

NEWSLETTER

No. 4, December 2024



"TOGETHER WE ARE STRONGER"

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ALFIM Participates in the II Biennial Meeting of SEFM and the IV Curie Day in Córdoba, Spain

From November 7 to 9, 2024, the city of Córdoba, Spain, hosted the II Biennial Meeting of the Spanish Society of Medical Physics (SEFM) and the IV Curie Day, a prominent event in the field of medical physics. The Latin American Association of Medical Physics (ALFIM) was invited to participate in two key round tables: on Friday, November 8, in the discussion with scientific societies and collaborating institutions, and on Saturday, November 9, in the international round table titled ALFIM and Other Opportunities for International Collaboration.

ALFIM was represented by its Vice President, Erick Hernández, who emphasized the importance of strengthening the existing cooperation agreement between both associations. During his presentation, he highlighted the need to ensure the sustainability of this collaboration by actively involving members of ALFIM and SEFM to maintain a dynamic and productive relationship.

A key point discussed was the proposal to create mentorship programs between Latin America and Europe, leveraging the strengths of each country to foster knowledge and experience exchange in medical physics.

The SEFM representatives expressed their interest in continuing to work on joint projects with ALFIM. They also voiced their confidence that the upcoming changes in SEFM's board of directors in 2024 and ALFIM's executive committee would ensure the continuity of this mutual collaboration. Immediate objectives include implementing the already planned courses and developing new joint initiatives.

This participation strengthens ALFIM's commitment to fostering international cooperation and contributing to the advancement of medical physics in both continents. For more information about SEFM's activities, visit their official website:



<https://sefm.es/>. 



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ALFIM PARTICIPATED IN:

- The work “*ALFIM: Continuing Education Strategy for Medical Physicists in the Region*” was presented orally at the *XIX Workshop on Nuclear Physics WONP 2024*, October 4–11, 2024, organized by the University of Havana, Cuba; at Colegio San Gerónimo de La Habana, compiling the results of some of the continuous training actions developed by ALFIM. For more information:

[CLICK AQUI](#)

- A Poster titled *ALFIM: RESULTS OF THE STRATEGY TO PROMOTE MEDICAL PHYSICS IN THE REGION* in the XIV was presented at the Argentine Congress of Medical Physics organized by SAFIM, in Bariloche, October 2024. This work summarizes the results of the dissemination strategy by ALFIM. If you want to see it:

[CLICK AQUI](#)

- The I REPROLAM Symposium that took place in Recife from November 5 to 8, 2024, received an important set of scientific and educational contributions, among which is a work in the form of a poster titled *HOW MUCH CAN ALFIM CONTRIBUTE TO TRAINING IN RADIOLOGICAL PROTECTION IN MEDICINE?* Which summarizes some of the actions that ALFIM has organized with the support of an important group of experts to improve safety and protection in medical applications. For more information:

[CLICK AQUI](#)



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"TOGETHER WE ARE STRONGER"

ALFIM celebrates the second edition of the "Así Lo Hacemos" competition in the framework of International Day of Medical Physics.

ALFIM launches the second edition of the regional "Así Lo Hacemos" competition as part of the celebrations for the International Day of Medical Physics, commemorated worldwide on November 7 under the organization of the IOMP (International Organization for Medical Physics).

This initiative, promoted by ALFIM's Communications Committee, aims to encourage the creation of brief educational materials related to the various processes involved in Medical Physics in Latin America and the Caribbean. The main goal is to promote, disseminate, and educate about the diversity of procedures and methodologies that medical physicists use in their fields of work. These materials cover topics such as quality control of equipment and detectors, radiation protection, safety in facilities, dosimetry, and other educationally relevant procedures

With this goal in mind, ALFIM called on the region's medical physics community to share their experience through educational materials that reflect their daily work in hospitals. These videos allow more experienced professionals to pass on their knowledge to those with less experience, thus creating a valuable network of collaborative learning. All videos participating in the competition are available on ALFIM's YouTube channel (@alfim.you-tube), making them easily accessible to the public and enabling everyone to learn from the solutions and methods applied in various work environments.

