Forum on International Physics

The American Physical Society website: http://www.aps.org/units/fip

Spring 2014 Newsletter

Ernie Malamud, Editor

IN THIS ISSUE

Disclaimer—The articles and opinion pieces found in this issue of the APS Forum on International Physics Newsletter are not peer refereed and represent solely the views of the authors and not necessarily the views of the APS.

View from the Chair

Esen Ercan Alp

It is a distinct honor and pleasure to welcome you to the spring 2014 Newsletter, as this year's Chair of the Forum on International Physics. As always, our Editor, Ernie Malamud, has prepared a great issue with articles from several contributors and diverse points of view. I would like to thank him for his relentless pursuit and dedication.

FIP is your platform to bring issues that are related to you as members of the APS that has an international dimension. We are eager to hear from you, receive your suggestions. Or even better, please volunteer to serve on any capacity you feel you can contribute.

Photo credit: Argonne National Laboratory

International Developments

In line with one of the key elements of the APS Strategic Plan, as presented to the Unit Convocation in February 2013 by Kate Kirby, the APS's Executive Director, FIP feels a renewed mission to increase the participation of our international members in the governance of the American Physical Society. This includes more participation at the Division and Forum levels, membership at the chair-line, as well as more invited speakers at the Society's March and April meetings.

FIP takes these objectives seriously. In the March and April 2014 meetings, FIP is organizing and co-sponsoring several exciting sessions that are closely related to our international members. (*More details on page 6 of this newsletter.*)

For the March 2014 meeting in Denver, Colorado, we have the following three sessions

- **Visa and Immigration Policies for 21st Century Science.** (see article by Flatten & Teich page 8)
- **Condensed Matter Physics in China**,
- **Twentieth-Century Chinese Physicists and Physics**

Plan to attend these as well as our annual FIP Reception (page 7 of this newsletter)

For the April 2014 meeting in Savannah, GA, we have lined up exciting speakers for these sessions:

- **Sakharov Prize Session**
- **Large Scale International Facilities I**
- **Large Scale International Facilities II**

Support for Collaborative International Work

The **International Travel Grant Award Program** is sponsored by FIP and we oversee the proposal evaluations. I thank **Ed Berger**, the incoming vice-chair who will handle the proposals this year. The intent of ITGAP is to **promote international scientific collaborations between APS members and physicists in developing countries.** The award is up to US $2,000 for travel and lodging expenses for international travel, which can be used in 5 years after it is granted. We encourage our members to consider applying with their international partners. For more information, please use the following link: http://www.aps.org/programs/international/programs/travel-grants.cfm . With support from many APS units and the leadership and support of the leadership of the Office of International Affairs, the ITGAP program increased the number of awards from 3 to 5, thanks to additional financial contributions from FIP and APS. Since it was initiated in 2004, more than 60 awards have been made. We are glad that this program continues strong and with excellent outcomes.

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As you may know, APS is also in the midst of an expansion in the number of *International Councilors*. The current two (of the planned four) are **Annick Suzor-Weiner** (University Paris Sud) and **Marcia Barbosa** (Universidade Federal do Rio Grande do Sul, UFRGS, in Brazil). We have extended invitations for them to join our FIP meetings whenever possible and offered our help in communicating with the FIP membership. We are very excited by these developments, as they strengthen the international mission of the APS. I urge you to heed the yearly call for nominations of new officers, including the election of a new International Councilor. It is important that we nominate excellent candidates to join those already elected and enhance the voice of international concerns within the APS Council.

Thank You and Welcome!

The start of the year brings new faces to the FIP Executive Committee. We welcome to the Chair-Elect, **Ed Berger** from Argonne National Laboratory, and new Vice chair, **Maria Spiropulu** of Caltech. She will be in line to succeed Ed Berger as Chair in 2016. We are also glad to welcome two new Members-at-Large, **Maria Longobardi** of University of Geneva, and and **Susan Seestrom** of Los Alamos National Laboratory; they will serve until December 2016. Our new FIP Councilor is **Young-Kee Kim** of the University of Chicago. We look forward to their contributions in the next two years.

FIP is fortunate to have continued services of **Noemi Mirkin**, University of Michigan, who serves as Secretary/Treasurer. She is the person we turn to for institutional memory. We are thankful for her years of excellent service carrying out the tasks performed in this position as well as overseeing the Forum's finances.

Acknowledgements are due to the departing members of the Executive Committee for their efforts with FIP: Past Chair **William Barletta** who is Director of the US-PAS as well as on the faculties of MIT, UCLA, and Ljubljana, and Members-at-Large **Carl Akerlof** of the University of Michigan and **Eugene Chudnovsky** of CUNY-Lehman College, and our FIP Councilor, **Herman Winick** of SLAC

This Year

I look forward to a year of new efforts at FIP. I believe it is important that we listen to your ideas and concerns. A great opportunity to meet is at the upcoming FIP reception, which will take place during the 2014 March meeting. Apart from meeting many FIP members, and to meet and congratulate some of the newly elected APS Fellows nominated by FIP, the reception gives us the opportunity to gather with colleagues from several overseas physics groups who share many of our interests. See the announcement in this newsletter. We look forward to seeing you there!

For those not attending the March meeting, I invite you to drop an email to me (alp@anl.gov) or any of the Executive Committee members. We want to hear your ideas for initiatives, newsletter articles, or anything else on your mind. We look forward to hearing from you!

Esen Ercan Alp is a Senior Scientist at the Advanced Photon Source of Argonne National Laboratory. His interests, apart from international affairs are x-ray spectroscopy, x-ray optics, and synchrotron radiation. He also serves as the Chair of the International Scientific Advisory Committee of Turkish Accelerator Center project, as well as a member of the Technical Advisory Committee of SESAME, the synchrotron light project for the Middle East.

Remarks by the APS Director of International Affairs

Amy Flatten

The partnership between the APS International Office and the many volunteers from the Forum on International Physics (FIP) has strengthened the Society's efforts to serve the international physics community. Consequently, I often use this first issue of the FIP newsletter each year to reflect on some of our past accomplishments. It reminds us of how much we can achieve together, and hopefully, invigorates us to push forward new initiatives for the upcoming year.

This past year, the Society partnered with the physical societies across North America for the biennial Canadian-American-Mexican Physics Graduate Student Conference (CAM) jointly sponsored by the American Physical Society (APS), the Canadian Association of Physicists (CAP), and the Sociedad Mexicana de Física (SMF). CAM2013 was held in Waterloo, Canada and promoted international networking, career development, and encouraged collaborations among North America's physics graduate students. FIP Executive Committee members contributed to the meeting as invited speakers and student mentors.

