

FIAP Newsletter—Fall 2014

FIAP Focus: Planning for the future of Industrial Physics

[Workshop on National Issues in Industrial Physics](#) by John Rumble

The Workshop on National Issues in Industrial Physics, jointly sponsored by APS and FIAP, will occur on October 6-7, 2014 in St. Michaels MD. APS and FIAP believe it is timely to explore the issues facing industrial physics within the United States to identify those issues that challenge U.S. industrial leadership in using physics as a key driver for success.

[FIAP Strategic Plan 2014-2017](#) by John Rumble

FIAP has put together a new strategic plan focused on better serving its members, better serving the industrial and applied physics community, helping industrial and applied physicists better serve society, and increasing FIAP organization excellence.

Careers

[Supporting Early Career Physicists at the APS March Meeting](#) by Crystal Bailey

FIAP and the APS are committed to advancing the careers of young physicists. The March Meeting represents an ideal platform for bringing those early in their careers together with more experienced industrial physicists. Activities at the meeting such as “Lunch with the Experts,” career workshops, and jobs expo are now supplemented with APS Local Links --- locally focused networking groups that meet more frequently.

Announcements & Meetings

[Nominations for Distinguished Lectureship Award on the Applications of Physics](#) by Crystal Bailey

Nominations for the 2015 Distinguished Lectureship term will close on September 30, 2014.

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Comments & questions can be sent to fiap_newsletter@aps.org

Opinions expressed represent the views of the individual authors and not the American Physical Society or authors' employers

Easier access to APS publications by Steven Lambert

The APS is making it easier for to get journal articles. All US public libraries can access any APS article for free, and individuals can purchase articles for a nominal fee.

Pake Prize

Start planning now! Nominations for next year's Pake Prize recognizing and encouraging outstanding physics and industrial physics leadership will open soon. Check <http://www.aps.org/programs/honors/prizes/pake.cfm> for details.

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Workshop on National Issues in Industrial Physics

One of the most important FIAP activities this year will be a Workshop on National Issues in Industrial Physics, jointly sponsored by APS and FIAP, on; October 6-7, 2014 in St. Michaels MD.

Physics has been a prime mover of industrial development in the United States for over 100 years. Technology advances in virtually every area have been made possible by physicists in industry using the latest physics knowledge to develop products and devices that have made our lives safer, better, and easier such as consumer electronics, automated braking systems, automated elevators, and smart phones. Equally important have been the contributions of industrial physics to the security and infrastructure of our Nation, including jet aircraft, radar, space exploration, air traffic control system, and renewable energy.

We almost take for granted that the flow of physics from research done across the globe to the individual physicists and companies that are based on physics is unencumbered and continuous. The world, however, continues to change: physics research is done in more countries than ever; technology has become globalized; physics information is now widely available on the internet; and the world economy and our national financial situation have been severely challenged in the last decade. The nature of industrial physics is also changing as many large central labs have been de-emphasized and the industrial physics community has become more fragmented.

APS and FIAP believe it is timely to explore the issues facing industrial physics within the United States as we move deeper into the 21st Century and to identify those issues that already or potentially challenge U.S. industrial leadership in using physics as a key driver for success. These issues include the availability of suitable physicists to perform industrial physics at the highest levels, the availability of new physics to overcome technological challenges, and the support of industrial physics by the government, legal system, and financial sectors as a key player in improving society and an important driver for new economic activity and wealth.

The goal is to produce an annotated list of issues facing industrial physics in the United States over the coming decade with some indication of seriousness and priority for action. To the extent practicable, the major issues will have suggested actions or actors, or both, for addressing the issues. A Workshop report will be issued (10-15 pages) within three months, similar in quality to APS POPA reports. The Workshop primarily consists of small breakout groups that will identify, refine, and prioritize the top issues.

If you are interested in attending, we can accommodate a very few additional attendees. Please contact Steven Lambert (lambert@aps.org) or John Rumble (jumbleusa@earthlink.net) as soon as possible.

FIAP Strategic Plan 2014-2017

With the start of the APS new Strategic Plan (www.aps.org/about/strategy/upload/strategicplan.pdf) and the introduction of the APS Industrial Fellowship, presently held by Steven Lambert, it has become timely and useful to put together a similar plan for FIAP, recognizing that any such plan should align with the APS plan. To that end, the FIAP Executive Committee has approved a plan, as summarized in the table below, the articulate goals and activities for the next four years. The table also defines specific activities for 2014, most of which are underway.

