



**Forum on Education Executive Committee Meeting
Sunday May 1, 2011 – Draft Minutes**

Attendees: Alice Churukian, Peter Collings, David Cook, Paul Cottle, Paul Dolan, Noah Finkelstein, Jack Hehn, Laird Kramer, Angie Little, Bruce Mason, Dick Peterson, Chandralekha Singh, Gay Stewart, Amber Stuver, John Thompson, Stamatis Vokos, Larry Woolf

Highlights and Action Items:

- The Committee on Education award for departments was endorsed.
- The agreement on the duties of the AAPT representatives on the FEd was approved. David Cook will provide the final version as approved.
- Recognition of AAPT-arranged sessions at APS meetings is needed in the meeting bulletins. Being sure this is noted in the title and abstract of sessions will be added in the FEd Duty Calendar for the Program Chair.
- It was suggested that a PERLOC representative be on the FEd Program Committee to help arrange high-quality PER-related sessions.
- A sub-committee on the funding of the Excellence in Physics Education Award, consisting of Larry Woolf, Noah Finkelstein, and Bruce Mason was created.
- For future meetings, only 30 -40 paper copies of the newsletter should be printed. They should be available in the APS booth and the FEd sessions.
- The request for newsletter articles, or even editorship, by individuals or groups funded by the FEd should be included in the Duty Calendar or other FEd operational documents.
- John will contact the FFER organizers about editing the Fall 2011 newsletter.
- A wiki has been created for FEd Executive Committee documents. This site needs to be populated with existing materials.
- The nominating and program committees need to be formed and start working for 2012 events and awards.
- APS has requested help reviewing resources available for science ethics training.

Welcome and Announcements:

UATP Workshop - Charlie Holbrow announced a workshop on "Using Astronomy to Teach Physics" in Lincoln Nebraska before the summer

AAPT meeting. This is also in preparation for the Gordon Conference in 2012 on Physics Education and Research, and a special issue of the American Journal of Physics. Charlie asked for help spreading the word and identifying participants. Chandralekha suggested the APS send out email announcements to department chairs.

Approval of Documents:

Minutes – The minutes from the 11/16/10 Executive Committee meeting were approved with the correction that Nic is the Summer Newsletter Editor and Paul was the Spring Newsletter Editor.

Committee on Education Department Recognition – Noah described the CoE recognition program to identify undergraduate programs engaging in best practices to improve education. The announcement for this is posted on the APS website. Dick Peterson asked about the need for funds to support this. Noah noted that no funds are needed because this is not a monetary award, just an APS Committee on Education recognition. The committee voted unanimously to endorse this program.

FEd/AAPT Agreements – David Cook discussed the draft agreements between the FEd and the AAPT. This first, in operation, codifies the APS plenary at AAPT meetings and the AAPT-organized sessions at the APS April meeting. The second, to be approved, outlines the duties of AAPT-related members of the FEd Executive Committee to help ensure coordination between the two organizations.

The second statement on duties was discussed in 2010, drafted and circulated in January 2011. Larry noted that this has the largest impact on the AAPT Past-Chair and the longest serving APS/AAPT Member-at-Large. There is one minor error to be fixed by David. This agreement was approved by the FEd Executive Committee.

Dick Peterson brought up the concern that the AAPT-organized sessions at APS meetings are not being identified as such in the APS Bulletin. APS Plenaries at AAPT meetings are so recognized. Chandralekha thought that this would be very difficult with the APS meetings software, where only APS Units are recognized. It was agreed that, at the least, the AAPT connection should be included in the title of the session and the abstracts when appropriate. It would

also be good to have this announced by the chair of the session. This should be added to the FEd Duty Calendar.

Noah asked about increasing the representation of the PER Community at APS Meetings and throughout the APS. It was suggested that a PERLOC representative be included on the FEd Program Committee. FEd and the PER Community have been working together well, we might just want to formalize having a PER voice in helping determine FEd Sessions. Gay noted that PERLOC is a part of the AAPT and so this will be a different type of connection from the FEd/AAPT agreements.

