



Forum on Education

American Physical Society

Forum on Education Executive Committee Meeting Saturday Feb 13, 2010 Draft Minutes

Highlights and Actions:

- The Committee approved \$5000 to support the Gordon Conference on Physics Research and Education in June 2010. Bruce will arrange the funding.
- An email to the FEd membership regarding National Lab Day will be sent.
- Peter Collings will continue discussions about the place of Outreach activities in the FEd.
- The MOU on AAPT/FEd joint sessions was approved.
- The 2010 Summer AAPT Plenary will be co-sponsored by the Division of Laser Physics.
- A meeting between the FEd Executive Committee and the AAPT Board at the Summer AAPT meeting needs to be arranged.
- Randy Peterson should be contacted about newsletter contributions on the Advanced Lab Topical Conference from 2010.

Members Present (Current & Future): Lila Adair, Peter Collings, Alice Churukian, Alex Dickison, Jack Hehn, Ted Hodapp, Laird Kramer, Sam Lightner, Ernie Malamud, Bruce Mason, Dick Peterson, Chandralekha Singh, Gay Stewart, Amber Stuver, John Thompson, Stamatis Vokos, Larry Woolf

Guests Present: Bo Hammer, Warren Hein, Kate Kirby, Carl Mungan

The meeting was called to order at 6:10 pm, ET

Welcome and Introductions (Peter Collings)

Two incoming members of the Executive Committee, Dick Peterson and Alice Churukian were welcomed.

Review of the Agenda and Minutes (Peter Collings, Bruce Mason)

The agenda was modified to accommodate Ernie's schedule, calling in from France.

The minutes from the May 3, 2009 Committee Meeting and October 27, 2009 Teleconference were approved. Minor typos will be sent to the Secretary.

Chair's Report (Peter Collings)

The Chair reported that it had been a very good year for the FEd. He noted the excellent newsletters and successful sessions at APS and AAPT meetings. Also noteworthy was the Understanding on Joint Sessions with the AAPT. The FEd Executive Committee will be losing the services of three people – Ernie Malamud, Sam Lightner, and Olivia Castellini.

Secretary-Treasurer Report (Bruce Mason)

The treasurer reported the final accounting for 2009 and the proposed budget for 2010. Much of the FEd funds are used for travel of committee members and support for speakers and conferences. The 2010 budget is a continuation of 2009. The projection for travel funds for committee members was reduced because of the Joint APS/AAPT meeting. Many of the members will have external support.

The 2009 and 2010 budgets are in Appendix 1 and 2 (with modifications due to the discussions at this meeting).

Councilor's Report (Gay Stewart)

This has been a busy year for APS. The highlights reported were:

- Executive Officer search and appointment of Kate Kirby.
- Improvement of the budget process.
- Work on the development of a minority bridging program to double minorities receiving PhD's.
- Improvement of the publication process to make it more flexible and timely.
- Work on the creation of new Guiding Principles for the APS. This will be distributed to members for comments.
- Work on the improvement of the process for the Society to make official statements. This was stimulated by a reaction to an APS statement on global warming and the subsequent discussions.
- A proposed change in the Society By-Laws to include more international members.
- Laserfest has started. It includes education modules, road shows, posters, and "Spectra" as part of the festivities.

There was discussion of open access and publication of APS journals. There are difficult questions regarding money and quality. The official statement is that APS supports the principles of open access to the extent that it also provides quality, peer reviewed journals. One potential example of increasing access is making articles open 6 months after publication.

Ernie reported on the activities in the Committee on By-Laws regarding the process of creating and approving policy statements and participation of international members.

The issue with policy statements came from reactions to the 2007 statement on climate change. To develop the process for policy statements, a group looked at other societies. The APS does not have this process in the By-Laws, while other societies do.

The changes proposed include making the policy statement creation transparent and open to member comment from the beginning and not allowing the Board and/or Council to edit the statements. The Council and Board will be required to send statements back to PoPA if there are recommended changes. Other considerations being studied are statements from units, and ways to sunset policy statements. This will strengthen the role of PoPA.

Current issues being considered by PoPA include nuclear downsizing and carbon capture.

