

Enthusiasm, good will and a  
structure to make them more  
valuable

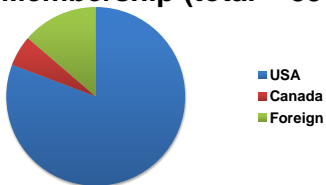
*Yakov Pipman, D Sc*

DISCLOSURE

**Common Interests**

- *AAPM - Board of Directors member, Education Council, International Educational Activities African Affairs, Latin American Affairs*
- *IOMP - Professional Relations Committee*
- *"MPWB" - Co-founder and VP*

**AAPM Membership (total = 8349)**



## Enthusiasm and Good Will

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## What is needed in Medical Physics to address Global Cancer ?

- By 2035: Will need an additional 22,000 Medical Physicists for LMICs alone to provide equal access to radiation therapy globally (Lancet Oncology Commission report)
- By 2025: We should train 6,000 MPs for LMIC's. (The Lancet report - Calls for Actions)
  - This is more than 600/year !
- Compare with:
  - IOMP membership - about 20,000
    - Many in High Income Countries (about 10,000 in the US and Canada alone)



Atun *et al*, Lancet Oncol 16: 1153-1186; Sept 2015

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## Great Challenges

- Many LMICs have little in the way of training programs or experienced medical physicists
- Great need for outside support
- Great need for equipment to train on/ train with.
- Training time is by and large not 'compressible'

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**What is being done ?**

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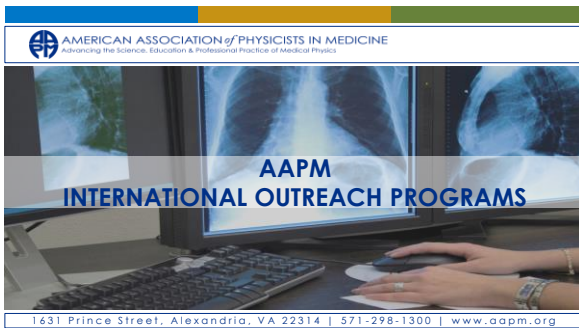
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### **AAPM INTERNATIONAL EFFORTS**

**Consolidated into two major committees**

- **International Educational Activities Committee**
- **International Affairs Committee**

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### INTERNATIONAL EDUCATIONAL ACTIVITIES COMMITTEE

- Ensure that AAPM provides medical physics educational programs and educational resources to medical physicists working outside of the USA and Canada.
- Ensure coordination between these international educational activities of the AAPM and those of related organizations.

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### IEAC (ACTIVITIES)

- Assess, periodically, the need for international educational activities and AAPM's associated activities.
- Develop and maintain policies for allocation of the AAPM's international educational resources.
- Develop and maintain policies for the conduct of AAPM's international education activities.
- Plan, develop, and direct the international educational programs and activities of the AAPM, including the International Scientific Exchange Program.

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### IEAC (ACTIVITIES)

- Endorse and Co-sponsor non-AAPM international education activities.
- Recommend to the AAPM Board sponsorship of non-AAPM international education activities.
- Provide advice to international organizations about educational needs in medical physics.
- Recommend to the AAPM Board advice intended for international agencies and foreign governments about the educational needs in medical physics.
- Develop budgets for the international educational activities of the AAPM.

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#### ▪ INTERNATIONAL AFFAIRS COMMITTEE

- The AAPM International Affairs Committee shall advise the AAPM Board of Directors through Administrative Council on matters related to activities of an international nature conducted either by individuals or committees on behalf of the Association.

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#### IAC (ACTIVITIES)

- Make recommendations to the President-Elect and/or the President for appointments of delegates and alternate delegates to international organizations such as the International Organization for Medical Physics (IOMP).
- Prepare reports on the international activities of the Association for the Board of Directors through Administrative Council.

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#### IAC (ACTIVITIES)

- Promote the application of physics to medicine and biology internationally.
- Disseminate scientific, technical, professional, and historical information concerning medical physics internationally.
- Serve as a clearinghouse for activities of an international nature of members, councils, and committees in order to provide coordination.