Graduate Student Statement – Amber Stuver distributed an updated draft of a statement on “Considerations Regarding STEM Graduate Students”. A preamble has been added and other changes had been made since this was last reviewed by the FEd Executive Committee. This is not meant for a vote of approval, just for soliciting comments. There may be a request to approve this in the future.

Chandralekha felt that the changes to the section on financial support were an improvement. Amber noted that the statement that graduate students should be paid at the same level as physics students who are in private jobs had been changed to stating that graduate students should be paid enough to cover their cost of living. This is less controversial and fits better with what granting agencies will pay.

Noah suggested bringing this statement up at the graduate student conference and with the Committee on Education. Amber noted that this was started at the previous graduate student conference. Stamatis recommended including this at the APS Graduate Student Mentoring Workshop. It will fit with the workshop because it is a statement on departmental attitudes and practices.

Stamatis noted that there is overlap in physics education activities that, perhaps, could be better coordinated. One example is teacher workshops held by the PTRA, the Modeling Teachers, and Quarknet. The community is too small for uncoordinated activities. He raised the question about the role of the FEd, APS, and AAPT in doing the organization. Ted noted that he has hired a new person for PhysTEC and teacher professional development.

Chair’s Report and Actions

FEd Duty Calendar - Larry noted that the duty calendar for the FEd officers had been expanded. This should be a living document that is continually updated and referenced. For example, this past year the FEd missed the nomination of people for the awards committee.

This year the nomination committee is the duty of Paul Cottle. The program committee, run by Renee, has started work. The award committee names have been sent to the APS. Larry will work on the fellowship committee in the future.

Funding of EIPEA - The APS contacted the FEd about the need for more funding of the Excellence in Education Award. There is not currently enough money to support the award and the travel and the certificate. There would need to be about \$24,000 more in the award account for it to be fully endowed. One of the main problems is that we have been funding more on travel than originally budgeted, because there are several awardees. We need to respond to the APS by June as to how we will handle this.

There was a recommendation that a committee be formed to look at this issue. Larry, Noah, and Bruce agreed to serve on this committee. A recommendation was made that the FEd support the travel and award certificates for the next year, and then look into increasing the funding in the award endowment. It was also agreed that there should be a maximum amount of travel funds to help planning for funding the award.

Distribution of FEd Newsletters - Larry raised the issue of whether the FEd should keep printing and distributing paper newsletters at meetings, and whether it is worth the cost. This is a remnant of a time when the newsletter was entirely paper.

Paul noted that not all newsletters printed for March got picked up. Bruce said that we have been printing about 70 for each of the March, April, and AAPT Summer meetings. There was an agreement that there should be some physical copies of the newsletter available for literature tables and the APS booth. It was suggested that 30 or 40 copies should be sufficient.

FEd Sponsorship of Meetings and Workshops – Larry noted that the FEd has been asked recently to endorse or sponsor meetings and workshops. It was agreed that the entire FEd Executive Committee should be informed of and have the chance to comment on these endorsements.

Email Blasts to FEd Regarding Jobs - Larry has received a request that the FEd distribute a job announcement through the FEd email list.

It was agreed that this was not a proper use of the FEd contact list.

Newsletter Editors, Editor Position – The Fall 2011 newsletter editor position needs to be filled. The need to find newsletter editors is a recurring issue with the FEd. Renee noted that at convocation, one of the units stated they have an “Editor Line” similar to their Chair Line. The FEd By-Laws states that the editor is a position on the FEd Executive Committee. We have not had a permanent editor of this sort for a while.

The current editors are: Nic for Summer 2011, Paul for Spring 2012, Dick for Summer 2012.

It was suggested that representatives of the FFPER handle the Fall 2011 newsletter. Chandralekha noted that this has been done in the past. John will contact the FFPER organizers about this.

Chandralekha suggested that Members-at-Large be responsible for finding newsletter editors. Larry noted that this could be suggested, but it is not in the By-Laws so it will not be a formal duty.