The issue with international members comes from the fact that 30% of APS members are from outside the US. A motion was made to allow more international Councilors. There are questions about the procedures for election of councilors from areas without professional organizations and the ability of international councilors to travel to participate in Council activities.

There is no indication from international members of a desire for this change.

Membership Survey Discussion (Ernie Malamud, Peter Collings)

This is a follow-up discussion from the FEd Membership Survey from last year. The survey respondents stated an interest in local volunteer work to support physics education.

Ernie explored the idea of having Sections include FEd member-organized sessions in their meetings. When he tried this in his section he got no response from FEd members. FEd sponsored local activities will require a dedicated local volunteer to make this happen.

Peter mentioned discussions in the Committee on Education to make modifications in Teachers' Days. Teachers' Days have good participation, but require lots of staff time and are one-time activities with no follow up. The idea is to organize teachers' days with APS support but run by a local institution. This institution could then follow up in future years. FEd members could be contacted and engaged in this.

Sam noted that Teachers' Days are run by the education committee of the Division of Plasma Physics. Two or three people do this and go back later in the year. This requires less staff time, but it does require the continuing efforts of the volunteers.

Larry noted a problem from the survey. The number of people in the area of a meeting with the interest and time to run a Teachers' Day is small to none. He suggested that we start with the people who are interested, and work with them.

Peter recommended notifying FEd members of National Lab Day, an effort to match teachers and science professionals. This notice will be sent out by Bruce.

Stamatis asked about the source of funding for local Teachers' Days. Peter suggested that a lot will be done by the local institution, while APS provides contacts & administrative support. Ted noted that Ed Lee works on Teachers' Days. Ted emphasized the need for these to be repeated events. The APS will work closely with a sponsoring institution for the first event, and then provide some staff support for an annual professional development day. This will not start this year. He also said this is more likely to be in collaborations with R-1 institutions with more resources to keep going. Institutions near Denver and Baltimore would be good because of the frequency of APS meetings.

Dick asked if the name "Teachers' Day" was a controversial term. Ted replied that there have been no negative responses. He also said that attendees are not all physics teachers.

Ernie wants the FEd to continue to consider the survey results.

Committee and Forum on Outreach (Peter Collings)

Peter discussed the formation of the APS Committee on Informing the Public. The topical area of this committee is to promote ways that APS, and its members, can help inform the public.

In discussions with Committee members, the idea of creating a new Forum on Outreach was raised. A group of APS members is discussing the collection of signatures to get this process started. If 200 signatures are collected, the Council will consider the petition. This is very preliminary.

The Executive Board discussed the creation of such a new Forum. There were concerns about overlap and duplication of efforts. FEd has always considered outreach as an important part of education. Many of the FEd sessions and newsletters are focused on informal and public education and outreach. This may be an indication that the FEd is not reaching some of its audience and could be doing a better job on outreach efforts. Perhaps there is a need to adjust the focus, and perhaps the name, of the FEd.

This may be connected to the organization of the APS. Education and Outreach offices are now separate, but have a lot of overlap in activities. Some members expressed their concern about the continuing fractionalization of the APS into more and more units.

There were suggestions of areas where the FEd could do more to help with Outreach-related issues. These included Science Media, Blogging, and Broader Impact efforts. Many of these have been topics of sessions and newsletters, but perhaps the people involved don't connect these topics with the FEd. Perhaps FEd should have a similar relationship with the Committee on Informing the Public as it does the Committee on Education.

Peter will discuss this with the APS staff and Kate Kirby. Gay will be prepared to address this if it comes to the Council.

AAPT/FEd MOU on Joint Sessions (Peter Collings)

The MOU was approved by the Executive Committee

Retiring FEd Executive Committee Members (Peter Collings)

Three people are leaving the committee: Sam, Olivia, and Ernie.

Peter thanked Ernie for his long and continuing service to the FEd. He has been with the FEd for one term as Secretary/Treasurer and four years in the Chair line. He's been a great committee member, mentor, and leader.

2010 Programs Report (Larry Woolf)

Larry also thanked Ernie for being a great mentor for other Chairs.