For the first time in its history, APS held its Executive Board Retreat outside of the United States. The retreat was held at Chicheley Hall, home of the Kavli Royal Society International Centre, just outside of London, United Kingdom and enabled the leaders of the European Physical Society (EPS), the UK Institute of Physics (IOP), and the German Physical Society (DPG) to discuss new strategies for expanding APS collaboration with European partners. Likewise, the APS also partnered with EPS, IOP, and DPG in the SESAME Travel Award Program that supports training opportunities for scientists in the Middle East. The SESAME project--the synchrotron light source in Amman, Jordan, will bring together scientists for research collaboration from countries with strained political relations. SESAME is an outstanding example of science for diplomacy and I believe FIP members would enjoy reading more about it at: http://www.sesame.org.jo/sesame/

This past year, the APS continued its partnerships with the Indo-US Science and Technology Forum (IUSSTF) and the Sociedade Brasileira de Física (SBF) to offer the Brazil & India Physics Student, Post-doc & Professor Exchange Programs. These Physics Student Exchange Programs offered graduate students opportunities to attend a short-course or summer institute in another country, or work overseas with a professor in his/her field of study. The Professorship/Lectureship Exchange Programs funded physicists wishing to teach a short course or deliver a lecture series in the other country. These programs were highlighted in the last FIP Newsletter and I wish to remind readers that we issue a call for proposals twice each year (fall and spring). I encourage FIP members to apply themselves, and also to encourage their students and post-docs to apply as well. More information is available at: http://www.aps.org/programs/international/programs/brazil.cfm and also http://www.aps.org/programs/international/us-india-travel.cfm

In partnership with the UK Institute of Physics (IOP) and the Abdu Salam International Centre for Theoretical Physics (ICTP), the Society continued to co-sponsor workshops designed for physicists and engineers from developing countries who are interested in learning entrepreneurial skills. This past year, two such workshops were held in Durban, South Africa and Chiapas, Mexico.

The Society also partnered with other organizations toward the AAAS Science and Human Rights Coalition--a network of professional societies providing strengthened connections between the human rights and scientific communities. Through this Coalition, the APS stressed the need for scientific organizations to advocate for the human rights of scientists in the US and around the world. More information on this important network can be found at: http://www.aaas.org/program/science-human-rights-coalition

The Society continues to bring international physicists to speak at APS meetings through both the Marshak and Beller Lectureships, which support distinguished physicists from the developed and developing countries respectively. In 2013, the Marshak Lectureship was awarded to a FIP nominee, Lilia Meza Montes of the Universidad de Puebla, Mexico. Montes delivered her talk, "Women in Physics: Increasing in number,

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and what else?" at a 2013 March Meeting session organized by the Forum on International Physics titled "Recent Advances in Condensed Matter in Latin America." More on this honor can be found at: http://www.aps.org/programs/international/programs/marshak.cfm

The Society also continued its ongoing commitment to developing country physicists through its International Travel Grant Award Program (ITGAP), which supports developing scientists' travel to visit collaborators in developed countries. The Forum on International Physics launched this program with its initial seed money in 2004. Today, nearly 10 years after its initial awards, the program has grown to include support from nearly every scientific Division of the APS. Please learn more about this program at: http://www.aps.org/programs/international/programs/travel-grants.cfm

The examples above are just a few of the activities of the past year. You can learn more about how we can help APS members with visa issues and our other initiatives at http://www.aps.org/programs/international. We have exciting plans underway for this upcoming year and I look forward to working with FIP to bring them to fruition.

In the meantime, I will conclude with a sincere thanks to FIP for its ongoing partnership with the APS International Office. This February 2014, I will have reached my 10-year anniversary as Director of International Affairs, and since my earliest days in this role, it has been my privilege to collaborate with FIP toward developing a portfolio of ongoing, sustainable, international programs that serve APS members and our physics colleagues around the world.

Dr. Amy Flatten is Director of International Affairs at the American Physical Society.

From the Editor

Ernie Malamud

I thank the authors for their contributions as well as our Newsletter Committee and members of our Executive Committee for their excellent suggestions.

Nevertheless, this issue is a bit "sparse." Several "promissory notes" failed to materialize. In the 6 issues I edited during my first 3-year term as Newsletter Editor, there was an average of 6.8 full articles/issue in addition to the roughly 10 other announcements and other pieces. So, I strongly encourage FIP members to suggest topics and authors for future issues. The **deadline for receipt of materials for the Fall 2014 issue is August 15, 2014.** If you can, please send text in MSword format and graphical material as JPGs. I also prefer if you are covering more than one topic in an article to divide the material into several shorter articles.

Ernie Malamud spent three decades at Fermilab participating in high energy physics experiments and accelerator design and construction. He is a Fermilab Scientist Emeritus and is on the adjunct faculty at the University of Nevada, Reno. He is the Editor of the DPB brochure "Accelerators and Beams, Tools of Discovery and Innovation." Free copies of the recently completed 4th edition are available by writing to malamud@foothill.net.

FIP sponsored or co-sponsored sessions at the APS Spring Meetings

March Meeting 2014
March 3 – 7, Colorado Convention Center, Denver, Colorado

Session B36 Monday, March 3, 11:15 AM, room 703
Visa and Immigration Policies for 21st Century Science
Chaired by Amy Flatten, Director of International Affairs, American Physical Society

Albert H. Teich, George Washington University, "George Washington University Visa Project - Streamlining Our Visa and Immigration Systems for Scientists and Engineers"
Kathie Bailey, National Academy of Sciences, "National Academy of Sciences: Helping Scientists Navigate & Troubleshoot Visa Issues"
Mathew Gillen Visa Offce, Bureau of Consular Affairs, US Department of State "Improvements to the Visa Application System: Serving the S&T Community, Promoting The American Economy and Keeping Us Safe"
Panel Discussion and Audience Q&A

Session G36 Tuesday, March 4, 11:15 AM room 703
Condensed Matter Physics in China
Chaired by Esen Alp, Argonna National Laboratory, Chair of Forum on International Physics

Yupeng Wang, Institute of Physics, Chinese Academy of Science, "History, Present and Future of IoP and Solving the unsolvable integrable models"
Enge Wang. President, Peking University, "Surface Studies of Ice"
Changqing Jin, Institute of Physics, Chinese Academy of Science, "Pressure tuned novel states of new quantum materials"
Hong Ding, Institute of Physics, Chinese Academy of Science, "Introduction of BASIC (Beijing Advanced Sciences and Innovation Centre)"
Lu Yu, Institute of Physics, Chinese Academy of Science, "Half-Century of Chinese Condensed Matter Physics--from humble beginnings"

Session W38 Thursday, March 6, 2:30 PM room 709/711
20th Century Chinese Physicists and Physics
Jointly sponsored by FIP and the Forum on the History of Physics (FHP)
Chaired by Danian Hu, City College of New York, CUNY

Yuelin Zhu, Gutman Library, Harvard University, "Chien-Shiung Wu: An Icon of Physicist and Woman Scientist in China"
Xiaodong Yin, Capital Normal University, Beijing, China, "2014 Beller Award: Chinese Physicists Educated in the Great Britain during the First Half of the 20th Century"
Tian Yu Cao, Boston University, "Mao and physics research in China in the 1950s-1960s: the H-bomb project and the Straton model"
Bing Liu, Tsinghua University, "Some problems in the competition of high-temperature superconductivity research during the late 1980s"
Liu Jinyan, The Institute for the History of Natural Sciences, Chinese Academy of Sciences, "A Brief History of the Institute of Theoretical Physics in the Chinese Academy of Sciences since 1978"

