, Judy Franz (APS), Leo Kadanoff, Jonathan Reichert

Peggy – Meeting was called to order at 8:05 MST  
 Minutes were presented. Larry pointed out typos. Minutes were accepted and approved.

**Elections** – The results of the elections were reported. New members are Peter Collings, Vice Chair; Olivia Castelini, Member-at-Large; Samuel Lightner, APS/AAPT Member-at-Large. Ernie was thanked for putting together the slate of candidates.

**Budget** – Bruce

The following Planning Budget for 2007 was presented.

**APS Forum on Education**  
**Budget Plan 2007**

Item	Rev/Exp	Total	Balance	2006
<b>Balance Jan 1, 2007</b>		6,673.32	6,673.32	16,717.61
Projected Revenue				
Dues	16,877.50			
April Meeting	1,000.00			
March Meeting	700.00			
Investment Income	900.00			
<b>Revenue</b>		19,477.50	26,150.82	32,824.14
<b>Meeting Expenses</b>				
Travel	(5,000.00)			

Meeting Expenses	(800.00)			
Ex. Comm. Meeting	(600.00)			
FEd Award Reception	(1,800.00)			
Award Travel	(1,300.00)			
Award Promotion	(800.00)			
Newsletter Printing	(800.00)			
Sorting Travel	(1,000.00)			
Fee Waivers	(900.00)			
AAPT/FEd Session	(1,000.00)			
<b>Meeting Expenses</b>		(14,000.00)		
<b>Supplies/Postage/Phone</b>		(90.00)		
<b>PER Conference</b>		(3,025.00)		
<b>Total Expenses</b>		(17,115.00)		
<b>Balance</b>			9,035.82	

Discussion –

- David and Paula noted that the FEd has supported the PER Foundations conference in 2005 and 2007 and the Gordon Conference in 2006 and 2008. They appreciate the support.
- There was discussion of the Excellence in Education Award travel. This probably won't be needed in future years. We are paying for promotional materials for the talks and travel for two speakers who are not award winners at this meeting.
- Karen asked about the number of mini grants. There was one in 2006 and 2 in 2005. The FEd is supporting Wolfgang Christian's workshop by waiving his registration.
- Peggy asked about funding two receptions for the award and for the FED business meeting. This was discussed later in the meeting.

**Councilor's report - Peter Z**

- The FEd Councilor was elected to the Executive Board for the first time. This will be a report of both the Council and the Board.
- There is a request to increase the number of concurrent invited sessions from 7 to 8. This is to start in 2009.
- Judy Franz's position on the UNESCO board has been renewed for 3 years.
- There was a request to ask congress to make a binding resolution not to use nuclear weapons on non-nuclear states. There was a concern that the APS does not have the competence to make a statement on this issue. This will go to POPA. Individuals can lobby for this, but the society probably can't.
- Public outreach lectures are occurring at meetings. Tim Gay will speak at the March meeting on the physics of football. Diandre Leslie-Pelecky will speak on the physics of NASCAR in April.
- The APS is involved in an effort on teaching of intelligent design. The APS Board has a recommendation for action. More information is coming. The materials are from "Challenging the teaching of intelligent design in science classrooms" (Not in K-12)

- Physical Review has a new editor-in-chief, Gene Sprouse. He seems to be interested expanding the offerings of electronic publication.
- Joe Serene is the new treasurer.
- A motion was passed that APS facilities can not be named after living people.
- The Washington office hired a press secretary.
- Any agenda items for the Council or the Board should be given to Peter as soon as possible.
- Leo Kadanoff is a great asset to the FEd. He spoke very highly of education and the FEd. Peggy noted that this was also true at the Convocation.

### Meetings - David H

David listed the talks for the March and April meetings this year. There is the same number of papers at the March and April meetings, but more sessions in April. There were only nine contributed papers in April.

There is a big competition for invited talks. We need to solicit recommendations.

David noted that Wolfgang did a good job at the meeting with both the workshop and the Excellence in Education Award.