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 **AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE**  
Advancing the Science, Education & Professional Practice of Medical Physics

## IAC (STRUCTURE)

- Board of Directors [Status]
  - Administrative Council [Status]
    - International Affairs [Status]
      - African Affairs SC [Status]
      - Asian Oceanic Affairs SC [Status]
      - Equipment Donation Program SC [Status]
      - European Affairs SC [Status]
      - Exchange Scientist Program SC [Status]
      - International Information SC [Status]
      - International Library SC [Status]
      - International Portal Working Group [Status]
      - Latin American Affairs SC [Status]
      - Middle East Affairs SC [Status]
      - Partners in Physics SC [Status]

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 **AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE**  
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## INTERNATIONAL PORTAL

The American Association of Medical Physicists (AAPM) is an international organization and provides a variety of programs, membership opportunities, and resources for medical physicists, students, and related medical and scientific professionals anywhere in the world.

**Guide** | **Map** | **Resources** | **Journal** | **Membership** | **Int'l Educational Programs** | **IAC**

### A Guide to Resources and Opportunities

This web page is a guide to the available resources.

Information on all AAPM programs and activities is available on the web at <http://www.aapm.org>. Access is open to all but some specific programs and resources are restricted to AAPM Members. For more information, see the [Member USERNAME and PASSWORD](#).

Many of the Educational Resources are also available to medical physicists in the Developing Countries. Access requires registration as a Developing Country Educational Associate (DCEA) and obtaining a [Developing Country Educational Associate USERNAME and PASSWORD](#).

To become a DCEA submit the online registration form at [Developing Country Educational Associate Registration](#).

A list of Developing Countries recognized by the AAPM is posted at [AAPM Recognized Developing Countries](#).

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## AAPM PROGRAMS ARE OFTEN COLLABORATIVE EFFORTS

- IOMP
- COMP
- ESTRO
- EFOMP
- IAEA
- ICTP
- MPWB
- Other National and Regional Societies

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## Examples: South East Asia

- Asian Oceanic Affairs Subcommittee (AOA-SC) works with North American Chinese Medical Physicists Association (NACMPA), participate in a variety of Regional courses and meetings in China.
- Advise to Chinese Health Department on guidelines and policies. Dialogue with China Medical Devices officials on setting up QC standards.
- Advanced Radiation Therapy Workshop - Cho Ray Hospital, Ho Chi Minh City – June 2016

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## Examples: Africa

- Dakar, Senegal: ‘Radiating Hope’ Physicists helped with training for an HDR and External beam program at Institut Curie to improve treatment techniques and to assist with department-wide issues.
- Nigeria: Several hands-on training visits to support a National MP training program (2010, 2012, 2013).
- Harvard Catalyst Summit on Global Cancer- 2015 and 2016.
- AFROBIOMEDIC : Pan African Medical Physics, BioMedical Engineers and Medical Scientists Conference in Nigeria – October 2016.

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## Examples: Middle East

Liaison to Iraq -External advisor to the Iraqi Cancer Board (ICB).  
Assistance with equipment specifications for RT facilities undergoing upgrade.

Host to Iraqi radiation oncologist on SBRT.

Co-sponsored King Fahed Medical City Conference on Physics and Engineering in Medicine, Saudi Arabia, 2015.

**Conference on Topics in Therapeutic and Diagnostic Medical Physics**  
Amman, Jordan  
April 28th - May 1st, 2010

**Sponsored By:**  
The American Association of Physicists in Medicine (AAPM)  
International Scientific Exchange Program (ISEP)  
Third Arab Radiology Conference (ARC)  
Arab Medical Association Against Cancer (AMAAAC)  
Jordan Medical Physics Society (JMPS)

**Program Director:**  
Dr. Aida Mustafa, AAPM, USA

**Co-Directors:**  
Dr. Sami Al-Khatib, Secretary General, AMAAC, Jordan  
Dr. Wasim Haddad, Chair of ARC Committee, Jordan  
Dr. Mustafa Al-Khatib, President of JAPM, Jordan  
Dr. Sami Al-Khatib, President of Jordan Radiology Society, Jordan

**Associate Directors:**  
Dr. Maysoon Al-Fisher, AMAAC, Jordan  
Dr. Matthew Al-Sharif, AAPM, USA

For more details please contact Dr. Maysoon Al-Fisher at maysoon@mednet.com.jo

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## Endorsed and Co-Sponsored meetings