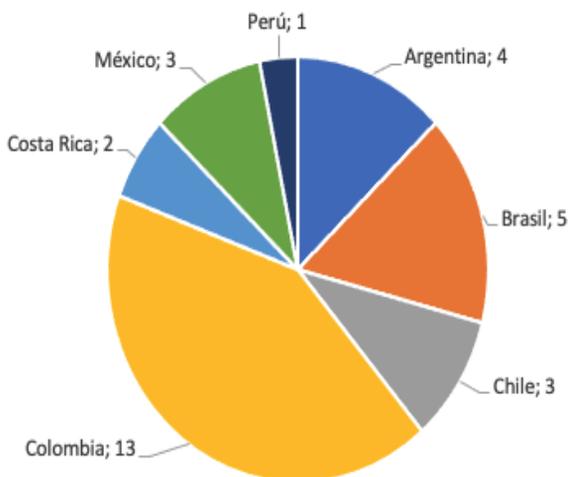


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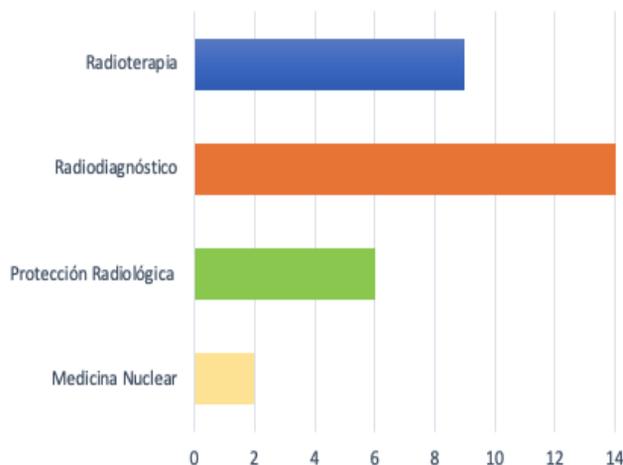
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Graphic No. 1: Works for country



Graphic No.2: Works for area

In this edition, a total of 31 submissions met the acceptance criteria to participate. Graph No. 1 shows the distribution of submissions by country of origin, while Graph No. 2 displays their distribution by thematic area. The evaluation process was thorough and complex. A total of 53 judges were invited, all recognized medical physicists from the region and active collaborators with ALFIM. Some indicated they could not serve as judges due to conflicts of interest or time constraints, but in the end, there were 12 judges for radiotherapy, 7 for nuclear medicine, 8 for radiation protection, and 17 for radiodiagnostics. Each submission was evaluated by at least six independent judges over a two-week period, using an Excel template with specific evaluation criteria and weightings, which allowed for a global score to be calculated for each submission. The results were very positive, as 77% of the submissions received scores above 8, reflecting the high quality of the material submitted to the competition.

The competition was led by the distinguished medical physicist, Dr. María Cristina Plazas, who has extensive experience in Colombia and other countries in the region. Thanks to the support of several companies, the first-place winner received a round-trip airfare, accommodation, and registration to attend the X Latin American Congress of Medical Physics, which will take place from March 9 to 12 in La Antigua, Guatemala. The second and third place winners were awarded the plane ticket and congress registration.

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The distribution of final evaluation scores was as follows: 48% of the submissions scored above 9, 29% scored between 8 and 9, 16% scored between 7 and 8, and only 7% received scores below 7. After this rigorous process, the top three winners of the competition were selected..

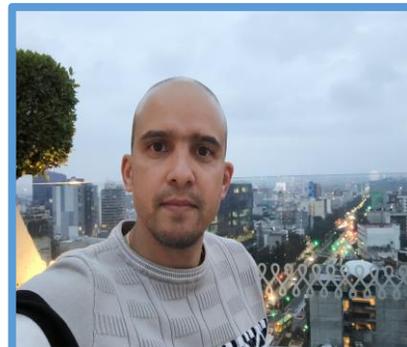
FIRST PLACE was awarded to the work titled: "Quality Assurance Program in the Manufacturing of Low-Cost Mammography and Radiography Phantoms," presented by lead author **Juan Samuel Osnaya Estrada**, in collaboration with Héctor Alejandro Galván Espinoza and Jorge Patricio Castillo López, from **MEXICO**



SECOND PLACE was awarded to the work titled: "Dosimetric Evaluation of the Ocular Brachytherapy Technique with I-125 Seeds Using a 3D-Printed Physical Simulator," presented by **Bryan Santiago López Fonseca**, in collaboration with Axel Simbaqueba Ariza and Franklin Niño Duarte, from **COLOMBIA**.



THIRD PLACE was awarded to the work: "Methodology for Verifying Automatic Exposure Control in Computed Tomography Equipment," by **Dagoberto Eloy González López**, in collaboration with Melissa Solís Lara, from **COSTA RICA**.



