

Committee on Careers and Professional Development Annual Report -- 2000

November 19, 2000

Summary

Members of the CCPD focused much of our attention this year to expanding and strengthening the Career and Professional Development Liaison (CPDL) program on the national and regional levels. We have enhanced the CCPD and CPDL websites, initiated a discussion bulletin board for CPDLs, continued offering a CPDL workshop at the APS March meeting, and are investigating how we can extend these activities to APS section meetings. The CPDL program eventually will become self-supporting; however, an increasing amount of staff time is required to deal with the logistics of communication with the CPDLs, and of offering workshops at the national and the regional level. In addition to the CPDL program, we have continued offering short courses for professional development at the March APS meeting, worked with related units such as FIAP and COE to optimize resources, and continued our investigation of accreditation of physics departments and the impact of ABET. As a relatively new committee, we are pleased that a strong forward momentum has overcome our initial growing pains. The issue of careers and professional development continues to be critical to the community, as evidenced in part by the decision of AIP to devote a special issue of *Physics Today* to career-related issues. The CCPD has established an ambitious agenda and will require additional Society support to execute these programs.

Acknowledgements

The committee wishes to acknowledge the invaluable support and efforts of Arlene Modeste Knowles throughout the year. Ms. Knowles has been especially helpful during the transition from Barrie Ripin to Fred Stein. Her devotion to the committee's goals, efficiency and sense of responsibility has been a large part of CCPD's success.

We have benefited greatly from working with the American Institute of Physics on issues of mutual interest. Roman Czujko has provided the committee with statistical information to focus and support our efforts. Jack Hehn and Bo Hammer have been valuable participants in committee meetings and in planning and executing the CPDL workshops. Finally, we have benefited greatly from contributions from the Committee on Education through Ken Hass, and the Forum on Industrial and Applied Physics through Jim McCambridge.

Introduction

The American Physical Society's Committee on Careers and Professional Development (CCPD) met on 25 January 2000 and 25 September 2000 at the American Center for Physics in College Park, MD. We continued our use of conference calls and e-mail to supplement our regular meetings. This additional communication was especially important in terms of planning the March meeting workshops, as deadlines often fell in between meetings. Conference calls also

enabled us to invite remote participation by representatives of other organizations such as FIAP, thereby reducing travel expenses and the workload of our administrative assistant, Arlene Modeste Knowles. The work done via e-mail and phone prior to committee meetings has helped us shape our meeting agendas early enough to ensure that the committee members were prepared in advance.

Career and Professional Development Liaison Program

The Career and Professional Development Liaison (CPDL) program began in 1998 as a means of establishing a two-way communication network between the CCPD and physicists who are preparing students for the workplace. This network allows efficient dissemination of materials and resources developed by APS (and AIP), and also provides the committee with information about APS member needs. At present, the program consists of:

1. A national workshop for CPDLs, typically held at the March APS Meeting;
2. A web page with resources for CPDLs and others, and a discussion board that encourages CPDLs to share their experiences, successes and questions with each other;
3. Establishing a workshop for CPDLs immediately prior to the AIP Industrial Forum on Physics to extend the geographical 'reach' of the program; and
4. Working with APS Sections to establish programming for CPDLs at section meetings

At present there are approximately 140 CPDLs at schools ranging from liberal arts colleges to research universities. The second CPDL workshop was held at the Hilton Hotel in Minneapolis, MN on March 18-19th, 2000. About 40 people attended the workshop, which featured presentation of the most recent statistics on careers, a poster session that allowed CPDLs to share information about their programs, and a series of 'best practices' talks that illustrated some nationally successful programs. Jan Herbst of General Motors Research provided a very well received lunchtime talk that highlighted the differences between industrial and academic research. The CPDLs were also involved in brainstorming sessions with the goal of developing ideas that the CCPD could use for future workshops and activities.

Written evaluations from the participants showed that the workshop was very successful. The overall satisfaction rated a 4.3 on a scale of 1(low) to 5(high). Most of the comments we received on how the program could be improved emphasized that different types of schools often have very different needs and not all programming is appropriate for all audiences. The attendees felt that the program was efficiently planned and made good use of their time. The attendees were satisfied with the \$75 workshop fee, which covered the cost of the meals. One unexpected fact was that almost half the participants came specifically for the CPDL workshop and were not attending the March APS meeting. Overall, the committee was very happy with the workshop.

The committee recommended that a third workshop for career and professional development liaisons be held at the March 2001 meeting in Seattle. Art Hebard volunteered to serve as workshop organizer. We learned from the 2000 experience that we needed to start planning and advertising the workshop much earlier, and we have already begun these activities for the 2001

meeting. We have shortened the workshop from one evening and a full day to one evening and a half-day. The March meeting schedule is already quite full and many people had other commitments on Sunday afternoon. One open question is whether the workshop should be limited to CPDLs (or their designates), or whether it should be more widely advertised. The original idea of the CPDL program was that every university needed one person responsible for these issues, and that a two-way dialog between the committee and the CPDLs was important; however, arguments have been made that department chairs, and even interested graduate students at schools without a faculty member willing to become the CPDL would benefit from participation. This issue remains to be resolved.