The summaries of the 2010 meetings were published in the Fall 2009 Newsletter. At the April/February meeting there are 8 invited sessions, 3 sponsored by the FEd and 5 co-sponsored. There are also several AAPT sessions that are "co-sponsored", or recommended, by the FEd. At the March Meeting there are 6 invited sessions, 2 sponsored by the FEd alone and 4 co-sponsored, 2 focus sessions, and a workshop on outreach. Larry thanked his program committee.

The AAPT Plenary session this summer will be co-sponsored by the Division of Laser Physics. The talks will focus on Metrology and Biological applications. David Sokoloff will coordinate the organization of this.

The meeting between the AAPT Board and the FEd Executive Committee at the Summer AAPT meeting has not been organized yet. Historically this has been informal and unofficial, attended by the FEd members who are at the AAPT meeting. Peter went for the MOU discussion in 2009. Dick urged that this continue to sustain the communication between the organizations. The possibility of doing this by teleconference with those who cannot attend the AAPT meeting was suggested.

2011 Programs Report (Chandralekha Singh)

Chandralekha will take over as Program Chair after the March meeting. There will again be the ability to hold five invited sessions at the April meeting, although now two of those will be arranged with the AAPT and one will be the Excellence in Education Award session. There will be four invited sessions in March. Co-sponsored invited sessions count as $\frac{1}{2}$ of a sponsorship. The March meeting can also have focus sessions.

Chandralekha will start organizing the program committee soon.

APS Reports and Discussions (Ted Hodapp, Kate Kirby)

Ted provided an update on APS education efforts.

- PhysTEC 2 was funded for \$6.5 M. The PhysTEC solicitation for new sites received 52 preliminary proposals and 13 full proposals. PhysTEC will select sites in the next month. PhysTEC is partnering with the APLU to connect with provosts and presidents. This is important for

sustaining the efforts of PhysTEC sites. The PTEC meeting ended today and included special sessions for Chemistry. ACS is planning on proposing a ChemTEC this summer, with help from PhysTEC.

- The National Task Force on Teacher Ed submitted its recommendations. Stamatis will report on these at the Tuesday Symposium. Printed copies will be out soon. The focus is what universities can do to help train teachers. It includes a wide range of grade levels, classes, and certification methods.
- The second set of APS/AAPT Noyce Fellows were selected. There were 11 last year and 12 this year. The sites are going well.
- A book on teacher preparation is due out this year. The articles are being reviewed now. This will be widely distributed.
- Efforts are ongoing on a Minority Bridge Program to help correct the large drop in minorities in physics at each level of education, from 30% in high school to 5% of PhD's. There are now about 30 minority PhD's per year, and the goal is to raise this to 60. The effort will include collecting best practices in recruitment and retention, collaboration with minority serving institutions, and submission of a grant application to fund bridge programs around the country. Chandralekha noted that 13% of African American students take Physics in High School, while it's closer to 50% across the board. There is a need for more and better teachers of minorities. Ted recommended a recent AJP article with an analysis of minorities in physics in the boroughs of NY.
- The Gender Equity Issues Conference in 2007 has resulted in more conversations at universities and labs about gender issues. There have been 15 site visits to look at gender discussions that are now happening. Reports of these visits show an increase in the level of interest.
- The Physics Careers web site on ComPADRE has been launched. Also available are "Physics Insight" materials to attract students to physics and the "Top 10 reasons to Study Physics" poster recently distributed in The Physics Teacher.
- Nuclear forensics teaching materials for high school will be coming out soon.
- A teacher recruitment video was recently created and shown at the PTEC conference. This will also be spread around to Noyce sites.
- As a result of a past task force, a set of Case Studies in Ethics for Scientists was created. Topics include personnel matters, authorship on papers, and treatment of postdocs. This material is getting a lot of use, and the web site is being redesigned to include an instructor's guide on using these materials. The NSF was asked to put in place ethics education for all grantees and this will help meet this need.

Kate Kirby was introduced.

Kate Kirby said a few words about her first seven months as APS Executive Officer. She noted a few of the highlights of her time in office so far:

- The partnership with the AAPT on the April meeting has been very positive.