April Meeting 2014
April 5 — 8, Savannah International Convention Center, Savannah, Georgia

Session E13 Saturday, April 5, 3:30 PM room 101
Sakharov Prize Session
Chaired by Esen Alp, Argonne National Laboratory,
Chair, APS Forum on International Physics

Boris Alshuler, P.N. Lebedev Physical Institute, Russian Academy of Sciences "Sakharov Prize Talk: Creativity of Physicists in the Struggle for Human Rights"
Omid Kokabee, Evin Prison, Tehran, *CITATION* "For his courage in refusing to use his physics knowledge to work on projects that he deemed harmful to humanity, in the face of extreme physical psychological pressure." (Kokabee has been imprisoned since 2011)
Herb Berk, University of Texas at Austin, "Free Omid Kokabee: Science Interrupted"

Session J10 Sunday, April 6, 10:45 AM room 204
Large Scale International Facilities I: Photon sources
Chaired by Esen Alp, Argonne National Laboratory,
Chair, APS Forum on International Physics

Uwe Bergman, SLAC National Accelerator Laboratory, "Linear Coherent Light Source: The Upgrade Path"
Serguei Molodtsov, EuropeanXFEL, GMBH, "EuroXFEL: An x-ray Free Electron Laser"
Mikael Eriksson, Max IV Laboratory, Lund University, "MAX IV: Design and Construction of a New Generation Storage Ring"

Session K10 Sunday, April 6, 1:30 PM room 204
Large Scale International Facilities II: Particle Accelerators
Chaired by Christine Darve, European Spallation Source

Jim Yeck, European Spallation Source,"European Spallation Source and Neutron Science"
Tetsuya Ishikawa, RIKEN SPring-8 Center, "SPring-8 and SACLA Plans for the Future"

FIP RECEPTION
TUESDAY, MARCH 4, 2014
6:00 - 8:00 PM
Governor's Square 12 – Sheraton Denver Downtown

Co-Sponsors:
APS Office of International Affairs
Overseas Chinese Physics Association (OCPA)
Association of Korean Physicists in America (AKPA)
American Chapter of the Indian Physics Association (ACIPA)
Iranian-American Physicists Group Network (IrAP)

Please join us as we honor the 2013 FIP APS Fellows!
Co-sponsors will also be giving out awards.

The FIP reception is a wonderful opportunity to interact with speakers, officers of the American Physical Society, members of the co-sponsoring organizations, and your fellow APS members.

Important March Meeting Session. Visa and Immigration Policies for 21st Century Science *Amy Flatten and Al Teich*

We want to highlight this very important session to the members of FIP, and ask that they not only attend, but also help us advertise the session, as it will provide an unprecedented opportunity to hear first-hand from policy-makers of changes and/or improvements in visa processing for STEM fields. The speakers include a representative from the State Department's Visa Office of the Bureau of Consular Affairs, as well as the National Academy of Sciences and George Washington University.

These representatives will discuss the federal policies that govern visits to the United States by international scientists, the changes that have been implemented in recent years, and what can be done to make these policies consistent with the changing needs of U.S. science while preserving American security. Included in the discussions will be a series of innovative proposals stemming from a current study of the visa issue, some practical guidance from the National Academy's International Visitors Office, and a presentation of visa policy changes that the federal government has implemented and plans to implement in the future.

FIP members recognize that physics, to an even greater degree than most other fields of science, is increasingly a global endeavor. Unfortunately, for colleagues from many countries wishing to come to the U.S. to study, attend meetings, or collaborate on research, immigration and visa policies often create hurdles that complicate lives and research plans and ultimately damage the reputation and the progress of U.S. science. How to address these problems will be the focus of this session.

Moderator: Amy Flatten, APS Director of International Affairs

George Washington University Visa Project – Streamlining Our Visa and Immigration Systems for Scientists and Engineers, Albert H. Teich, Research Professor of Science, Technology and International Affairs, George Washington Univ.

Abstract: Many scientists believe that current U.S. visa and immigration systems are out of sync with today's increasingly globalized science and technology. This talk will highlight specific proposals that would facilitate the recruitment of promising STEM students by U.S. universities and better enable international scientists and engineers to visit the United States for scientific conferences and research collaboration. Most of these proposals could be implemented without additional resources and without compromising U.S. security. The talk is based on the results of an 18 month study conducted at the George Washington University's Center for International Science & Technology Policy.

National Academy of Sciences: Helping Scientists Navigate & Troubleshoot Visa Issues, Kathie Bailey, Director, Board on International Scientific Organizations, National Academy of Sciences

Abstract: The International Visitors Office (IVO) is a program operated by the Board on International Scientific Organizations of the National Academy of Sciences. The IVO serves as a resource on visa-related issues for scientists and students traveling to the United States for professional activities. The speaker will address visa issues for international scientists wishing to visit the United States, tips for trouble-shooting visa issues, and statistics on the current visa system.

Improvements to the Visa Application System: Serving the S&T Community, Promoting The American Economy and Keeping Us Safe, Mathew Gillen, Visa Office, Bureau of Consular Affairs, U.S. Department of State

Abstract: The speaker will address policy changes and improvements in visa processing that help scientists and students to visit and study in the United States. The speaker will also discuss challenges involved with balancing the needs of U.S. science with national security interests.

A panel discussion and Q&A with the audience will follow the speakers' presentations.

Four Newly Elected Members of the FIP Executive Committee

Compiled by E. Malamud using excerpts from the candidate bios and statements

From L to R: Maria Spiropulu, Maria Longobardi, Susan Seestrom, Young-Kee Kim

Maria Spiropulu began her 4-year term in FIP's Chair Line on January 1, 2014. Spiropulu is a Professor of Physics at Caltech, an experimental physicist who has been researching elementary particles and their interactions in the past 20 years at Fermilab's Tevatron and CERN's Large Hadron Collider (LHC). Her current research interests include searches for dark matter in colliders and in particle/astro-particle observations. In 2009 she was named a Fellow of the AAAS "for her leadership in experimental high-energy physics, in particular for her pioneering efforts in the experimental search for supersymmetry and extra dimensions." Spiropulu writes: "science is one of the few truly international activities; it knows no geographical limitations since the pursuit of knowledge of nature is a trait of all nations and peoples. Scientific exchanges and communication play a sizable part -- larger than the small number of scientists involved -- in determining the intellectual climate of opinion in one country in regard to another. Implications of international scientific interaction and cooperation can be found in the past 70 years, in the data on the funding, manpower and publication yields of all physics disciplines across the world and the influences in thinking as a result of international activities and exchanges both in theory and in experiment. The accelerated pace of physics research and technological progress, due to the massive computing and information highways that render the world an omniconnected network of knowledge, implies that the communication of physicists internationally is the prerequisite for achieving the ambitious scientific and technology goals across all disciplines. […] As an FIP officer I commit to continue fostering international exchanges in physics as a mechanism to build more knowledge- and innovation-based societies globally."