The web-based discussion board for the CPDLs has suffered from lack of use during its initial few months; however, the board was launched in the summer, which is often a slow period for these types of activities. David Elmore volunteered to take a leadership role in stimulating conversations on the web-based discussion board and we hope that this will generate more use by CPDLs.

The resources available on the CPDL web page are very useful to CPDLs, who need easy access to career information and some assurance that it is accurate and up-to-date. The number one request from CPDLs is to provide them with 'canned' Powerpoint presentations that are maintained using the latest information from AIP and APS. The CPDLs are often asked to make presentations for current and prospective students, as well as for their parents, who are increasingly aware of career issues. We have identified physicists who either have or are willing to make presentations on topics such as the differences between academic and industrial employment, preparing for industrial job-hunting, etc. These presentations need to be reviewed, put in a uniform format, and posted on the web. The APS staff can upload the presentations to the web, but we need some funding for someone to assist an APS member volunteer to a) track down the presentation authors, b) work with the authors to develop and/or revise their presentations, c) maintain the presentations with the latest information (i.e. updating statistics as they become available) and d) make the presentations available to CPDLs. An APS member volunteer could be given funding for an undergraduate student to assist with the time-consuming logistics of this project. An initial investment of about \$1 K (14 weeks x 10 hours week @ \$7.00/hour) would be enough to get six to ten presentations on the web for use by the CPDLs. Some small continuing investment would be required for maintenance. We are recommending the 'subcontracting' of these activities to a university or industry member because of the specialized knowledge needed. The volunteer APS member would provide the specialized knowledge and the undergraduate student the legwork. Although APS staff members could do some of the work, we feel that having a physicist working with someone in their own immediate vicinity would hasten the project's progress. This arrangement would be a relatively inexpensive way to provide some relief to the already stretched APS staff.

Not everyone attends the March meeting and the committee has been concerned with ensuring that as many CPDLs as possible have access to the workshop resources. Heather Galloway and Bill Donnelly have taken the lead in working with local organizing committees for the Texas and New England section meetings respectively. This effort will require additional resources, especially in terms of helping sections find and fund speakers, contact CPDLs and other

interested people, and plan programming. We are examining how the committee can best encourage and facilitate these types of meetings.

Accreditation of Physics Programs/ABET

We are continuing to monitor national discussions involving possible accreditation of physics departments and the continuing impact of ABET 2000. The APS Committee on Education initially brought to our attention actions by the Accreditation Board for Engineering and Technology (ABET) that may have serious implications for physics departments and their graduates. We have had several discussions about the pros and cons of accreditation of physics departments in a manner similar to that provided by the American Chemical Society, but have not arrived at any recommendations. At present, we feel that the appropriate action is to remain aware of the national situation and continue contact with CoE.

Future Business of the Committee

The CCPD will continue to focus on supporting and expanding the CPDL program. We expect that our workshops will become continuing events at national and sectional APS meetings.

Anecdotal evidence suggests that students may not have an accurate understanding of the current state of opportunities in physics. Future research is necessary to determine whether this misperception is widespread, how students get their perceptions of the job market, and how the physics community can ensure that students base their decisions on accurate information.

NRC has just released a report on the current situation for postdoctoral research associates. The important position of postdocs as researchers and teachers, as well as the future leaders of the physics community, makes understanding the current needs and future challenges critical for APS. We will initiate an e-mail discussion of the report among the committee, with the eventual goal of preparing a statement for consideration by the Executive Board.

The Career and Professional Development Liaisons are an enthusiastic and willing group of physicists with great passion for ensuring that the physics community prepares students for the broad variety of careers they have available to them. We note that a number of the CPDLs have volunteered to serve on the CCPD and we encourage APS to draw from this group as necessary. We also note that the original composition of the committee included a graduate student. We feel it is very important to have representation from graduate students and/or postdocs on the committee, and request that this is considered when appointments to the committee are made.

Concluding Remarks

Although the career situation has changed markedly from five years ago when the task force that recommended this committee first met, we emphasize that attention to the matter of careers and professional development remains a critical task for the Society. We are entering a very different future, in which physicists are questioning our role in society and how that role is reflected in the job market. The CCPD will provide a continuing evaluation of this situation to enable the

Society to act wisely on behalf of its members. Respectfully submitted For the Committee on Careers And Professional Development.

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Diandra L. Leslie-Pelecky, Chair, 2000