

FIAP Spring 2016 *Newsletter*

American Physical Society Forum on Industrial & Applied Physics

Careers

<i>Free Job Postings for Internships</i>	2
<i>Industry Day at March Meeting 2016: From Nano to Meso</i>	2

Updates

<i>Awards and Prizes</i>	2
<i>2015 FIAP Fellows</i>	3
<i>Procedure for Nominating Someone for an APS Fellowship Through FIAP</i>	4

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

Free Job Postings for Internships

The APS offers free job postings for internships. The postings appear on the *Physics Today* Jobs site and remain on-line for 60 days. You access a targeted audience of physics students and members of AAPT, AVS, and the IEEE Computer Society. Free internship postings are available year round, but now is the time when many

students are seeking summer jobs. Do not miss this opportunity to connect with students, market the innovative work underway in your company, and broaden your candidate pool for future job openings. You can find details on this [page](#) of the APS Careers website.

Industry Day at March Meeting 2016: From Nano to Meso

The second Industry Day at the APS March Meeting is entitled *Nano to Meso* and will focus on the growth of the technology that enables materials design and strategic synthesis prior to experimental testing and hardware assembly. Please join the industrial scientists, academics, and researchers from the national laboratory system who will create this new paradigm. Theory led material development has the potential to substantially drop the cost to develop, and time to market. This session attempts to bring these concepts to the forefront of the physics community, with the hope that the resulting excitement will create new capabilities in the international technical sphere. Speakers will include industry R&D

leaders and senior scientists from both the academic and industrial laboratories. There will be a reception at the end of Industry Day (after session P12) to which you are all invited. The FIAP Prize session V12 is Thursday afternoon, and will also have a reception following it. Check [here](#) for full program details.

Registration

Industry Day will take place on Wednesday March 16 during the March Meeting in Baltimore, MD. If you wish to attend Industry Day, you must register for the APS March Meeting. One-day registration is available, details at this [link](#).

Awards and Prizes

Pake Prize Nominations Due July 1

Nominations for the Pake prize are now open. The prize is named in honor of George Pake, whose team at Xerox PARC constructed one of the first laser printers and the forerunner of the internet during his tenure at Xerox. The award recognizes “outstanding work by physicists combining original research accomplishments with leadership in the management of research or development in industry”; and consists of a \$5,000 stipend for travel to the meeting at which the prize is to be awarded, and a certificate recognizing the contribution of the recipient. It is presented annually.

Please check <http://www.aps.org/programs/honors/prizes/pake.cfm> for details.

Industrial Applications of Physics Award [link](#)

The IAPA recognizes an individual, or individuals, for excellence in the application of physics in an industrial setting. Moreover, this award seeks to publicize the value of physics in industry and enhance students. The prize carries a \$10,000 monetary award with certificate citing the contribution for which the Prize was awarded. The Industrial Application of Physics Award (IAPA) recognizes an individual, or individuals, for excellence in the application of physics in an industrial setting. Moreover, this award seeks to publicize the value of physics in industry and enhance students. The prize

carries a \$10,000 monetary award with certificate citing the contribution for which the Prize was awarded. This prize is supported by a grant from the General Motors Corporation.

This award was established in 2009 and is given every other year. The nomination deadline for the 2017 recipient is July 1, 2016. Nomination materials should include biographical information, relevant lists of publications and patents, and up to three letters of support.

Nominations Due June 30 for Distinguished Lectureship Award - Applications of Physics

The APS Committee on Careers and Professional Development (CCPD) and FIAP award an annual Distinguished Lectureship to recognize an industrial physicist for technical accomplishments, with the intent of fostering student interest in industrial physics. The goal of this award is to 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. The award recipients are recognized at a national meeting and will give a minimum of three lectures over a term of one year. The Distinguished Lectureship presentations should discuss key aspects of the recipient’s career and professional development in physics, they should be interactive and engaging, and

they should be aimed especially at physicists early in their careers. The Distinguished Lectureship will include a \$5,000 award and reimbursement of travel costs up to \$5,000. Follow this [link](#) for more

information including the nomination process. The deadline for submission of nominations for the 2017 Distinguished Lectureship is June 30, 2016.

2015 FIAP Fellows

New APS Fellows Elected through FIAP will be Recognized at March Meeting 2016

Evans, Dean [2015]

Air Force Research Laboratory - WPAFB

Citation: For contributions in the photorefractive field leading to an understanding of the physics and defect structure needed to mature these crystals for applications, and for work in the physical understanding and development of ferroelectric nanoparticles.

Fanciulli, Marco [2015]

University of Milano, Bicocca

Citation: For outstanding contributions in the growth and characterization of materials and nanostructures for emerging devices for information processing.

Hallen, Hans [2015]

North Carolina State University

Citation: For creative contributions to our understanding of the optical properties of materials at the nanoscale, and their use in the characterization of materials and structures.

Iannaccone, Giuseppe [2015]

Pisa University

Citation: For contributions to the theory of quantum transport and noise in mesoscopic and nanoelectronic devices and to their application in electronics.

Karunasiri, Gamani [2015]

Naval Postgraduate School

Citation: For extensive contributions to the development of quantum well infrared detectors and MEMS based sensors for directional sound sensing and THz imaging.

