

## **THE OBJECTIVES AND VALUES OF THE IOMP JOURNAL *MEDICAL PHYSICS INTERNATIONAL* AFTER 30 ISSUES**

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The IOMP Journal *Medical Physics International* (MPI) was created in 2012 and from its beginning has an excellent auditorium of readers. MPI was intentionally made as an open access online Journal – a free e-Journal, to support the global development of medical physics, especially in Low and Middle Income (LMI) countries. This directly supports the main objective of the International Organization for Medical Physics (IOMP). For the first 10 years MPI is read by thousands of medical physicists, students, and other professionals each month.

MPI was created and developed to address some of the topics less often discussed in the other Journals. Especially relating to professional development, education methodology and resources, practical applied physics, and the preservation and of our history and heritage. Initially the Journal made agreements with the other established Medical Physics Journals, that MPI will not focus on their specific research-orientated fields, but on the above topics.

At the same time there was a need for educational papers, based on the latest research in a form suitable for classroom presentations and discussion. Thus, MPI became a dissemination tool for all our colleagues in LMI countries and their students.

This dissemination strategy moved into the area of practical implementation of new methods and equipment. Test objects, quality control specifics, optimization criteria and various other subjects from the clinical practice were published, often as invited papers from eminent specialists.

The dissemination of research was also addressed - for teaching, presenting excellent educational materials (e.g., the foundations of DSA, the small field dosimetry, the Ultrasound imaging development, etc.). The educational topics grew into publishing whole lectures in support of classroom teaching (e.g., Lectures on Human Vision, Hospital Networks, CT Dose optimization, etc). MPI published many papers presenting educational models and resources, which were applied by educators in many countries (e.g., educational models in clinical medical physics, the VERTTM concepts, educational databases, the use of the e-Encyclopedia of medical physics, IAEA and ICTP courses, etc.).

Another educational field was publishing reviews of suitable for education books – from the IOMP-CRC Book

series, and also from various other publishers. Other educational resources – both online and classical were also highlighted.

A very important part of the publications was associated with professional development in various countries. Papers from almost all IOMP National Member Organizations (NMO) were published. The MPI regular issues in the period 2018-2021 presented focused information of 65 countries from the IOMP Regional Organizations (RO): MPI 2019 (vol7) No.1 - Latin America (ALFIM); MPI 2019 (vol7), No.2 – Africa (FAMPO); MPI 2020 (vol.8), No.1 South-East Asia (SEAFOMP); MPI 2020 (vol.8) No.2 – Asia-Oceania (AFOMP); MPI 2021 (vol.9) No.1 – Middle East (MEFOMP); MPI 2021 (vol.9) No.2 – Europe (EFOMP).

All these professional publications, plus the RO Reports in the regular publications in the IOMP Newsletter *Medical Physics World*, formed an invaluable record of the global medical physics staffing and status, thus providing large Organisations as IAEA and WHO with information about the needs of the global workforce in medical physics for the harmonious support of healthcare.

From the beginning MPI published over 2000 pages with papers on the topics of: Education; Professional issues; Collaborating organisations; Technology innovations; How To; Tutorials; History; Book reviews; Abstracts of PhDs; Members' Awards, Editorials, Addresses and others.

Additionally, the professional publications were further enriched by publishing of the Abstracts and materials of all International Medical Physics Conferences after 2013, plus other materials from international conferences of the RO. These abstracts were previously scattered at various publications and websites. From 2013 these were collected in one place at the MPI Journal (as Annexes to the specific Journal and with separate Editors), thus forming an excellent record of the research and other development in the profession. Over 2000 pages with Abstracts were also published in the MPI.

The vision of the MPI Founding Co-Editors in Chief Slavik Tabakov and Perry Sprawls about the values of the Journal were presented also in each Editorial and a number of papers – both from them and from the invited eminent authors. Gradually over the time the MPI Journal was seen as a flag of the medical physics development and growth in LMI

countries, as well as a substantial part of the backbone of this process. We thank all authors who contributed to this.