### Discussion –

- Peggy felt that more shared sessions should be explored. This message needs to go out to other unit chairs. This worked well with Bio, and the DCMP has approached her.
- Karen and Paula were concerned about attracting speakers to APS meetings. If they go to AAPT meetings, this will require too much travel. It is unfortunate that there can't be some support, at least fee waivers. This is not generally done by the APS. David and Noah noted that there are many APS education people who don't go to AAPT meetings. There needs to be awareness in both directions. This might be encouraged through popular sessions connected to newsletter themes.
- Mary suggested that Advanced Labs might be a good topic for connecting the societies. There is a need to adapt modern techniques to advanced lab issues. Let the researchers give something to education.
- Ernie and David are working to improve the continuity of the meeting planning and organization. Currently the Program Chair just serves for just one year. There is a lot of travel to organize two meetings. Ken noted that it's been a struggle but the allocation of sessions is improving. Larry and Ken suggested that the duties be written down and the whole chain of chairs be included in the efforts.
- The APS session at the AAPT summer meeting is having difficulty. There still is not a list of speakers and this is not set as a Plenary session. Ken feels that this should be a Plenary. Larry suggests that this be included in the documentation of the Program Chair's duties.
- The APS has a task force to rejuvenate the April meeting. Suggestions are to emphasize themes and public outreach. The plan is to also do joint meetings with other societies, with the AAPT as the first example. Units are supposed to respond. Jonathan noted that the April meeting does not include vendors, which is a problem for creating a vital meeting.

- David H recommended the creation of a program committee with up to 9 members. Members will be the Vice-chair, Chair, and Chair-elect, 3 other current or past executive committee members, Chair of Awards Committee, and 2 other members. This was approved.
- Peggy and David H discussed the need for invited session ideas. A request should be sent out and we should follow up on suggestions. 2008 - New Orleans in March and April in St Louis. 2009 - Pittsburgh in March, Denver in April/May. 2010 – Joint APS/AAPT meeting. For the APS events at AAPT meetings, we need to arrange this with a division. The division should help with any reception and materials. This should be the duty of the Program Chair.
- Peggy introduced the issues of the awards reception and business meetings. Several events are being split between the March and April meetings, the required business meeting, the awards reception, and the recognition of fellows. It was decided that there should be a single reception each year, and it should alternate between the two meetings. The decision on the meeting where all these events will occur will be made soon after the award winners are announced and be connected with the award presentation. This will engage the FEd with both the March and April audiences. The main concern is if the fellows will be able to attend.
- Possible connections with other divisional APS meetings were discussed. The FEd should encourage and connect with educational efforts at these meetings. Examples include a well-attended session at a Fluids meeting and events at Particles meetings.

#### **Advanced Labs - Jonathan Reichert**

The upper division advanced lab course is not getting the attention it deserves. In many schools, this lab has been replaced by a senior research project. Students aren't getting the breadth and depth of experience to really build and run labs. Those in charge of these the labs are isolated and don't have connections to their peers. There are no sessions at meetings about experiments or building lab infrastructure.

TeachSpin is working to establish a new association, on the model of PIRA, for the Advanced labs. PIRA is more focused on demonstrations and freshman labs. Sessions at meetings for labs will need to be somewhat different because of the need for people to interact with the apparatus and data.

There is a laboratory committee at the AAPT, but again it's mostly freshman labs. There is a reception at the March meeting, endorsed by the FEd, to move this forward. The discussion will include the collection of fees to establish the organization.

#### **Discussion –**

- There were questions about what organization should take a lead on this. The AAPT organized a task force that has made recommendations. Jonathan was concerned that this will be too slow, and that a majority of those running advanced labs are more connected with the APS.
- Several possible approaches to helping this situation were suggested. Karen thought workshops at meetings would be ideal. Karen also felt that the existing committees and organizations should be solicited to help. Paula and Peggy suggested that focus

sessions at meetings should be organized, and that we need someone on the program committee to help this happen. Jonathan agreed to help.