Four overall goals have been defined, as aligned with the APS plan:

- To better serve FIAP members
- To better serve the industrial and applied physics community
- To help industrial and applied physics better serve society
- To increase FIAP organizational excellence

Given that FIAP already foster continuity of leadership through its four-year Chair cycle (Vice, Chair-elect, Chair, Past Chair), the strategic plan adds a continuity of programs and activities that increases FIAP's impact. Full implementation will not be done until next year or beyond (see green shading in the table, but we have already started a number of new activities as included in the table.

There are numerous opportunities for FIAP members to get more active. If something interests you, please contact John Rumble at jumbleusa@earthlink.net

FIAP Strategic Plan 2014-2017	
GOAL ONE: To better serve FIAP members	
Objective 1: Communications	2014 Activity
Continue periodic e-newsletters with content appropriate to FIAP members and other industrial physicists	Issue newsletters on specific subject
Improve the FIAP website to (a) highlight FIAP and APS services to industrial physicists, (b) provide ready links to industrial, national laboratory, and other non-academic career information, and (c) links to meetings of interest to FIAP members	Redesign Website (slow)
Work with APS to include news items relevant to industrial physicists in publications such as APS News, Physics Today and similar publications	Discuss with APS communications staff
Objective 2: Membership	2014 Activity
Increase retention of student members who move into industry by offering discounted membership dues to APS and FIAP	Done. Early Career Membership is 5 yrs at \$71 vs \$141 regular
Develop in partnership with APS membership staff a recruiting	A major challenge!

5	<p>FIAP Newsletter, Fall 2014</p> <p style="text-align: right;">Comments & questions can be sent to fiap_newsletter@aps.org</p> <p style="text-align: right;"><i>Opinions expressed represent the views of the individual authors and not the American Physical Society or authors' employers</i></p>
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campaign for mid-career and beyond industrial physicists	
Circulate the call for nominations for FIAP Fellowships to attract more industrial candidates	Send letter request to research directors, lab managers (How to identify?)
Increase the visibility of APS prizes and awards for industrial physicists and the recognition of recipients	Issue press release of FIAP Fellows and prize winners
GOAL TWO: To better serve the industrial and applied physics community	
Objective 1: Dissemination of Physics	2014 Activity
Work with APS to review and upgrade “package” access to APS and other industrial physics-related journals	Discuss with APS (Many complexities)
Organize hot-topic sessions at March APD meeting on subjects important industrial physics using the FIAP Program Committee (see below) and partnering with other Divisions as appropriate	Revamp approach to organizing FIAP sessions at March meeting
Continuing education – Work with APS in creating a portal to online physics-related “educational” resources, such as a portal to COSERA, the Khan Academy and explore the production of APS-produced physics videos and webinars	Discuss with APS
Objective 2: Advocacy and Strategic Alliances	2014 Activity
Make APS aware of issues important to the industrial physics community locally, nationally, and globally.	2014 “National Issues in Industrial Physics” mtg. (See below)
Objective 3: Education	2014 Activity
Work with APS CCPD on having local industrial physicist involvement in Local Links chapters	As local chapters are established, help identify FIAP members who could participate
Work with APS CCPD as they create industrial physics career guidance packages for physics departments, including industrial career preparation, advisor mentoring, guidance to APS career resources, and mentoring resources	Ensure FIAP representation in APS CCPD activities
Work with APS CCPD to create a pool of industrial physicists able to represent FIAP and industrial physics at career events at section and national meetings	Continue to hold sessions and panel meetings at section and national meetings on industrial careers
GOAL THREE: To help industrial and applied physics better serve society	
Objective 1: Physics Information and Public Policy:	2014 Activity
Work with APS Public Affairs Office in identifying areas in which APS position/policy statements are needed that relate to industrial physics and help develop needed policies	Hold “National Issues in Industrial Physics” meeting sometime in 2014
Objective 2: Outreach:	2014 Activity
Work with APS to ensure that industrial physicists are represented in all APS outreach activities to the public	Discuss with POPA
GOAL FOUR: To increase FIAP organizational excellence	
Objective 1: FIAP Governance	2014 Activity
Create and use a FIAP Program Committee to work actively with the FIAP Vice Chair to organize FIAP’s portion of the March meeting.	Set up FIAP Program Committee; special emphasis on getting new people involved

Supporting Early Career Physicists at the APS March Meeting

In 2012, an Early Career Task Force was established as a part of the APS Strategic Plan, to examine how APS could serve physicists more effectively in the early stages of their careers. One of the recommendations of this group was to offer career and professional development activities at APS annual meetings—particularly ones aimed at increasing awareness of industrial careers among students.