The specially made MPI Journal website was developed by the MPI Technical Editor Magdalena Stoeva, who was fully supporting the Journal from its beginning to this day. Each MPI issue and each paper has its own web address on the MPI website (www.mpijournal.org), which is optimised to work on various platforms.

During the second Editorial term of MPI (2018-2022) a whole new independent sub-part of the Journal was created, dedicated to preserving the history of the profession – MPI-History Edition (MPI-HE, also known as Special Issues on History of Medical Physics). Its Founding EiC Slavik Tabakov and Perry Sprawls were joined soon by Geoffrey Ibbott in commissioning and producing history-related materials, which by now are over 1000 pages.

The success of the MPI Journal and its large auditory attracted interest from several professional publishers, offering potential future impact factor of the Journal. The leads of the MPI did not accept this, as the Journal was made not as a business activity, but as a free resource to all medical physicists, especially from LMI countries. Any business association of the MPI will make it a paid Journal and thus it will not be able to reach our colleagues from many countries. Thus, such business association will decrease its impact on the medical physics global development, despite the suggested impact metrics, which is usually associated primarily with research activities and related citations. For example, a number of MPI papers have 1000+ downloads each – a figure rarely reached by many research papers. Over 30 MPI papers (i.e., about 10%) have over 5000 downloads each. These are the real figures speaking about the impact of

this professional/education-orientated Journal. In this line of thoughts MPI does not take the copyright of the papers – it stays with the authors.

We have presented many times official server statistics about the use of the MPI Journal and its global audience of readers. We believe that it will stay the same by keeping the Journal as a free resource (see Fig.1: stats Jan-Jun 2023). The quality of the papers is supported by internal reviewing process, which although not a typical peer-review, keeps steady influx of valuable papers and other materials (abstracts have their own Conference-related assessment).

The Editors-in-Chief and all Editorial board (based on IOMP ExCom and eminent professionals from the RO) work voluntarily for the objectives of the Journal, as are all of the IOMP ExCom members' activities.

These objectives and vision of the MPI Journal made it one of the most read Journals in Medical Physics. From its first issue in 2013 (celebrating the 50<sup>th</sup> Anniversary of the IOMP) until now – the 60<sup>th</sup> IOMP Anniversary - the regular bi-annual MPI issues are 20 and the MPI-History Editions are 9, with over 5000 published pages. This current regular MPI issue (vol.11, No.1, July 2023) will be the 30<sup>th</sup> publication of the Journal. It will be produced by the new Co-Editors in Chief Francis Hasford and Sameer Tipnis, who were elected by IOMP ExCom and Publication Com in January 2023, to replace S Tabakov and P Sprawls, who's successful second Editorial term was completed at the end of 2022. The new EiC are specialists with established record as educators and supporters of medical physics professional development in LMI countries. We are confident that they shall continue steadily the way forward of the MPI Journal and wholeheartedly wish them success.