In a general discussion of the newsletter, there were several suggestions for editors and authors. Recipients of mini-grants are regularly asked to write articles. The organizers of the PERC and the March and April FEd sessions are also candidates for writing articles, and perhaps even editing the newsletter. Larry suggested any ideas be sent to the editors of the upcoming newsletters. It was also noted that the deadline for papers should be at least a month before the newsletters need to be finished to give the APS time to format them and for editing.

Recognition of Fellows of other Units who are FEd – Peter received a question about recognizing fellows of other APS units who are also members of the FEd. It was agreed that this is not something the FEd would do.

Relationship with the FOEP – In previous discussions regarding the Forum on Educating the Public, it was suggested that formal connections between the FOEP and the FEd should be established, such as representation on executive and program committees. Larry noted that the FOEP By-Laws have not yet been completed. Gay stated that the APS Council recommended the FOEP speak to the FEd about this, although she was not sure if this was to be a formal process. Dan Dahlberg spoke to her about this at the Council meeting and agreed to discuss the issue with the FEd. Gay will be willing to make a statement about this during the Council meeting when the By-Laws come for a vote.

Larry will speak with Dan Dahlberg about this. Ted will do what he can to keep the FEd Executive Committee informed about this.

Treasurer's Report:

Financial Report and Budget - Bruce presented the 2010 financial report and a 2011 budget. He noted that in 2010 the FEd had spent about as much as the income. The budget report was approved.

A general discussion of FEd expenses was held. Gay noted that there would be questions if there were significant surpluses. Larry noted that we needed to be careful with travel money as this was a significant expense. Ted asked about funding the Excellence in Education award and Bruce noted that we had done this in the past and should be able to do this with the current funding model.

APS Forum Financing – Bruce noted the change in the method used for funding the APS Forums. Previously this was done using a two-tiered formula based on membership. It was now decided that forums without significant surpluses would receive \$20k annually, while those with surpluses would not be funded for the time being. The goal was to reduce by 50% the amount spent by the APS on forum funding. This leaves the FEd in the same position financially as in the past.

Secretary-Treasurer Instruction Manual – Bruce has created a set of instructions outlining the duties of the FEd Secretary-Treasurer as he's been performing them. This has been passed to Scott for his use and updates.

APS Wiki Site – The APS as a wiki site for units to use for their communication. A template site has been created for storage of FEd Executive Committee documents, minutes, and budgets. Material needs to be posted on this site.

Reimbursement Approval Guidelines – Larry has created a spreadsheet that outlines the standard funding expenses of the FEd and the approval process. An example of the need for this was a request by Renee to organize a lunch for speakers, particularly those speakers who would not otherwise attend a meeting. The FEd does not normally do this, so some method of approval is needed. Examples of support from the past include partial travel support for speakers who would not normally attend a meeting and dinner for fellows at meetings where there is not a reception.

Noah noted that this is a broader issue of holding a pleasant and social meeting. He gave the example of having beer at poster sessions. Chandralekha pointed out the questions of precedence and approval. Would it be possible to take out all invited speakers? Larry and Peter

suggested that this be possible, with the approval of the Chair and Treasurer, but that it be for unusual circumstances.

Past Chair Report:

Nomination Committee – The past chair is responsible for nomination of fellows, with the Chair and Past Chair putting together the nominating committee. It would be good to have people with different experiences on the committee. Suggestions should be sent to Larry.

The external nomination deadline was April 1, so these nominations are already at the APS. The FEd has a maximum number of nominations it can recommend, although it can also make supplemental recommendations. The FEd has generally recommended less than our maximum.

Chair-Elect Report:

FEd Session Attendance – Chandralekha noted that the FEd was allocated 4 sessions at the March meeting. With co-sponsorships this resulted in many sessions. Attendance at sessions was:

March meeting: (7000 Attendees)

FEd FGSA session: 50

Upper-Level PER (Paula Heron): 50 – 80

Undergraduate Research (Eric Mazur): more than 100

Outreach and K-12: 40 people, increasing over time.

FIAP, Educating for Industrial jobs: more than 70 throughout

Focus Session on Computation (Amy Bug): 40

Communicating Physics: 60

April Meeting: (1200 Attendees)

Big Bang Theory: Around 200 people.