Kim, Ki [2015]

North Carolina State University

Citation: For contributions to the understanding of electron-phonon scattering and related transport properties in the low-dimensional electronic and spintronic devices and structures.

Manzur, Tariq [2015]

Naval Underwater System Center

Citation: For outstanding contributions in the field of photonics, laser devices, and systems.

Meitzler, Thomas [2015]

US Army Research Development & Engineering Command

Citation: For the development of a novel technique for embedding of ultrasonic, optical, and spintronic transducers-sensors into armor materials and contributions to understanding how embedded transducers give indication of armor damage.

Rumble, John [2015]

R&R Data Services

Citation: For leadership in developing systems that organize and provide ready access to the high quality scientific and technical data needed for the design, performance prediction, and analysis of industrial products.

Tang, Xinfeng [2015]

Wuhan University of Technology

Citation: For pioneering studies of the synthesis, processing, characterization, and understanding of thermoelectric materials, and for contributions to their use in industrial applications.

Wright, Michael [2015]

Varian Medical Systems

Citation: For outstanding research and innovation in x-ray imaging and radiation therapy, its resulting commercial impact, and profound medical benefits for humankind.

Zhang, Zhuomin [2015]

Georgia Institute of Technology

Citation: For advancing the knowledge of near-field thermal radiation between objects at nanometer distances as well as the radiative properties of photonic crystals and metamaterials for energy harvesting and semiconductor processing.

Nominating Procedure for an APS Fellowship Through FIAP

Call for Nominations: FIAP Submissions for APS Fellowship
<http://www.aps.org/programs/honors/fellowships/nomination-requirements.cfm>

Any nomination for APS Fellowship must be linked to one of the “units” in APS. For people working in industry the most likely unit is FIAP, the Forum on Industrial and Applied Physics. It is the biggest forum, so it has a large allocation of Fellow nominations.

Only APS members can be nominated to become fellows. You must also be an APS member to submit a nomination. You will need the support of a second member who is the “co-sponsor.” It is not necessary to be a FIAP member to nominate someone, but it’s easy to join FIAP and can’t hurt.

The nomination package should include recommendations from up to two others who need not be APS members.

Deadline for fellow nominations: June 1, 2016 for FIAP

Nomination process: Can be submitted at any time, but must meet the deadline to be considered for that year

Before submitting a nomination, you should assemble all the items listed on this <http://www.aps.org/programs/honors/fellowships/nomination-requirements.cfm>; including:

- Citation (maximum 300 characters)
- Supporting paragraph (maximum 2500 characters)
- Letter of support (uploaded as a pre-saved document)

- Name and email address of a co-sponsor. The co-sponsor should also provide a strong letter of support.
- Additional letters of support (at most 2 beyond yours and the co-sponsor’s)

Use your letter of support to emphasize the concrete accomplishments of the nominee and the impact thereof. Since many FIAP nominees work in non-academic environments, the FIAP Executive Committee has provided guidelines on the criteria for nomination on the following page.

Process Overview:

1. Submit nomination to APS prior to unit deadline (June 1, 2016 for FIAP)
2. Nominations are reviewed at the Unit level by the Unit Fellowship Committee
3. Recommendations are reviewed by the APS Fellowship Committee (by September 1)
4. Final approval is given by full APS Council (by November 30)
5. Notification of newly elected fellows as well as sponsors of nominees deferred or dropped
6. General announcement of new fellows in March issue of *APS News*

Complete nomination details may be found at the appropriate link. Questions are welcome.

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Criteria for APS Fellowship Nomination Through FIAP

Criterion	Definition
Contributions made in fields of Industrial or Applied physics	The primary criterion. The nominee should have made a significant contribution in a field of industrial or applied physics according to the following sub-criteria. The accomplishment(s) should be easily and succinctly expressed.
	Pure academic physics research that has not resulted in industrial applications, led to commercial products, or major applied physics projects within national or international laboratories or facilities should be considered by APS Technical Divisions rather than FIAP.
Examples of significance	Successful commercialization of a product or process resulting from physics R&D or advancement in physics
	A significant practical application of physics, but not commercialized, e.g., patents exist
	The practice of physics, such as significant advances in physics, but are not developed into an application, e.g. a body of work in physics in an industrial or national lab setting with publications but no or very few patents
	Original research and development that advances the field of industrial or applied physics without satisfying any of the above sub criteria
	Leadership in advancing industrial or applied physics in a significant industrial, governmental, or other program
Patents and Publications	A maximum of the 8 most significant patents and publications required for the nomination. No more than 4 publications can be included. All publications should be directly related to the nominee’s significant contributions to industrial or applied physics.
Continuing record of patents	Patents are a visible way for industrial and applied physicists to demonstrate significant achievement worthy of recognition. A list of patents should be considered separately from physics journal publications
Continuing record of publication	Publications are a visible way for industrial and applied physicists to demonstrate significant achievement worthy of recognition. A list of physics journal publications should be considered separately from patents
Related accomplishments, record of professional physics contributions	Stature of the nominee in the physics community based on leadership, management, and involvement in APS & FIAP, professional appointments, awards and recognition.
Letters of sponsor, co-sponsor, and 2 supporters	Based on qualifications of the sponsors and the strength of the letters