- Laser Fest is a big event and opportunity to help the public understand the importance of research.
- There are important changes underway resulting from comments from APS members regarding the Climate Change policy statement.
- Open access is important and a challenge to the business model of APS. Many of our activities (education, outreach, international, etc) are funded by publishing.
- The financial issues are difficult because the reserves are down. APS is being conservative with staffing and budget.
- Membership is up over 48,000. There are many new student members and an increasing number of students paying dues. The APS must face the challenge of keeping these members.
- A new section, the Prairie section will be launched. The growth in the number of sections is important because of the possibility for outreach to undergrad institutions, and students, through local, low cost meetings.
- A new topical group on Energy Research & Applications has been created.
- The meetings are doing well, with 1200 pre-registered attendees for the April/February meeting and the March Meeting on track to have over 8,000 attendees. It is still a challenge to bring more researchers to the April meeting. Many forums are providing good programs but the APS divisions need to bring in more researchers to participate. Astrophysics participation is growing. They are trying to bring in laboratory astrophysics. The April meeting will not be huge, like the March meeting, but an interesting and exciting place to be.
- Kate is impressed by the APS volunteers, the leadership in units and task forces, and peer reviewers. The APS staff works well with these volunteers.

Warren noted that the AAPT has been happy with the support and collaboration working with Kate.

Chandralekha asked about a possible Forum on Outreach and the potential for overlap with the FEd. Kate stated that this is the first she has heard of this and it probably is due to the CIP, as a new committee, trying to determine its role and activities.

Committee on Education Report (Peter Collings)

Peter listed several of the activities and recommendations discussed by the Committee on Education. There is the possibility of creating a web site for the support of graduate education directors in conjunction with a graduate education conference. The Committee also discussed creating a recommended speakers list of Physics Education Researchers.

As discussed previously, the Committee is considering how to expand the existing Teachers' Days.

It has been suggested that there be a way to recognize departments that are improving education and enrollment. This is also connected to suggesting reviewers for external reviews of physics departments.

Issues of teacher preparation were also discussed. The preparation of teachers for both 9th and 11th grade physics is needed. 9th grade teachers are not as well prepared. The goal is to help Principals and Boards of Education understand the needs.

Recommendations came out of the Conference on Graduate Education. It was noted that the AAPT has created a booklet on graduate education.

AAPT Reports and Discussions (Lila Adair, Warren Hein, Phillip Hammer)

Lila noted that the AAPT is pleased with the current joint meeting. It has gone much smoother than working with other organizations on previous joint meetings. The program is excellent.

It is good to have the MOU approved and official.

Warren reported that the AAPT has made recommendations of department reviewers for several years, with 3 – 4 requests each year. This started with the SPIN-UP report and site visits. Peter recommended that this be a joint effort, including graduate education and research programs. He emphasized that the CoE does not want this to become any sort of certification.

This would be good to include in a website, being discussed, to highlight joint projects of the professional societies. Jack noted that AIP gets requests for departmental reviewers, which are referred to its member societies. Other joint efforts are government relations for science education, climate issues, and the America Competes act.

Jack noted that the SPS is sponsoring four oral sessions and 3 poster sessions at this meeting. The undergraduate awards are on Monday. Viera Rueben will be inducted as an honorary member of Sigma Pi Sigma.

Common Core Education Standards, as a way to improve on the current diverse state standards, is another big issue now being studied. Helen Quinn is hosting an NRC board to arrange a framework for science standards. Achieve, a commercial organization, will be involved in building standards and assessments based on the framework. This will be part of the next version of No Child Left Behind. This is a big change and opportunity, with a large budget for STEM education in Department of Education. How scientists and educators will be involved in this effort is still a question.

Gay worked on science standards for the College Board. The diversity of state standards and lack of assessments were both big problems. She had some issues working with Achieve, but the end product was much better than state standards.

2010 Gordon Conference (Chandralekha Singh)

The 6th bi-annual conference on research & education in physics will be this June at Mt Holyoke College. These conferences focus on teaching and PER at the undergraduate level. Chandralekha requested support of \$9000 from the FEd to support this conference.