Undergrad Research: 25 – 30

Excellence in Ed Award: 35

PER Session: 35 – 40

Peter thanked Chandralekha for her work organizing the meetings.

Vice-Chair Report:

2011 Election Results – Renee reported the election results. The new members of the FEd Executive Committee are Paul Cottle (Vice Chair), Scott Franklin (Sec/Treas), Greta Zenner Peterson (APS Member-at-Large), Angie Little (APS/AAPT Member-at-Large)

2012 Sessions – The program committee and ideas for the 2012 APS meetings are needed. Renee announced that some members of the committee had been identified including Chandralekha, Larry, Amber, Dick Peterson, John Newsom, Paul Cottle, and Angie Little. It was recommended that a PERLOC member join. The program committee has not been officially formed and it is easier to organize sessions with a larger number of members with diverse interests. There are recommendations that entrepreneurs and women be represented if possible.

The FEd Executive Committee members were requested to provide ideas for sessions. Chandralekha suggested another session about exciting the public about physics, similar to Larry's session, be held in conjunction with the FOEP. Larry suggested local informal education representatives. Gay suggested hosting sessions on April Meeting topics at the March Meeting and vice versa. David Ehrenstein may have good contact from Physics Focus for this.

Next year's meetings are Boston (March) and Atlanta (April).

Backup Invited Speakers – There was discussion at the APS about having back up invited speakers for sessions. Larry didn't understand how this could be done. Travel and attendance of backups could be difficult. The general agreement was that organizing some sort of discussion or panel during the time of missing talks be recommended by the APS, rather than backup speakers, with suggestions and help on how this can be done.

Committee on Education:

Noah reported on some of the activities of the APS Committee on Education. He noted how productive it can be to have APS Staff, the APS Committee, and Forum members all working together.

The CoE has arranged 3 subcommittees on K-12, Undergraduate, and Graduate education. The topics identified by the K-12 subcommittee

include Alternative Certification & Teacher Preparation, the new National Framework and Standards, PhysicsQuest, and APS Outreach. The Undergraduate subcommittee discussed a PER Speakers database, reviewed by PERLOC and APS, the Undergraduate Education award mentioned at the beginning of the meeting, and the study and external review of departments. The Graduate subcommittee focused on the Graduate Student conference in 2012 and connections with the FGSA.

The CoE also discussed formal links with the FEd and the CIP, and wants to explore connections with the FOEP. There is a National Academies study on Physics Education that is under way that is important for the field. The CoE is also interested in building relations with the other disciplines including chemistry and biological sciences. There is a desire for coordination of messages for the NSF, National Academies, OSTP, and the White House.

APS Education Report:

Ted reported on a number of activities of the APS and the APS Education Department.

There is a push to include education articles in PRL and Rev Mod Phys. He is working with the editors on this. The FEd might want to help identify authors and articles for these journals.

An APS strategic planning process is underway, with a document due in June. This effort comes from both the staff and the APS Board. The main topic is the expansion of APS activities. The leadership needs to decide how to support this.

The APS Education Office is finishing up a Minority bridge project proposal. They will try to move this through for funding. There was a small planning grant to do this, but it is currently funded through the APS. They are also looking at private money to support this until it is funded.

A Research Mentor Training manual has been created and is going to all physics departments. CERTL from Wisconsin put these together in a couple of disciplines. Monica Plisch created one for physics with their help. There was a workshop at the March Meeting about this with 25 – 30 people in attendance. Those interested should talk to Ted to promote this.

A pamphlet on 7 myths about high school physics was created by a workgroup between the APS and the AAPT. This is written for Guidance Counselors and parents. Tens of thousands have been distributed.

PhysTEC is holding a workshop May 23 – 24 in Austin Texas. It will feature Carl Wieman and Eric Brewe and will be in conjunction with a UTeach meeting. There are six new sites PhysTEC sites: Wright State, San Marcos, Genneseo, Virginia Tech, BU, Seattle Pacific, and Florida International. There are many new PTEC members.

The Education Department is hiring a new staff member, Jacob Blickenstaff.