The two new Members-at-Large on the 13-person FIP Executive Committee are Maria Longobardi and Susan J. Seestrom. Their 3-year terms began on January 1 of this year.

Maria Longobardi was born in Naples, Italy and did her graduate work at the University of Salerno. Longobardi works in experimental condensed matter physics and is currently working at the University of Geneva in the Department of Condensed Matter Physics on the electronic properties of 1D systems at the atomic scale. Longobardi states "cooperation is a key word for science; international and interdiscipinary research teams. [...] Cooperation is also a key point for all scientific communities. I'm strongly convinced that APS plays a crucial role in interexchange between people. The APS is one of the largest communities of physicists and, due to the high international profile, offers an unique opportunity of scientific and cultural interexchange. [...] As a member of the FIP Committee I will encourage the interdisciplinarity and interexchange between international members, by promoting and sustaining opportunities of meeting, debate and mobility between researchers of different disciplines and countries, with particular attention to young researchers."

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Susan Seestrom has been Associate Laboratory Director for Experimental Physical Sciences at Los Alamos National Laboratory since 2006, and was Associate Laboratory Director for Weapons Physics from 2004 through 2006. Seestrom's research in nuclear physics ranges from studies of nuclear structure with medium energy probes to studies of the weak interaction using neutrons and most recently she led efforts to develop a source of ultra-cold neutrons at Los Alamos. She is an APS Fellow and has served in various capacities on APS committees. In addition to her professional work, Seestrom is a passionate supporter of math and science education. Seestrom states "I am interested in the Forum on International Physics for two main reasons. The first is the obvious one that physics is increasingly an international enterprise, and as costs of large facilities increases success will rely on international partnership. It is important to build a foundation of understanding and partnership for future international partnerships to succeed. […] My second reason is because I believe education in general, and science education in particular, can play a role in improving lives of people around the globe. I would like to see the physics community play a larger role in this area, and better connections to physicists world-wide could be a starting point.

FIP's new Councilor is Young-Kee Kim. Kim works in experimental particle physics and is the Louis Block professor of Physics at the University of Chicago. She served as Fermilab Deputy Director from July 2006 to June 2013, and co-Spokesperson of Tevatron's CDF experiment from 2004 to 2006. She was born and raised in Korea. Kim states "although accelerator physics is an active research field and accelerators are critical for particle physics and other areas in science, we are not educating enough accelerator students." Kim devotes some of her time on educating the next generation of accelerator physicists, and has served on numerous national and international advisory committees and organized numerous international workshops and conferences. "I deeply care for the international and diverse scientific connection, cooperation and collaboration. I believe that the Forum on International Physics has been and will be playing a very important role in this regard. I learned a very important lesson during my graduate program: a strong sense of community and the power of collaboration. This was crucial for someone like me who was not well prepared for research, and who, then, did not understand English very well. The power and importance of collaboration has been demonstrated on many occasions. I continued to testify to the importance of the community and collaboration. […] My experiences made me appreciate the importance of diversity and inclusiveness and issues and difficulties associated with women and minorities and with those from developing countries. This led to my engagement and activities in diversity. Physics has become dominated by international collaborations. I feel it is in the interest of American scientists to foster such collaborations."

Entrepreneurship workshop held in Mexico

From Judy Franz

A five-day workshop on entrepreneurship for scientists and engineers was held in Mexico in early December, attended by 35 people from six countries in the local region.

Participants in the workshops were given a range of information relevant to producing a business plan, including on intellectual property, steps needed to commercialize a product, and metrics to evaluate the process. Working in groups, business plans were presented to a panel of judges on day five.

Specials presentations were also made by guest speakers from academia and government.

Eight of the participants indicated an intention to be involved in entrepreneurial activity within the next two years.

This came to me from IOP, but APS was involved in it and Amy Flatten was there. It is a follow up activity from the IUPAP South Africa conference in 2005. Several such workshops have been held in different parts of the world.

Dr. Judy Franz, a condensed matter physicist, was our APS Executive Officer from 1994—2009.

FIP Members Recognized as APS Fellows

It is a pleasure to recognize and congratulate nine of our members who have recently been elected to APS Fellowship upon nomination by the FIP for their significant contributions to physics and the advancement of physics throughout the world.

Shangjr F. Gwo, National Tsing Hua University, Taiwan, Republic of China

Citation: For his important contributions in developing innovative approaches for growth and fundamental studies of semiconductor surfaces, interfaces, and nanostructures, for his experimental breakthroughs in developing plasmonic metamaterials and plasmonic nanolasers, and for his promotion of international collaborations in physics.

V. Krishnamurthy, George Mason University, Virginia, US

Citation: For pioneering contributions to the physics of intraseasonal, interannual and decadal variability of South Asian monsoon and South American climate, the predictability of atmosphere as a nonlinear dynamical system, and the development of atmospheric physics in developing countries.

Bao-An Li, Texas A&M University, Commerce, Texas, US

Citation: For his important contributions to our understanding of asymmetric nuclear matter, for his untiring efforts in promoting isospin physics worldwide, and for enhancing scientific contacts and collaborations with physicists in China.

Baowen Li, National University of Singapore

Citation: For distinguished contributions to the field of "phononics", particularly for conceiving phononic devices like thermal diodes, thermal transistors, logical thermal gates and memories and phonon transport in low dimensional systems.

Martensson Nils, Uppsala University, Sweden

Citation: For pioneering work in the field of photoelectron spectroscopy, who has contributed to many fundamental concepts to understand electronic processes of a wide variety of materials as well as to several revolutionary technical developments, thereby profoundly influencing this field with sustained contributions for more than four decades.

Chandra Shekhar Mishra, Fermilab

Citation: For exceptional achievement in the creation and stewardship of international collaborations in accelerator and particle physics, especially in the Indian-American Agreement for Cooperation in the Area of Accelerator and Particle Detector Research and Development for Discovery Science.

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Jian-Wei Pan, University of Science & Technology, Beijing, China

Citation: For his pioneering works on experiments of optical quantum communication, quantum computation, and multi-photon entanglement, and for his important role in international physics.