At the APS March Meeting 2014, APS and FIAP teamed up to do just that by offering an increased presence of FIAP members at the popular “Graduate Student Lunch with the Experts” on Tuesday of the meeting, as well as an extremely well-attended Industrial Outreach session, in which John Rumble, Crystal Bailey, and Barbara Jones spoke to students about the employment outlook and the nature of careers in the private sector on Wednesday. Specific topics covered during the 90-minute session included employment and salary information about private sector careers, how to successfully find and apply to careers in industry, and how fundamental physics research is involved in device and product design. Over 280 students and postdocs were in attendance, and though an hour was allowed for open Q&A, many students continued discussion with industrial physicists attending the event afterward, in the hallway outside the meeting room.

This year’s March Meeting also saw the launch of the inaugural Denver Area APS Local Links on Wednesday evening. APS Local Links are locally based, informal networking groups designed to develop mutually beneficial links between industry professionals, early career physicists, and faculty in a given area. Of the 50 attendees at the inaugural Denver Local Links Meeting, roughly 10 of them were from local industries. APS has continued to develop the Local Links program, and currently has five Local Links groups active around the country, each of which include industrial representation on its planning committee to ensure that the groups’ activities benefit representatives from local companies. We hope to see the level of involvement of industry in the Local Links to continue to increase. For more information about APS Local Links, please visit <http://www.aps.org/membership/locallinks/index.cfm>.

In addition to these activities, APS also offered a Career Workshop with celebrated science career coach Peter Fiske, who gave detailed advice on career planning and self-assessment, network building, writing a compelling resume, and finally on interviewing and negotiation. APS also hosted its annual Job Expo at the meeting, offering free job posting packages to all registered exhibitors. APS also offered a

special series of events for undergraduate students, including a graduate school fair, a resume writing workshop, and special undergraduate research talks.

Plans for the 2015 Meeting include offering the Career Workshop, Job Expo, and networking opportunities for students—as well as another Industrial Outreach session similar to the one hosted last year. APS and FIAP will work together to coordinate early career physicists' events with the planned Industry Day activities, and to widely advertise these events to APS members and to all early career physicists attending the meeting.

APS is aware that the majority of physics graduates of all degree paths will find rewarding, well-paying employment in the private sector. Therefore, informing students about career options outside of academia—and doing so early on in their undergraduate or graduate education—is essential. We look forward to continuing to partner with FIAP to help increase awareness of the incredible breadth of career options available to physics graduates at APS meetings.

Nominations for Distinguished Lectureship Award on the Applications of Physics

APS is now accepting nominations for the Distinguished Lectureship Award on the Applications of Physics. This award seeks to recognize and honor physicists in industrial and other non-academic careers for their significant contributions to the advancement of physics of a technical, industrial, or entrepreneurial nature and for their demonstrated ability to give interesting and engaging lectures to both experts and non-experts.

The award is given annually and will include a \$5,000 award, recognition in APS News and the APS March Meeting, and a plaque to be presented following the completion of the Lectureship term. Travel costs associated with giving the lectures will be additionally reimbursed by APS, up to \$5,000.

Nominations for the 2015 Distinguished Lectureship term will close on September 30, 2014. For more information about the Award, and to submit your nomination, please visit:

<http://www.aps.org/careers/lectureship/index.cfm>

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Easier access to APS publications

Obtaining publications can be difficult for physicists working in industry who do not have access to a technical library. Two options from APS can make this easier. The first is the [APS Journal Packs](#) which allow members to download 20 APS articles for \$50 using an APS Journal Account. You can search for articles and preview the abstracts at the APS [website](#), then purchase and download a PDF using your Journal Pack. A totally free option for APS journals is that all US public libraries can access any APS article. This service is available to all users after [some setup by your local library](#). You must go to the library to access the journals using computers in the library. Please contact me with feedback or questions about these services.

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