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ALFIM warmly congratulates the three winners, as well as the ten finalists and all participants in the "This is how we do it" competition. Selecting the winners was an extremely difficult process due to the high quality of the submissions. We invite everyone to visit our YouTube channel to watch the videos and continue learning from the projects submitted to the competition. Attached are the lists of all submitted works, with the finalists highlighted in bold.

We extend special thanks to Dr. María Cristina Plazas and M.Sc. Diego Montufar for their outstanding work in handling all the details of the competition, as well as to all the judges for their time and dedication in evaluating the submissions. Finally, we want to express our gratitude to the sponsors: SunNuclear&Capintec, which donated the 3 airfares; Fixca, which provided the accommodation; and ALFIM, which covered the congress registration.

See you at the congress next year. Warm regards to all.

Patricia Mora

Thank you to our sponsors



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The following Works are presented according to their area.

The works in **bold** belong to the group of the 10 semifinalists.

RADIOTERAPIA

Título del Proyecto	Tópico	Autor Principal	País
Calibración de Winston Lutz en el EXACTRAC	Radioterapia	Alberto Adrada	Colombia
Evaluación dosimétrica de la técnica de braquiterapia ocular con semillas de I125 usando simulador físico impreso en 3D	Radioterapia	Bryan Santiago López Fonseca	Colombia
Impresión 3D de dispositivos personalizados para tratamiento en radioterapia en el Instituto Nacional de Cancerología	Radioterapia	Franklin Niño Duarte	Colombia
Creación de un modelo predictivo de RapidPlan para tratamiento de cáncer de mama en Halcyon, a partir de planificaciones con configuración helicoidal	Radioterapia	Rixy J. Plata V.	Chile
Interpretación del índice Gamma en Radioterapia	Radioterapia	Uvaldo Reyes Serrano	México
Dosimetría absoluta para fotones en un acelerador lineal de uso radioterapéutico	Radioterapia	José Daniel Preciado Palacios	Colombia
Control mensual basado en el formalismo TRS 398 usando SunScan	Radioterapia	José Vidal Valladolid Salazar	Perú
Álbum actividades de residentes en Física Médica Radioterapia	Radioterapia	Axel Danny Simbaqueba Ariza	Colombia
Participación del Instituto Mexicano del Seguro Social de Mérida en el Servicio Postal de Auditoría de Dosis del OIEA/OMS	Radioterapia	Anayeli Espinoza Bustamante	México

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MEDICINA NUCLEAR y PROTECCION RADIOLOGICA

Título del Proyecto	Tópico	Autor Principal	País
Control de calidad de un equipo PET	Medicina Nuclear	Vanesa Sanz	Argentina
CONTROL DE CALIDAD PARA SISTEMAS SPECT	Medicina Nuclear	Patricia Rico Torres	Colombia
Open Data Kit (ODK) como herramienta para fortalecer el sistema de gestión de calidad en protección radiológica	Protección Radiológica	Mauricio Andrés Arciniegas Álvarez	Colombia
Generalidades de la dosimetría interna ocupacional	Protección Radiológica	Alexander Bonilla Araya	Costa Rica
Vigilancia Dosimétrica: Desarrollo de una herramienta para el seguimiento y control de la exposición ocupacional	Protección Radiológica	Luz Eliana Franco Olarte	Colombia
Control de la investigación de la dosis ocupacional mediante el uso de dosímetros individuales del Servicio de Física Médica y Radioprotección (SFMR) de un gran hospital público	Protección Radiológica	Georgia Adriana Andrade Alves	Brasil
Puesta en marcha de un protocolo para verificar los monitores empleados en protección radiológica	Protección Radiológica	Camilo Alvial	Chile
Centraje en TC, Inicio de la Radio protección	Protección Radiológica	José Miguel Pichun Valenzuela	Chile