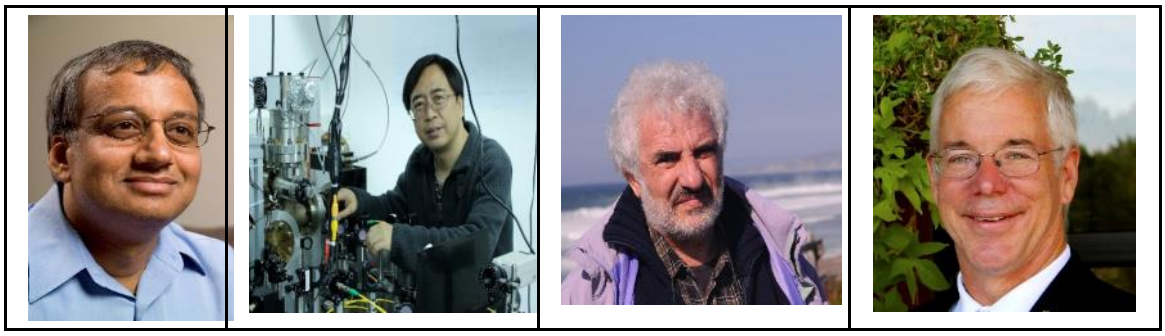
Fulvio Parmigiani, University of Trieste

Citation: For pioneering contributions in ultra-fast non-linear photoemission in metals and broad-band time resolved optical spectroscopy of cuprates and high temperature superconductors, and for establishing a strong, international scientific user program at the world's first seeded free electron laser facility.

Eric J. Prebys, Fermilab

Citation: For his important contributions to the physics of beams and his exceptional efforts to shape the US - CERN collaboration enabling successful physics programs at the LHC and charting a course for US involvement in future LHC upgrades.

From Left to Right: Shangir Gwo, V. Krishnamurthy, Bao-An Li, Baowen Li, Nils Martensson



From Left to Right: Chandra Shekhar Mishra, Jian-Wei Pan, Fulvio Parmigiani, Eric Prebys

Italian fellowships for young engineers in the US

Emanuela Barzi

ISSNAF and Consiglio Nazionale degli Ingegneri (CNI, the National Order of Engineers) will be sponsoring up to 100 internships in the US for young Italian Engineers. Between July and December 2014, interns will work for two months in some of the most prestigious Universities and research centers in the United States and Canada (MIT, INRS-Université du Quebec, Princeton, USC, UCLA, University of Utah, UIC, Northwestern and others).

The call for applications will be distributed by CNI amongst all Italian engineers in the spring. The sponsors are hoping to place at least 10 of these interns in groups at the Fermi National Accelerator Laboratory (Fermilab), in the framework of the Italian Visitor Program run by CAIF, the Cultural Association of Italians at Fermilab.

ISSNAF - Italian Scientists and Scholars in North America Foundation - is the largest network of Italian researchers and scholars in the United States and Canada, with almost 4000 affiliates in 350 academic and research institutions. ISSNAF is a 501(c)(3) organization whose mission is to promote scientific, academic and technological cooperation amongst Italian researchers and scholars who are active in North America and in the world of research in Italy. Amongst its founding members are four Nobel laureates and Fermilab's distinguished visiting scientist Giorgio Bellettini. Every year, ISSNAF sponsors tens of internships and postdoc fellowships and presents the "ISSNAF Awards for Young Investigators," the winners of which are honored with the Medal of Representation of the Italian President of the Republic. ISSNAF engages in activities of advocacy and networking for Italian researchers and scholars both in North America and Italy. For more information visit www.issnaf.org

CAIF – Cultural Association of Italians at Fermilab - is a non-profit 501(c)(3) organization hosted at Fermilab, whose purpose is to enhance the Italian culture and talent in the US. Over the years, a number of art exhibits and chamber music and opera events have been organized at the laboratory. CAIF helps Italian students and young professionals to get advanced training in the US, and runs a summer program, established in 1985, for Physics and Engineering students under the sponsorship of DOE, INFN, the Italian US Embassy, the Sant`Anna SSSA School of Pisa, and ISSNAF. Most interns are trained at Fermilab, but trainees may be sent also to other US scientific Institutes and Laboratories. In recent years, students have been trained at the NASA's Goddard Space Flight Center in Greenbelt, Maryland, the Space telescope Science Institute in Baltimore, the Harvard-Smithsonian Center for Astrophysics, the Langone Medical Center in New York. Scholarships have been granted to students from the universities of Bologna, Milan, Naples, Padua, Pisa, Rome, Turin, Trieste, and from the Polytechnic of Turin and Milan. For more information visit http://www-org.fnal.gov/caif/Home.html

Emanuela Barzi is the founder of the Fermilab's Superconducting R&D laboratory, a world leading center in superconductor technology for particle accelerators, and the Leader of the research group born around such effort.

Important articles on global perspectives in physics

From Luisa Cifarelli

An important article on the 12th Asia Pacific Physics Conference (APPC12) appeared in the International News section of the November 2013 issue of APS News. This article "Asia-Europe Physics Summit Provides a Global Perspective" co-authored by William Barletta and Luisa Cifarelli, covered this conference, held under the auspices of the Association of Asia Pacific Physical Societies (AAPPS) in Japan. It was also the occasion for ASEPS3, the third Asia-Europe Physics Summit, a collaboration between AAPPS and the European Physical Society (EPS). An update on what has happened since ASEPS3, "Global perspectives on major science facilities," also co-authored by Barletta and Cifarelli, appears in the current January/February 2014 issue of the CERN Courier on p. 19. The next ASEPS meeting will likely be in Europe in 2015 (to be confirmed).

INDIA CONNECTION

Sultana N. Nahar

In September 2013 a delegation from Ohio State University (OSU) went to Aligarh Muslim University (AMU) located in Aligarh, a city of over 1,000,000 population in Uttar Pradesh state about 130 km southeast of New Delhi. AMU, one of India's leading universities, has 30,000 students and a large, beautiful campus. The main purpose of our visit was to initiate the STEM (Science, Technology, Engineering, Mathematics) project "Training the Next Generation of STEM Faculty at Higher Education Institutions in India," one of the initial awards under the Obama-Singh 21st Century Knowledge Initiative described in our last newsletter.

Although India is known for producing many intellectuals, the large population of the country makes the fraction low. The country has about 300,000 faculty members for existing and upcoming institutions of higher education for about 150 million students. The education system lacks infrastructure for higher education.

A treaty was signed in 2009 by the US president Barack Obama and Indian Prime Minister Man Mohan Singh to select eight Obama-Singh 21st Century Knowledge Initiative awards for five years under the US India Education Foundation. Four awards will be for projects led by US universities and four led by Indian universities. The aims are to strengthen collaboration and build partnerships between American and Indian institutions of higher education in priority fields with the objectives of cultivating educational reform, fostering economic growth, generating shared knowledge to address global challenges, and developing junior faculty at Indian institutions of higher learning.

I have had connections with AMU since introducing the STEM program in physics in 2011 (http://www.aps.org/units/fip/newsletters/201202/nahar.cfm). I worked with Anil K. Pradhan (Principal Investigator) and OSU to write the proposal and after its award became the project Associate Director and Chief Liaison Officer. The visit to India by the OSU team to initiate the project was covered in a number of Indian newspapers and was welcomed by all AMU STEM departments. Sessions and discussions cleared up issues in the new program due to differences in the educational systems between our two countries.

