

Committee on Career and Professional Development Annual Report -- 1998

(formerly, Committee on Applications of Physics)

26 October 1998

INTRODUCTION

The past year has been one of transition for the Committee on Applications of Physics. Under that banner, the CAP was a leading advocate and champion of the successful effort to create the Forum on Industrial and Applied Physics (FIAP). The Forum is now the largest unit in the APS, and is actively engaged in fulfilling its mission. Much of the work that CAP formerly did is now being performed by FIAP. For example, FIAP is responsible for organizing meeting sessions, and advising the APS on matters related to industry and applied physics, functions that the CAP previously had been providing.

The evolutionary change described above occurred at a time when the APS was being encouraged by many of its members to establish a clearinghouse for its career-related activities. This view was reinforced in the timely 1997 report of the APS Task Force on Careers and Professional Development, which recommended that the Society charge one of its committees with this responsibility. Thus, it seemed appropriate to rename the CAP, alter its mission, and allow it to step into its new role without delay. The APS Council concurred, and formally approved an amendment to the APS Bylaws that reflects the change in the mandate of the committee, and its new name: Committee on Careers and Professional Development (CCPD). The new APS Bylaw reads as follows:

The membership of the Committee on Careers and Professional Development shall consist of 9 members appointed by the President to staggered three-year terms. The President shall appoint the Chairperson from among the members. The Committee shall be responsible for coordinating affairs within the Society concerned with career and professional development in physics and advising the Society on courses of action.

The CCPD has met twice in 1998 at the American Center for Physics; its winter meeting took place on 26 January, its fall meeting, on 15 September. Much of the agenda of each meeting was devoted to an effort to develop a global picture of the current employment situation for physicists, especially, those about to embark upon their career, or in their early professional years.

Activities for 1998

CAREER AND PROFESSIONAL DEVELOPMENT LIAISON PROGRAM

The committee benefitted greatly from the results of an APS e-mail survey of junior Society members (those within 3 years of their last degree) that compiled their perceptions of the job market in the fall of 1997. It strengthened the committee's resolve to pursue the concept of a

Career and Professional Development Liaison (CPDL) to be designated in each participating physics department throughout the country. The goal is a nationwide network of interacting physics-department Career Liaisons. To this end, Diandra Leslie-Pelecky, a committee member, and Barry Ripin undertook to organize a CPDL workshop at the March 1998 APS meeting. Approximately 240 invitations were sent to department chairs of PhD- and MS-granting physics departments in the U.S. Thanks to the solid efforts of the two organizers, over 50 participants attended this inaugural workshop, and provided valuable feedback that serves as guidance for the future work of the committee. Even more important was the sense that a successful start had been made along the path toward establishing the network just described. This derived from the evaluations and comments solicited from the workshop attendees upon conclusion of the session.

The positive outcome of the first CPD Liaison Workshop encouraged the committee to plan further actions such as the creation of a website for current and future workshop participants, a CPDL kit for those who wish to join the Liaison program, and a follow up CPDL department Chairs and Liaison meeting in the Spring of 1999.

While the CCPD can plan and coordinate a Liaison program, it can only be effective if it acts in concert with the APS whose existing databases, lines of communication and other resources are vital to the success of such an ambitious project. The APS, in turn, would need to cope with constraints arising from limitations in its available staff and funding. For example, an essential ingredient in the CPD Liaison program will be a Careers and Professional Development Site Visit Program whose purpose will be to assist physics departments in preparing graduates to broaden the range of their planning to take into account the scope of physics-related careers now open to them. Additional funding for this program will be required, and to this end, Barrie Ripin and Phillip Hammer submitted a grant request to the Sloan Foundation in August. If funded, this grant will permit a total of twelve site visits over a period of two years.

In its first phase, the plan provides for visits to nine degree-granting physics departments with outstanding reputations for career and professional development activities. It recognizes that this approach will save a great deal of time as it will document existing best practices and help to codify objective measures of success. This information will be embodied in a resource book that will be disseminated widely, and will serve as a useful guide to departments that are inspired to enter the Liaison program.