**APS President** - Leo Kadanoff

Education is an important aspect of the business of the APS. The President and Congress have called for scientists to help improve innovation and competitiveness. The support for research has increased, but the APS needs to consider broader, K-25 issues in education.

The APS wants to back this interest with funding. There is a request to set aside \$1.2M for new programs and innovations. The APS wishes to work jointly with the AAPT. The FEd should work with Ted on these issues.

Discussion –

- Peggy pointed out that there are strong connections between the FEd and the AAPT so we can help with efforts. Leo suggested that ideas and strong proposals to the Council are needed to move things forward.
- Noah praised the work of the APS on these issues and felt that lobbying efforts are crucial. Leo noted that this can't just be aimed at the NSF. Noah and Paula suggested that the role of Ted's office will expand and more resources will be needed. Ted and his current staff can not handle the operation of many new initiatives. Again, Leo suggested a resolution to the Council would be appropriate and working with Ted is important.

**Executive Officer** - Judy Franz

- This discussion focused on the question of how the FEd wishes to handle the March and April meetings. Peggy stated that the current approach of having a presence in both meetings is important. Both the number of invited sessions and the attendance at the sessions have been good. Noah and David M felt that the presence of education talks at the meetings has been appreciated by attendees.
- The connection between the PTEC conference and the March meeting has been beneficial.

**APS Report** - Ted

- The Ethics Education web site has been created. It contains case studies in physics that can be use in classes. Topics such as working with graduate students and authorship on papers are covered. Peggy suggested that this be an article in an upcoming newsletter.
- The APS is hosting a gender equity conference. The ACS did this in Chemistry and it was highly regarded. This was funded by DOE, NIH, and NSF. The APS conference will be in May with national labs and the 50 largest physics departments invited. The materials are being posted on the APS Women in Physics web site.
- Funding for a graduate education conference, jointly with the AAPT, has been requested from the NSF. This is being run by Tate, Singh, and Tennyson. They will invite graduate studies chairs from large universities, and have them help set the agenda. Details are still being arranged.

- The third PTEC conference was a success. It was over-subscribed with 120 attendees. There is a lot of interest and excitement. Next year's conference is in Austin February 22<sup>nd</sup> and 23<sup>rd</sup>. Peggy asked about the connection with the March meeting. This is being evaluated, and doing this again will depend on having a host institution near the meeting. Noah felt it helped attract some attendees.
- Four new PhysTEC sites have been added. This is a high priority for the APS and AAPT. A Noyce grant has been submitted for PTEC or PhysTEC fellowships. This will be the last year of the PhysTEC funding and the discussion of what is next is ongoing. This is a question of what services should be provided to PhysTEC and PTEC institutions. David Meltzer will edit a collection of papers on teacher preparation, to be distributed to all physics departments. There will be a micro-PTEC meeting in Greensboro and it is hoped that deans and chairs will come.
- The Washington office is more interested in lobbying efforts for education. They wish to focus on very specific issues and target legislation. The CoE and FEd need to help the office do this. Ted is working with Mike Lubell on this and hopes to target one of the new people coming in for education issues.
- The Doubling Initiative, to double the number of physics graduates, is moving forward. Discussions are being held with the AAPT, the FEd, and the CoE. The goal is to drastically increase the number of physics majors. It will connect with the SPIN-UP report, SPS, and the gender equity conference and other initiatives on underrepresented groups in physics. 10 people, including Peggy, have been asked to help develop a strategic plan for this. This plan will go back to the FEd and CoE to generate a request for funding. Peggy will be happy to gather any comments or suggestions.

Mary brought up again the need to make clear why this is happening, other than just increasing the number of high school physics teachers and increasing the inclusion of underrepresented groups. She also mentioned the need to make physics more relevant for students and employment. Ted stated that physics has the lowest unemployment for all the STEM disciplines. He also noted that physics is 0.4% of all majors in this country and 2% of STEM majors. Doubling the physics majors is unlikely to have a big impact on any other disciplines.