The GRC organization is pushing the Chairs to get the attendance at this conference up to the Gordon average of 125. The Physics Conferences have received good reviews, but there is little funding to help support people to attend the conference. The funding request is, in particular, to help support graduate students and junior faculty. Otherwise they can't come.

The GRC provides \$22,000 in funds for use by the Chair. These have been used to bring in research speakers who do not have funding to attend this sort of conference. Other Gordon Conferences bring in funding to support attendees.

The FEd has supported this conference for several years at \$3,000. Stamatis noted that this is a unique conference with a broad audience. Requesting support from the FEd is reasonable.

Other potential sources of funds were discussed. It was suggested that the PER Topical Group could help with this. John recommended that PERLOC be approached. Commercial vendors helped with the Advanced Labs topical conference last summer. ALPhA doesn't have resources to support this. Amber noted that the FGSA has some funds for grad student travel to conferences.

The cost for Gordon Conferences is \$850 for the entire week. This will be a difficult year for travel.

Larry noted that tripling the support is a large increase. He made a motion that the FEd provide \$5,000 for the Gordon Conference to support junior faculty, post docs, graduate or undergraduate students. The motion passed.

Newsletter Reports

Amber finished up the Spring 2010 newsletter before the joint meeting. Copies were brought to the meeting for distribution.

Carl is the editor of the Summer 2010 newsletter. He does not yet have a theme for this issue. Carl requested that suggestions for topics or articles be emailed to him. He has received some solicited contributions, and agreements to write articles, but is still looking for contributions.

We need to contact Randy Peterson about a report on the Advanced Labs Topical Conference from the summer of 2009 for inclusion in the summer 2010 newsletter.

Larry noted that past summer newsletters had included a summary of sessions at the March and April meetings, with links to the presentations.

Collecting and posting the talks took quite a bit of time and effort. Carl is not sure if we'll do this again because of the effort. Discussions with the APS about simplifying the hosting of talks has been held, but we don't yet have a definite answer.

Peter suggested that the fall newsletter have some connection to the upcoming Gordon Conference. Although reports of the activities at the Gordon Conference are not allowed, it's okay for speakers to present their own work. Chandralekha and Kiko Galvez will be Fall Newsletter editors.

It would be good to decide on the editor of next Spring's Newsletter. There were no volunteers.

Graduate Student Expectations (Amber Stuver)

Amber drafted a Whitepaper on the expectations of graduate students for education, treatment, and support. This was distributed to the FEd Executive Committee last year. The CoE is looking at this.

This document is being considered by the Committee of International Freedom as well because of the basic issues on human rights. They have made some suggestions. Comments should be address to Amber and the FGSA. This report was approved by the FGSA for distribution and comments. One possible outcome is to make this an APS position statement as a way to help departments address these issues.

Stamatis noted that this report is very nicely done. He would like to see more about TA Preparation. Len Jossem's resource letter in AJP would be a good place to start on this topic. It is important to give graduate students a good start in their potential roles as educators. Amber noted that this fits well with a FGSA survey on TA training experiences.

Ted suggested this whitepaper reference the Ethics Case Studies. The policy on the ethical treatment of subordinates and the report from the Graduate Education Conference would also be good references. Also, if there are situations not addressed in the case studies, additions could be made. Many of the issues considered are more important than just getting students through a graduate degree.

There were several comments about the salary issues discussed in the whitepaper. This raises many questions about graduate school being an education or a job, and whether the cost of tuition and benefits need to be included in the calculation. The central issue is whether student stipends can cover the basic costs of living.

If desired, the FEd can disseminate this or perhaps wait for the CoE to make a recommendation. We can put this into newsletters. Ted suggested this could also go into the Education Corner in the APS News. To do this, the document should be sent to Ted or Gabe Popkin.

Incoming Chair (Larry Woolf)

Peter thanked everyone for their hard work. Peter will now be leading the Fellows committee and will be requesting nominations for 2011.

Larry thanked Peter for his efforts as Chair and noted his pleasure in working with both Ernie and Peter. He feels Chandralekha will be a great benefit to the FEd.