Phase two of the Site Visit Program will involve visits to three departments that are seeking assistance in developing or improving career and professional development programs. Their current practices will be assessed, and models derived from lessons learned in phase one will be used to suggest improvements. In order to be successful, the Site Visit Program will have to rely upon volunteer teams of APS members with appropriate experience in this subject; this team selection aspect of the program will be handled with great sensitivity to avoid alienation of the host department faculty. Concurrent with Site Visit activities, the CCPD expects to foster growth in the Liaison program through meetings, teleconferences, newsletters and the support of industry representatives. The committee will be seeking new members who are willing to commit some their time to this enterprise. It believes that the time for discussion is over; the time for action is now.

SHORT COURSES for CAREER AND PROFESSIONAL DEVELOPMENT

In January, the committee examined the idea of sponsoring short courses for interested students and faculty that are designed to acquaint inexperienced physicists with nontechnical topics that may be encountered early in their careers, especially in an industrial setting. Given the present somewhat more entrepreneurial nature of university research, some topics, such as elementary patent law might not be outside the realm of those bent upon an academic career. A brief report prepared by Allen Goland confirmed the fact that short courses of this nature have been around for a long time, and in fact are offered by many professional societies as well as commercial organizations. They are often presented in-house in industry, sometimes being mandatory for employees. The real question, therefore, is whether or not our members wish to avail themselves of the opportunity to strengthen their position in job hunting or their security in a first job. An informal dialogue via e-mail was conducted in the Spring by Arlene Modeste, and it yielded a mixed response, in part because of uncertainties with respect to cost and accessibility. The committee plans to proceed with the idea, perhaps offering an initial short course at the Centennial meeting if the logistics can be worked out. Other possibilities are to offer the courses at Divisional symposia, or regionally, but not in conjunction with specific APS functions. In some sense, the committee suspects that the reason for the apparent lack of enthusiasm for this idea is precisely why it should be carried further: in their immersion in physics the prospective attendees have avoided exposure to topics that appear trivial and readily picked up on the job. Unfortunately, many of those topics are the lifeblood of industry these days, and failure to familiarize oneself with them in advance is disadvantageous.

COORDINATION OF APS CPD ACTIVITIES

The mission statement of the CCPD assigns it the responsibility for coordinating and advising the Society on affairs concerning careers and professional development. To meet this obligation the committee will need to learn what activities are currently underway in each of the Society's units. A start has been made on this task, but it will need to be incorporated into a strategy that will have as its objective the provision of tangible "value added". Otherwise, the individual APS units will continue their uncoordinated efforts, thereby failing to make use of resources that could be made available to them. Given the diversity and differences in the perceived job market among society members, it may be asking too much of them to consider a more coordinated approach, but it seems worth trying. It is probably worth noting here that at least on third of physics-trained graduates never attain a graduate degree. For them, the support of a mature and sophisticated professional society can be the pathway to a future career in physics.

FUTURE PLANS of the CCPD

Realistically, unless some critical issue arises suddenly, the committee should not be seeking additional responsibilities or creating new projects for itself. If it can succeed in the endeavors outlined above it will have fulfilled a good deal of its mission. Therefore, future plans are all related to implementation of the projects just described. A few examples (not prioritized) are:

conducting a new e-mail survey of junior members in two years.

comparing FIAP and AIP job engines that developed simultaneously to determine the most effective way to utilize them.

establishing liaisons with FIAP and with the AIP Corporate Associates to ensure strong lines of communication with all APS units on matters of career and professional development.

cooperating with the AIP in its Careers for Physicists Project.

working with the AIP Corporate Associates to develop means of conveying the value of physicists to industry.

CONCLUDING REMARKS

The minutes of the joint meeting between CAP (now, CCPD) and FIAP at the American Center for Physics on 22 September 1997, indicate that Andy Sessler remarked that " the formation of this new committee [CCPD] is a historic moment for the APS because when APS was first formed, its main concern was with the science of physics and all it entails. In recent years, with interests in lobbying, education, international affairs, etc., and especially now, with the advent of the Committee on Careers and Professional Development, APS is demonstrating its concern for the well-being of physicists." The committee hopes that it can fulfill its responsibilities to the satisfaction of Andy and all the rest of our Society. In doing so, we hope it will become evident that the original primary concern of the APS will be reinforced by the young physicists who are so anxious to retain their careers in physics, and who may only be able to do so with the Society's dedicated help.

Respectfully submitted for the Committee on Careers and Professional Development
Allen N. Goland, Chair