2014	August 24 - 30, 2014	International Workshop on Modern Clinical Radiography
2014	January 28 - 31, 2014	The Physics of Advanced Radiotherapy Techniques: The Role of Medical Images
2014	18-May-14	XII Argentinean Meeting of Medical Physics/ I Meeting of Medical Physics of the Americas/ I AATMN Meeting of Nuclear Medicine and Diagnostic Imaging
2014	6/16/2014	AAPM/IDMP - ISEP Radiotherapy course on: "QA and Dosimetry of Emerging Radiotherapy Techniques"
2014	17-Jun-14	International Workshop on Monte Carlo Techniques in Medical Physics
2014	4/ 4 - 8, 2014	ESTRO 33 Vienna, Austria
2014	January 28 - 31, 2014	The Physics of Advanced Radiotherapy Techniques: The Role of Medical Images Santiago, Chile
2013	8/ 24 - 27, 2013	VI Congress of the Latin American Medical Physics Association (ALFIM) Guanacaste, Costa Rica
2013	June 12 - 15, 2013	4th Biannual Congress of Radio-Chemotherapy and the 7th Medical Physics Meeting Córdoba, Argentina
2013	November 29 - 30, 2013	School on Medical Physics Montevideo, Uruguay
2012	3/26/2012	16th International Leskef Gamma Knife Society Meeting
2013	8/ 23-26 2013	International Workshop: New Technologies in Modern Radiotherapy: Bangkok Thailand

## Who else is doing what?

- Teaching resources
  - Regional Courses
  - Training fellowships
- Regional and National projects
  - Multiyear budgeted
  - Requested by National Authorities
  - Equipment
  - Expert missions/ scientific visits
- Dosimetry and program audits (TLD, QUATRO)
- Surveys and data
  - Equipment (DIRAC)
  - Safety (SAFRON, SAFety in Radiation Oncology)
  - Accidents
- International Standards, Guidelines and Protocols
- International and national radiation policies





- Teaching resources (\*)
  - Regional Courses, conferences and symposia
  - Online library
  - Summer schools
- Regional and National Courses
  - Single year budgeted
  - Requested by AAPM committees
  - Members participate in IAEA expert missions and courses with IAEA, IOMP, ICTP, ASTRO, ESTRO, etc.
- Collaborations with international and regional organizations
- Surveys and data,
  - Equipment
  - Safety
  - Accidents
- Protocols for procedures and techniques
- National policies and practice guidelines
- Professional standards



(\*) "The AAPM's Resources for Medical Physics Education Wherever You Are"; Y Pigman, C Bloch; MEDICAL PHYSICS INTERNATIONAL Journal, vol.3, No.1, 2015

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- Support of
  - International conferences
  - Regional conferences and courses
- Support, and creation, of national and regional MP organizations
- Representation at the international level and in scientific bodies
- Policies, definitions and recommendations
- Dissemination of information
- Guidelines
- Surveys and data
  - Equipment
  - Staffing
- Promotion of the profession – internationally




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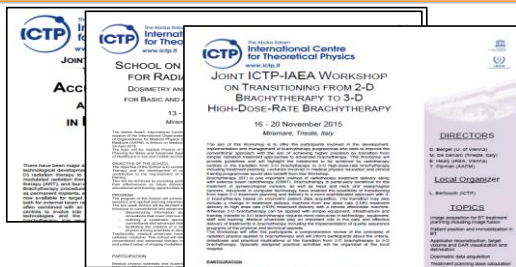
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## Collaborations with ICTP-IAEA programs




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## Are there gaps?

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## Need for more...

- Support for individual clinics / universities
- Grassroots activities
- Individualized education/training/mentoring
- Longer term support
- Prompt assistance and consultation
- Development of longer term relationships




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**MPWB**

Home About Us How We Can Help How You Can Help News Contact

**Our Vision**  
A world with access to effective and safe applications of physics and technology in medicine.

**Our Mission**  
To support activities which will yield effective and safe use of physics and technologies in medicine through advising, training, demonstrating and/or participating in medical physics-related activities, especially in low or middle income countries.

**Join Us**  
MPWB is an entirely volunteer-run organization. If you are interested in learning more about MPWB, consider participating in our training.

**How we can help**  
Learn more about how MPWB can help your organization.

**Upcoming events**  
No upcoming events.

**Blog posts**

- 16 Jan 2016 1:46 PM Global PT and MPWB Anonymous
- 11 May 2016 1:16 PM MPWB Training at ANITA AGM Anonymous
- 16 Jan 2016 1:46 PM Global PT and MPWB Anonymous

[www.MPWB.org](http://www.MPWB.org)

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## MPWB Board of Directors



**Jake Van Dyk**  
- President



**Yakov Pipman**  
- Vice-President



**Jerry White**  
- Chairman of the Board



**David Wilkins**  
- Secretary/ Treasurer



**Parminder Basran**  
- Director of Communications



**Robert Jeraj**  
- Director of Fund Raising

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## •Why a structure to volunteer ?

Coordination  
Leverage  
Sustainability  
Your thoughts...  
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