The APS is hosting a series of webinars, many focusing on career information, work, and life balance. Many are aimed at students. There have been some bugs, but attendance is 40 – 50, with some webinars having as many as 80. These materials go online at the APS web site. Anyone with ideas for webinar topics should let Ted know.

A proposal has been submitted to the NSF, with the AAPT, to support a Graduate Education Conference but there has not yet been a response. This is probably because of NSF Funding uncertainties. The program officers sound positive. It is hoped that this will occur in the spring of 2012. The theme of the conference is diversity and the T-shaped individual (both Broad and Deep). The directors of graduate studies are very positive.

APS Ethics Case Studies – The APS developed resources on science ethics about 7 years ago, after the Bell Labs scientific misconduct case. The ethics workforce put together a series of case studies on the web. Ted re-wrote this as materials for an ethics seminar. This is available by searching for Ethics on the APS website.

The APS is revisiting this because of missing topics and new ideas developed since 2004. They are organizing a team to review this, and also think about the pedagogy behind the workshop resources. NSF requires ethics training from the university, so this can be a service for physics departments. Suggestions and recommendations from the FEd are welcome.

Dick asked how this was assembled. The NSF funded a digital library

on ethics studies with which the APS will work. NSF has funding on ethics research.

AAPT Report:

David Cook reported on recent initiatives of the AAPT.

Last fall the AAPT started an e-mentoring program for high school teachers. This pairs AAPT members as mentors with mentees, who are not necessarily AAPT members. To date 66 mentors have volunteered and 55 mentees have enrolled. Some mentors have several mentees. The responses to this effort have been very positive so far.

Efforts are underway to make use of the SPIN-UP reports on Undergraduate and Two Year College programs. Regional workshops have been held, and a workshop is being planned for HBCUs. The SPIN-UP report is an important foundation for the new undergraduate program award.

There will be several special events connected to the AAPT Summer Meeting in Omaha. These include a High School Teacher's Day, the three day UATP meeting announced by Charlie Holbrow, and the annual APS symposium, which is on nanoscience this year.

There will be continuing workshops and events on the advanced laboratory held in conjunction with ALPhA. The conference on Advanced Labs held in Michigan was very well received. The past summers there have been Alpha Immersion programs, short events focused on one or two experiments. Different institutions are hosting workshops on particular labs. A second topical conference is planned for 2012.

The Two Year College community has started a series of New Faculty Experience workshops to increase the knowledge of PER results implemented at TYC's. An earlier version of this work was done in 2008-2009. These events are spread over a year and include mentoring and online interactions.

AAPT is participating in an effort lead by Project Kaleidoscope "Mobilizing Disciplinary Societies" to promote sustainability studies and curricula for the 21st century.

A recent study by the US Chamber of Commerce, "The Case for Being Bold: A New Agenda for Business in Improving STEM Education", suggested that STEM firms should move away from licensure and create their own teacher preparation. This includes the use of STEM professionals to teach, but who don't want to be full-time teachers. They suggest the private sector can encourage employees to do this because businesses know what students need to succeed. There are questions as to how the APS and AAPT might address these efforts.

AIP Report:

Jack Hehn presented some comments on education efforts from the AIP perspective. The AIP appreciates the work that Crystal Bailey is doing and the APS undergraduate efforts. These collaborations are very useful.

AIP is working on a proposal to study workforce outcomes from the Bachelor's degree. This research will look at departments that graduate bachelor students and follow their careers to find out if the departments are providing the skills that employers want. The result will include recommendations of studies. Planned activities include presentations at SPS zone meetings, convening a longer-term panel, site visits, and developing prototype alumni advisory boards.

The next Sigma Pi Sigma conference will be held in 2012 in Orlando.

The DOE Science Bowl is this weekend.

A recent webinar was held on "Change the Equation", a report on NAIP math scores compared to State testing. This is leading to the NRC standards framework and will bring up questions about the assessments tied to the standards.

Closing:

Larry recognized John Thompson, Peter Collings, Stamatis Vokos, and Bruce Mason for their service as they leave the FEd Executive Committee.

Chandralekha thanked Larry for his work as Chair.