Peggy suggested that we have a conference call about this after the planning committee meets at the end of March.

- Leo emphasized the importance of the Washington office to efforts in education. They are good at building coalitions. Ted mentioned the need to keep a representative for education on the PPC and Leo agreed.

#### **AAPT report - Ken**

Ken emphasized the cooperation between the APS and AAPT on many issues. Some of the priorities of the AAPT include a conference on systemic changes in introductory physics, increased lobbying efforts similar to those of the APS, the doubling majors, and the Advanced Labs. AAPT has set up a web page and a email list for Advanced Labs. The AAPT is involved in issues in graduate education. The coordination between the APS and AAPT is important. He suggests that the joint meetings between the FEd and AAPT Executive Board continue.

**FEd Newsletter - Ernie**

- We communicate with our members through the newsletter. A survey is needed to determine if the current operation is sufficient for this purpose. Statistics for downloading exist, but they don't tell enough.  
A committee to run a survey was established with Ernie as chair and Karen and David M as members.
- Paula is editor of the Fall newsletter and Karen is editor of the spring newsletter. Authors for the Fall newsletter did not come through, although the Teacher Preparation section is completed. Karen does not yet have articles for the Spring newsletter. A statement from the Chair is also needed. It was suggested that a small Fall/winter newsletter be completed for the April meeting. Karen is getting short articles on outreach for the Spring newsletter from physics centers. Examples might be JILA, JLAB, LIGO, and the High Field Magnet Lab.
- The issue of formatting of the newsletter arose. Bruce has discussed this with the APS. Materials can be sent to Bruce and formatted by the APS. They will then also post the materials online. Ernie has templates and formatting information for the newsletters.
- The Summer newsletter will be edited by Larry and Tom Rossing on K-12 activities.

**Discussion –**

- Ernie felt that the newsletter be more news and less like a scholarly journal. Karen pointed out that the most viewed article is from Illinois on the introductory course. This was very scholarly. This issue should be part of the survey.
- Ernie felt newsletter deadlines should be attached to meetings, the Spring issue with the March/April meeting and the Summer issue with the AAPT meetings. This could also connect the newsletter to sessions at the meetings. Peggy felt this might be difficult due to how far ahead we assign newsletter topics. Karen liked theme issues because it is easier to put together the newsletter. Ken felt that deadlines should not be connected to meetings. This is an electronic medium and we should view it this way. Length and timing don't matter that much.
- Ernie noted that the newsletter was initially meant to be letters and comments, and Ken would like to see more of this. Larry noted that this is not what's currently available. There was a discussion of the very active and lively traffic on the email lists, and how the traffic there might be mined for materials for the newsletter. There was a suggestion to have one or more people browse the lists, collect good discussions, and add these as a newsletter column. David M suggested that he could do this for Phys-Lrn.
- Ernie asked if we need a pdf version of the newsletter. It was agreed that a printable version is needed.
- Peggy noted that there should be articles from units that sponsor AAPT sessions.
- Larry asked about the newsletter index. Bruce indicated that the APS is redoing all the web pages so we might want to wait on the changes. David M felt that reformatting the newsletters was a waste of time. It was agreed that the index should be posted.

**Forum on Graduate Student Affairs - Peggy**

Peggy has had discussions with members of the Forum on Graduate Student Affairs about having a representative on the FEd. It was agreed that we did not want to create an elected position, but it would be good if the FGSA could appoint someone for us to invite to meetings. We have shared concerns so should communicate with students. Problems include having students spend time on things that they should not be doing, travel costs, and the fact that students are often not available for very long. The question also arose if there should also be undergraduate students included on FEd discussions. Jack noted that there were SPS reporters at the meeting doing a very job. Good students are available, but it needs to be worth their time.

Peggy suggested this be tabled and considered when decisions are made about the next meeting.

The meeting adjourned at 11:21 MST