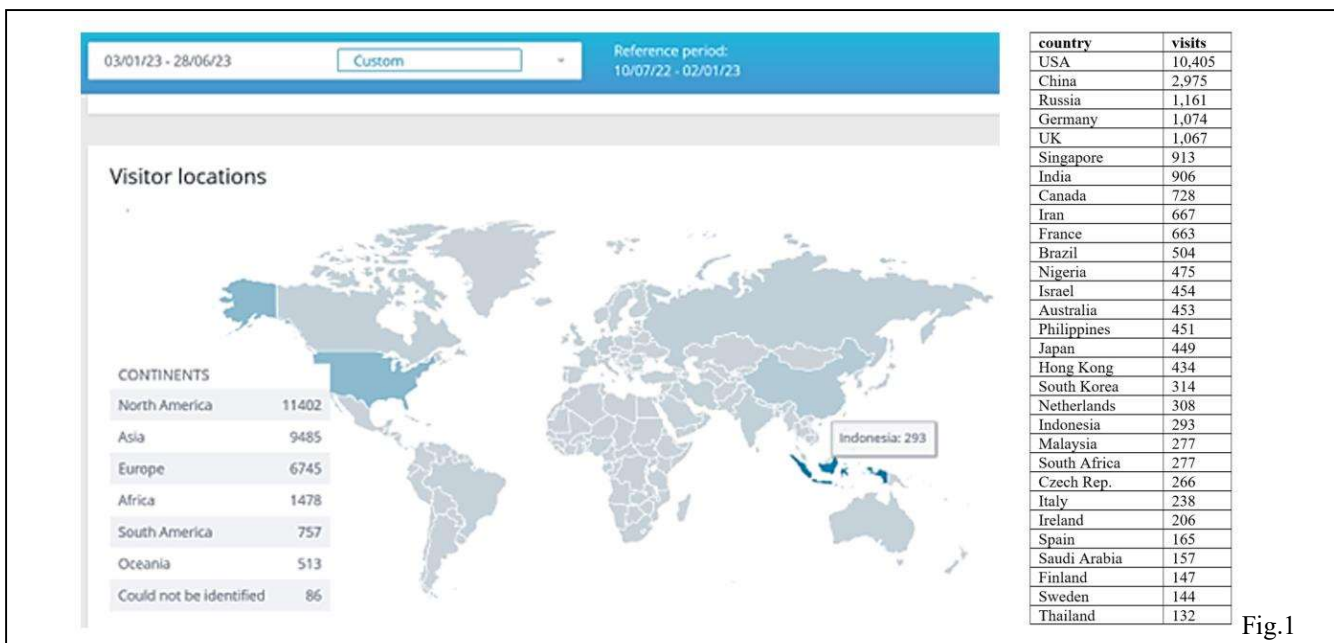


Fig.1

**ANNEX:** Here below are listed the most downloaded MPI papers and full Issues, and also the MPI-History Editions. All these are presented with their unique web addresses.

We cordially thank all authors and colleagues who contributed papers to the Journal over the past 10 years, and also to all Contributing Editors of the focusses MPI issues.

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\*X-ray Tubes Development; \*Film-Screen Radiography Receptor Development; \*History of Medical Physics e-Learning Introduction and First Steps

MPI-HE 2 - <http://www.mpijournal.org/pdf/2019-SI-02/MPI-2019-SI-02.pdf>

\*Fluoroscopic Technology from 1895 to 2019; \*The Scientific and Technological Developments in Mammography;

\*Review of the Physics of Mammography

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\*History of Dental Radiography; \*The History of Contrast Media Development in X-Ray Diagnostic Radiology;

\*Medical Physics Development in Africa

MPI-HE 4 - <http://www.mpijournal.org/pdf/2020-SI-04/MPI-2020-SI-04.pdf>

\*A Retrospective of Cobalt-60 Radiation Therapy; \*The Many Steps and Evolution in the Development of Computed Tomography; \*Medical Physics Development in South-East Asia; \*History of Medical Physics Education and Training in Central and Eastern Europe

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\* Ultrasound-the First 50 Years; \*Measurement of Acoustic Pressure and Intensity Using Hydrophones; \* Measurement of Acoustic Power and Intensity Using Radiation Force; \*Thermal Methods for Ultrasound Measurement development

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\*History of IOMP; \*IOMP History tables with the names of all IOMP contributors in its 60-year history.

MPI-HE 8 - <http://www.mpijournal.org/pdf/2022-SI-08/MPI-2022-SI-08.pdf>

\*Medical Physics teaching; \*External-Beam Radiotherapy Fractionation; \*Medical Physics teaching in medicine, etc.

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\*History of PET; \*Rectilinear Scanners; \*Establishment of IDMP; \* Several papers on women in medical physics

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