The program introduces a dual-degree program for senior Ph.D. students in STEM. The curriculum for the MEd-STEM in Education and Research (ER) degree was approved by the Council of Academic Affairs at OSU in December. The curriculum has equal emphasis on world-class faculty training and state-of-the art research at OSU. The novel component is that an advanced Ph.D. student will spend two years in learning teaching skills at OSU, carry out teaching field work at AMU and at the same time will be involved, along with his/her AMU advisor, in research projects at OSU that matches the student's own Ph.D. research project. In addition to their AMU Ph.D. they will finish with a MEd-STEM degree from OSU. The research collaboration begun under the program can continue as long as desired. Any Indian Ph.D. student can enroll in the program through the OSU-AMU Center of Excellence. Both OSU and AMU are optimistic for the success of the project.

Because of its unique nature and addressing directly current educational needs, the new STEM ER program is already creating interest in other universities. I have been invited to visit the University of Kashmir at Srinagar to present physics seminars and discuss possible participation in the MEd-STEM ER program through grants from Indian government agencies. OSU alumni in India are also coming forward by helping to form a network to advertise the importance of the project. The startup of the program was greatly appreciated by the AMU Duty Society which jointly with the Indian Society of Industrial and Applied Mathematics (ISIAM) held an evening reception for Anil Pradhan and myself. In public speeches STEM ER issues were discussed and the possible formation of a STEM research center in Delhi was proposed. The reception held in the Delhi Habitat Center was attended by delegates from several educational institutions and agencies, including Jamia Millia Islamia University, Sharda University, Guru Nanak Dev University, Vidya College of Engineering and Technology, Gautam Budha University and the Indian University Grant Commission (UGC). Both Pradhan and I received recognition plaques. Formulation of the plan for the research center is in progress and will continue during our 2014 visit in India.

During this visit to India we also made progress on organizing the conference **ALIGARH NANO-IV International 2014** (http://www.amu.ac.in/pdf/conf/9996.pdf) to be held in the Aligarh Nanotechnology Center of Excellence during March 8-10, 2014. Professor Alim Naqvi, the founder of the Aligarh Nanotechnology Center, and the scientific organizing committee are very interested in having speakers from the US to present the latest scientific advances.

The Aligarh Center is carrying out productive research in solar cells, graphene materials, and plasma ablation. It has invented its own products:, in cosmetics - Nano Anti-Blemish Solution; Nano Skin Cleansing Solution; Nano Skin repair and anti-aging wrinkle cream; in cleaning - Nano surface cleaner and Nano-Glass cleaner; in medical use - Nano Antimicrobial cream and Nano-Burn cream. They also

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have innovated technology in synthetic diesel production and in water purification. Along with several Indian agencies OSU is a sponsor of the conference through the Obama-Singh award; I am one of the conveners of the conference, particularly for non-Indian speakers.

The Department of Physics scheduled a recognition ceremony for teaching, research, and student excellence during my visit to Aligarh. Two faculty members, Professors Sajjad Athar and Nasra Neelofar, received prizes for best teaching, one faculty member, Professor Sabbir Ahmad, as the best research advisor, Rafi Alam (male) and Huma Haider (female) best Ph.D. students, and Wadut Shaikh (male) and Aiman Fatima (female) best undergraduate students at the ceremony. Two best master's degree students also received awards instituted by the AMU alumni association. The large conference room was filled with an enthusiastic audience of students, researchers, and faculty members and past faculty members who wanted to share the occasion. The prizes are under a STEM program in Physics that I founded in AMU in 2011. Teachers are recognized for teaching and research guidance and students nominate them based on their learning experiences. Recognition brings a better atmosphere for interaction between the teachers and students.

The Physics Department was also scheduled to inaugurate its new computerized 14-inch (35 cm) telescope during our visit. It replaces an old 8-inch (20 cm) manual telescope given by Queen Victoria. The new telescope with a CCD camera should be able to detect objects with wavelength range from ultra-violet 300 nm to infra-red 1000 nm. Space fascinates minds and astronomy is a very popular subject. I gave an astrophysics seminar on neon abundance in astronomical objects to a full conference room on the last day of our visit.

During the India visit, I also took the opportunity to speak to women in science and invited them to join the International Society of Muslim Women in Science (ISMWS). My visit to Abdullah Women's college of AMU was arranged by the principal where science students attended my presentation "Women Stars in Science" in its large auditorium. The students were particularly interested and curious about the scope of higher education and they gave me a long applause. As I was walking out of the auditorium they gathered around with happy faces and some even asked for an autograph.

I also met a physics student who has been an ISMWS member for a few years. She remained close by for all the events in the 3 days I was at Aligarh and later sent me an email expressing how she became newly motivated by my visit. This was one best rewards I received in my 2013 India visit.

Figure 1. Session on initiation of the OSU-AMU Center of Excellence for STEM Education and Research. L to R: Nick Booker (Indogenius, associated with the project); Ratnish Bhattacharya (OSU-India Gateway Office); ProVC (Deputy Vice Chancellor) Brigadire Ahmed (AMU); VC (Vice Chancellor) General Shah (AMU); Professor A.K. Pradhan (OSU); Dr. Sultana Nahar (OSU); Professor Wasi Haider (AMU).

Figure 2. Sultana Nahar receives the prestigious Bab-e-Syed AMU memento symbolizing the gate to the knowledge learning place with the line of knowledge being spread worldwide like rain.

Figure 3. Sultana Nahar receives a recognition plaque from the Indian University Grant Commission (UGC) delegate.

Figure 4. Physics faculty and student prize winners with the Vice Chancellor, the Deputy Vice Chancellor, the Dean of the Faculty of Science, the Physics Chair, the Convener, and Sultana Nahar.

Figure 5. Ribbon cutting inauguration for the new 14-inch (35 cm) telescope.

Figure 6. With students after the presentation "Women Stars in Science."

Figure 7. Presentation "Women Stars in Science."

Dr. Sultana N. Nahar, a Bangladeshi American physicist is a research scientist in the Department of Astronomy at Ohio State University and an elected member of the FIP Executive Committee. She has published extensively on radiative and collisional atomic processes in astrophysical and laboratory plasmas, and also worked on dielectronic satellite lines, theoretical spectroscopy, and computational nanospectroscopy for biomedical applications. Sultana Nahar is the winner of the APS 2013 John Wheatley Award. Email: nahar@astronomy.ohio-state.edu

International collaboration in training the next generation of accelerator scientists and engineers

William Barletta

Particle accelerators are engines of discovery in fundamental physics, biology, and chemistry. They have broad diagnostic and therapeutic use in commerce, medicine and national security that form a global, multi-billion dollar per year industry. Given the scarcity of formal, university-based educational opportunities, there is a growing need to provide a continuing, well organized source of knowledge on accelerators to early career physicists and engineers, as well as to scientists looking for career shifts, to educate and train them in in advanced areas of particle accelerator science and technology. A global perspective on accelerator education can be found in [1].