In his candidate's statement, Larry stressed his desire to bring an industrial perspective to the Forum. He would like to get another industrial physicist on the board.

There are several possible activities that Larry suggested to help build the industrial perspective in the APS Education Efforts. A workshop on training for industrial physicists could help get out more information about the needs of students heading to industry. There could be more regular articles in the newsletter to help departments provide more of this information. An APS News back-page article on physics in industry would make people more aware of these needs. This was an important issue during the Graduate Education conference as well.

A difficulty in involving industrial physicists in the FEd is their rewards systems. In industry is little encouragement or support for involvement in education, although this does depend, somewhat, on the company. Ties to industry are important FEd and Graduate Education issues because it is vital to understand the other things that our students will do.

Stamatis asked about the impact a company or research lab might have on educational efforts. We should work on sessions and newsletter articles addressing these needs. We should help Renee recruit industry people to the FEd to keep this going. Ted noted, however, that he has put forward the names of several industrial people but they have not been elected. It is a problem because they are not part of the "clan" of University educators.

The meeting adjourned at 9:20 pm ET.

Appendix 1
APS Forum on Education
Budget Report 01/01/09 - 12/31/09

Item	Rev/Exp	Total	Balance
Balance Jan 1, 2009		19,711.08	19,711.08
Projected Revenue			
Dues	19,325.00		
Meeting Revenue, March	1,435.00		
Meeting Revenue, April	1,248.00		
Investment Income	1,725.95		
Revenue		23,733.95	43,445.03
Meeting Expenses			
Reception	(850.67)		
A/V	(621.63)		
Committee Phone Rental	(345.00)		
Committee Meal	(872.93)		
Grad Student Meal	(241.35)		
Physics of Dance Presentation	(140.00)		
Meeting Total		(3,071.58)	
Fee Waivers			
Gray	(205.00)		
Laws	(205.00)		
Malville	(205.00)		
Nelson	(205.00)		
Shropshire	(315.00)		
Franklin	(205.00)		
Hennessy	(205.00)		
Pollock	(205.00)		
Zentner	(205.00)		
Statman	(157.50)		
Fee Waiver Total		(2,112.50)	
FEd Exec Comm. Travel			
Collings	(1,628.40)		
Haase	(479.21)		
Lightner	(799.56)		
Malamud	(2,786.34)		
Mason	(398.99)		
Rossing	(737.20)		
Singh	(713.04)		
Stewart	(186.06)		
Vokos	(570.49)		
Wolf	(1,184.08)		

FEd Exec Comm. Travel Total		(9,483.37)	
Speaker Travel			
Zollner		(500.00)	
Gray		(100.00)	
Program/Sorting Travel		(424.66)	
FFPER Conference		(3,000.00)	
Mini-Grant (Univ. of Idaho)		(500.00)	
Postage		(31.94)	
Phone		(319.64)	
Newsletter Printing		(812.94)	
Total Expenses		(20,356.63)	
Balance			23,088.40

Excellence in Education Account: 116,120.00

Appendix 2
APS Forum on Education
Budget Projection 2010

Item	Rev/Exp	Total	Balance
Balance Jan 1, 2009		23,088.40	23,088.40
Projected Revenue			
Dues	19,300.00		
Meeting Revenue, March	1,500.00		
Meeting Revenue, April	1,200.00		
Investment Income	2,000.00		
Revenue		24,000.00	47,088.40
Meeting Expenses			
Reception	(1,200.00)		
A/V	(600.00)		
Committee Meal	(1,000.00)		
Grad Student Meal	(240.00)		
Meeting Total		(3,040.00)	
Fee Waivers		(2,500.00)	
FEd Exec Comm. Travel Total		(8,000.00)	
Speaker Travel		(1,500.00)	
Program/Sorting Travel		(500.00)	
Gordon Conference		(5,000.00)	
Adv. Labs Topical Conf. (2009)		(2,500.00)	
Mini-Grant (Univ. of Idaho)		(500.00)	
Postage		(100.00)	
Phone		(350.00)	
Newsletter Printing		(800.00)	
Total Expenses		(24,790.00)	
Balance			22,298.40