Schools on accelerator physics have existed in the U.S. (US Particle Accelerator School) and Europe (CERN Accelerator School) since 1981. The sessions of the Joint International Accelerator School (JAS) complements those schools by providing in-depth courses and seminars in specialized areas. Furthermore, Joint International School enhances the collaboration among the CERN, KEK, Japan and Russia Accelerator Schools by working together on an advanced topical course, alternating between the U.S., Western Europe, Japan and Russia. These joint schools foster collaborations among the accelerator communities of the four regions in scholarly work, both writing and teaching. During the school program, participants are encouraged to discuss their technical challenges with internationally well-known experts and scientists. The school environment provides a positive atmosphere for learning.

The 2014 Joint School, *Frontiers of Accelerator Technology: Beam Loss and Accelerator Protection,* to be held in Newport Beach, California is being organized by the U.S. Particle Accelerator School (with central office located at Fermilab), the CERN Accelerator School (headquartered at CERN), the KEK Accelerator School (located at the KEK National Laboratory) and the Russia Accelerator School (in Novosibirsk, Russia). It will be held November 6 – 13, 2014 in Newport Beach CA.

This year's session is intended for a broad range of individuals with professional interests in accelerator physics and technology, ranging from physicists and engineers involved in accelerator construction projects to graduate students, post-docs and experimentalists working in accelerator-based sciences using high power particle beams. The lectures will be structured into the following general categories in order of presentation:

1. Beam dynamics and beam losses (circulating accelerator, linear accelerator)
2. Introduction to risk management of complex systems (e.g. particle accelerators) – include case studies
3. Beam material interaction, heating, activation
4. Indirect damage (not due to direct beam losses)
5. Beam induced damage mechanisms and their calculation
6. Detection of equipment failures before beam loss
7. Beam instrumentation for machine protection
8. Beam Cleaning and collimation
9. Machine Protection
10. Hardware systems with large stored energy
11. Practical design principles for protection and safety systems
12. Controls and machine protection
13. Operation in presence of dangerous beams

Each day will conclude with an evening discussion session that focuses on case studies of accelerators that deliver high power beams. Approximately 100 participants are expected, including 80 students and 20 lecturers.

The first joint school was held at Santa Margherita di Pula, Sardinia (January-February 1985) with the subject of *Nonlinear Dynamics*; the second in South Padre Island, Texas (October 1986) on *New Accelerator Methods and Techniques*; the third at Anacapri, Italy (October 1988) on *Accelerator Instrumentation and Diagnostics*; the fourth on Hilton Head Island, South Carolina (November 1990) on the subject of *Beam Intensity Limitations*; and the fifth in Benalmadena,

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Spain (October-November 1992) on *Factories with e+e- Rings*. The sixth was on the island of Maui, Hawaii (November 1994) on the subject *Frontiers of Accelerator Technology*, the seventh was in Hayama and Tsukuba Japan (September 1996) on *Radio-Frequency Engineering for Particle Accelerators*, the eighth in Montreux and Geneva, Switzerland (May 1998) on *Beam Measurements* and the ninth international school was held in St. Petersburg and Moscow, Russia (July 2000) on *High Quality Beams*, the tenth international school was held in Long Beach, CA (2002) on Frontiers of Linac Technology. The 11th session, Synchrotron Radiation and Free Electron Lasers, was held at the Majorana Centre, Erice, Sicily in 2011.

Consistent with the protocols of the Joint International Schools, each region supports the costs of lecturers and a limited number of student scholarships from the respective regions. Management of the JAS is divided equally among the three partners. As a goal, instructors are provided from each region and students would be half from the non-host regions, and half from the host region. Each region provides for the local support of limited number of scholarship students. Further details on the JAS 2014 program, including applications for participation and requests for financial aid can be found on the USPAS website, http://uspas.fnal.gov and the CAS website, http://cas.web.cern.ch .

Reference. [1] "Educating and Training Accelerator Scientists and Technologists for Tomorrow," W.A. Barletta, S. Chattopadhyay, A. Seryi, Reviews of Accelerator Science and Technology, Vol. 5 (2012) 313–331

William Barletta, a past chair of the FIP, is Director of the US Particle Accelerator School and a member of the faculty of the Departments of Physics at MIT , UCLA and Ljubljana.

The Malta Conferences
Frontiers of Science: Research and Education in the Middle East

Morton Hoffman and Zafra Lerman

Political instability and social incivility, coupled with water scarcity, threats of nuclear proliferation, and a need for energy that is outstripping the sources has made the Middle East a very dangerous region of the world. Nations are in declared and undeclared states of war with each other and themselves, and expressions of hatred and, at best, animosity are proclaimed daily. Yet, within these nations, there are people who do the work of science and science education at universities and national institutes, and hunger to know their colleagues from across the forbidden borders and to learn about the results of their research.

In order to facilitate contacts and collaborations among these scientists and educators, biennial "Malta Conferences" (so-named because of the location of the first two meetings in 2003 and 2005 on that Mediterranean island) have been held over the past 10 years for the purpose of using science diplomacy as a bridge toward peace in the Middle East. Recent conferences were held in Istanbul in 2007, in Amman, Jordan, in 2009, in Paris in 2011 at UNESCO headquarters as part of the celebration of the International Year of Chemistry, and on Malta at the Hilton Hotel on November 10-15, 2013 (Malta-VI).

These conferences, which are organized by the Malta Conferences Foundation (MCF), a 501(c)(3) charitable organization, feature plenary lectures by Nobel Laureates, workshops on topics of importance to scientists and educators from the region, oral and poster presentations by participants from the Middle East, and ample time for everyone to make personal and professional connections. At Malta-VI, a total of 80 invited participants, including students and early-career scientists, attended from 15 Middle Eastern countries (Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Palestinian Authority, Qatar, Saudi Arabia, Syria, Turkey, and the United Arab Emirates); 15 invitees were unable to come to Malta, a member of the European Union, because of visa problems.

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The plenary lectures were given by the following Nobel Laureates: Yuan T. Lee (Taiwan; Chemistry, 1986), *Return to Nature, Back to Sunshine*; Ada Yonath (Israel; Chemistry, 2009), *Mid-East Regional Collaborations for Investigating Cellular Molecular Machines*; Dan Shechtman (Israel; Chemistry, 2011), *Quasi-Periodic Materials – A Paradigm Shift in Crystallography*; Claude Cohen-Tannoudji (France; Physics, 1997), *Atoms and Light*; Roald Hoffmann (U.S.; Chemistry, 1981), *Protochemistries Are the Bridge*. Presentations were also made by Yvonne Pope (Chemical Abstracts Services, U.K.), *SciFinder – The Choice for Chemistry Research*; Monique Beaudoin (U.S. Office of Naval Research Global, London), *ONRG's International Research Grants and Research Support Grants*; and Mustafa Al-Ammar (Earth Ambassador for the Protection of the Planet and Preservation of Peace), *Sustainable Peace and Youth Leadership*, who also performed a number of Iraqi songs and ballads.

Greetings were offered at the opening ceremony by Zafra Lerman (President, MCF), George Abela (President, The Republic of Malta), Gina Abercrombie-Winstanley (U.S. Ambassador to Malta), Rob Luke (British High Commissioner to Malta), Henry Frendo (President, Malta National Commission for UNESCO), who read a message from Irina Bokova, the Director General of UNESCO, and Marinda Wu (President, American Chemical Society). The opening address on "Science for Peace" by HRH Princess Sumaya Bint El Hassan (President, Royal Scientific Society of Jordan), who was unable to attend because of illness, was read by a member of the Jordanian delegation. Evening receptions were held during the week at the residences of Ambassador Abercrombie-Winstanley and High Commissioner Luke.

The following workshops, which were chaired by the listed organizers, were held:

- *Chemistry and Bio-Medicinal Chemistry*: Cathy Costello (U.S.), Masoud Mehrgardi (Iran), Mohammed El-Khateeb (Jordan)
- *Analytical, Nanotechnology, and Material Science*: Khalid Al-Saad (Qatar), Essam Al-Jumaily (Iraq), Ossama Assad (Israel)
- *Energy, Environment, Air and Water Quality*: Chuck Kolb (U.S.), Yehuda Shevah (Israel), Tareq Abu Hamed (Israel), Alfred Abed Rabbo (Palestinian Authority)
- *Chemistry Safety and Security*: Leiv Sydnes (Norway), Nadia Kandile (Egypt), Saeed Al-Alawi (Bahrain)
- *Science Education at All Levels*: Howard Alper (Canada), Rachel Mamlok-Naaman (Israel), Boshra Mossaad Awad (Egypt)

A total of 44 oral presentations were made during the workshop sessions; 25 posters were on display throughout the entire meeting. At the end of the conference, the workshop organizers provided summaries of the talks in their sessions, many of which were quite provocative and stimulating, and the vigorous discussions that ensued. Proposals were presented for future actions, including the continuation of existing collaborations and the development of new ones, the dissemination of the information from the workshops to a broader audience, and the search for funding to provide research and international exchange opportunities for students and faculty. In the closing session, the participants, many of whom had attended previous Malta Conferences, enthusiastically endorsed the motion that Malta-VII be held in 2015.

The members of the MCF Board of Directors who attended Malta-VI were Zafra Lerman (President, U.S.), Morton Hoffman (Treasurer, U.S.), Iona Black (Secretary, U.S.), Catherine Costello (U.S.), Charles Kolb (U.S.), Stanley Langer (U.K.), Leiv Sydnes (Norway), and Howard Alper (Canada).

The following organizations were co-sponsors of Malta -VI:

- *Organization for the Prohibition of Chemical Weapons (OPCW)*: Recipient of the 2013 Nobel Prize for Peace
- *Google Inc.*
- *United Nations Educational, Scientific and Cultural Organization (UNESCO)*
- *Committee of Concerned Scientists (CCS)*
- *American Chemical Society (ACS)*
- *American Physical Society (APS)*
- *American Association for the Advancement of Science (AAAS)*

More information about the MCF and the Malta Conferences can be found at http://maltaconferencesfoundation.org/

The distinguished guests: L to R: Marinda Wu (President, American Chemical Society), Rob Luke (British High Commissioner to Malta), Zafra Lerman (President, Malta Conferences Foundation), George Abela (President, The Republic of Malta), Gina Abercrombie-Winstanley (U.S. Ambassador to Malta), Henry Frendo (President, Malta National Commission for UNESCO).

Physics Nobelist Claude Cohen-Tannoudji (France), giving his plenary lecture on "Atoms and Light."

Israeli Chemistry Nobel Laureates in conversation: Ada Yonath (Weizmann Institute of Science), at left, and Dan Shechtman (Technion).

Zafra Lerman is President and Morton Hoffman is Treasurer of the Malta Conferences Foundation.

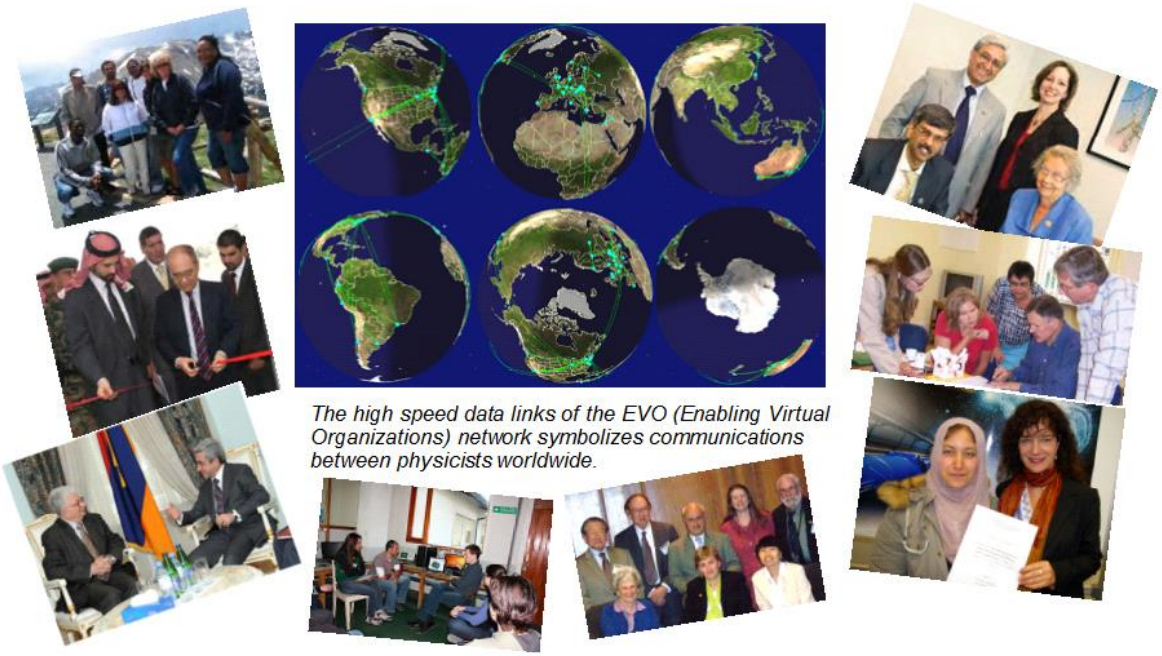
Forum on International Physics

The Forum on International Physics is an association of APS members interested in encouraging cooperative activities between physicists of all countries. FIP supports the development of physics worldwide.

The FIP organizes invited and contributed paper sessions at APS meetings, nominates FIP members to be recognized as APS Fellows, and for the annual John Wheatley Award, communicates with its members via the FIP web site and a periodic Newsletter, and works to affect policies and procedures at the APS deemed favorable to the large number of APS members working abroad.

For more information visit the FIP web site at **http://units.aps.org/units/fip/**

APS members who wish to support the work of the Forum are invited to become members of the FIP. To join go to:
http://www.aps.org/membership/units/join-unit.cfm



The high speed data links of the EVO (Enabling Virtual Organizations) network symbolizes communications between physicists worldwide.

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