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RADIODIAGNOSTICO

Título del Proyecto	Tópico	Autor Principal	País
Programa de garantía de calidad en la manufactura de maniqués de mastografía y radiografía de bajo costo.	Radiodiagnóstico	Juan Samuel Osnaya Estrada	México
Ejecución de pruebas combinadas de Control de Calidad en Mamografía según los protocolos norteamericano y europeo	Radiodiagnóstico	Laura Cristina Gil Sánchez	Colombia
Unificando metodologías para la implementación de valores típicos en radiodiagnóstico en Colombia	Radiodiagnóstico	Lady Astrid García Sánchez	Colombia
Implementación de un sistema remoto y automatizado para el control de calidad de imagen en instituciones prestadoras de servicios de mamografía	Radiodiagnóstico	Lady Astrid García Sánchez	Colombia
Metodología para comprobar el Control Automático de Exposición en equipos de Tomografía Computarizada	Radiodiagnóstico	Dagoberto Eloy González López	Costa Rica
Caracterización del tubo de rayos X a través de la curva de rendimiento para la estimación del kerma en aire a la entrada de la superficie y la determinación de valores típicos de dosis.	Radiodiagnóstico	Jairo Fernando Poveda	Colombia
Atribución de Físico Médico en Fluoroscopia y Radiología Intervencionista	Radiodiagnóstico	Renato Dimenstein	Brasil
Control de calidad de imagen en Tomografía Espectral	Radiodiagnóstico	Nathaly Barbosa	Colombia
Gestión de la dosis a pacientes con un sistema computarizado libre	Radiodiagnóstico	Janine Hastenteufel Días	Brasil
Control diario de calidad de imagen en Mamografía en PACS	Radiodiagnóstico	Raíssa Xavier Contassot	Brasil
Diseño de fantoma compresible para simular mama en mamografía	Radiodiagnóstico	Rosana Pirchio	Argentina
Prueba de aceptación de Equipos de Protección Personal con plomo	Radiodiagnóstico	Raíssa Xavier Contassot	Brasil
Aseguramiento de la calidad en estudios radiológicos	Radiodiagnóstico	Ezequiel Minniti	Argentina
Aseguramiento de Calidad en Estudios de Diagnostico Radiológico	Radiodiagnóstico	Ezequiel Minniti	Argentina

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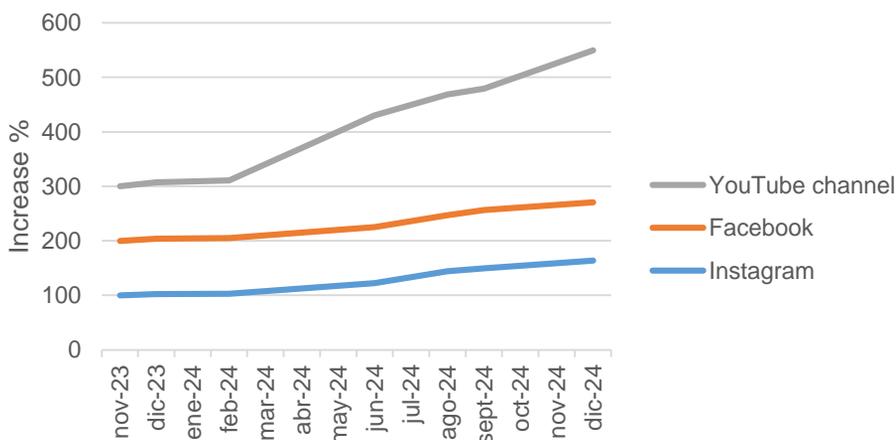


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Growth of ALFIM's Social Media

The Latin American Association of Medical Physics (ALFIM) has achieved significant growth in its digital platforms, standing out particularly on Facebook, Instagram, and YouTube. This progress reflects ALFIM's commitment to strengthening communication and the exchange of knowledge within the medical physics community in Latin America. From June 2023 to December 2024, Instagram followers increased from 568 to 1,391, representing a 145% growth. The YouTube channel has also grown consistently, reaching 543 followers and over 15,555 views.

ALFIM's networks
2023-2024



ALFIM thanks its community for their continuous support and reaffirms its commitment to generating quality content for the development of medical physics in the region.

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ALFIM's MILESTONE 2024

- ❖ Compliance with the 2022-2025 Strategic Plan
- ❖ Implementation of the plan for ALFIM Financial Sponsorship.
- ❖ Increase of ALFIM's visibility: strengthening of the YouTube channel, consolidation of the ALFIM serial newsletter already produced in English, sustained growth of social media and communication groups, consolidation of the website.
- ❖ Development of the Commemorative Day event in celebration of International Day of Medical Physics and the "This is How We Do It" competition.
- ❖ Support for national and international scientific and educational activities through the presentation of papers, expert participation, etc.
- ❖ Organization of the ALFIM 2025 Congress.
- ❖ Creation and strengthening of strategic partnerships and cooperation ties with organizations such as EFOMP, SEFM, LatinSafe, Red LAPRAM, REPROLAM, etc. Specifically, with the IAEA, several technical documents have been reviewed and endorsed. ALFIM's contribution to the IOMP has been strengthened, particularly around publications and contributions to working groups.

<https://www.alfim.info/>



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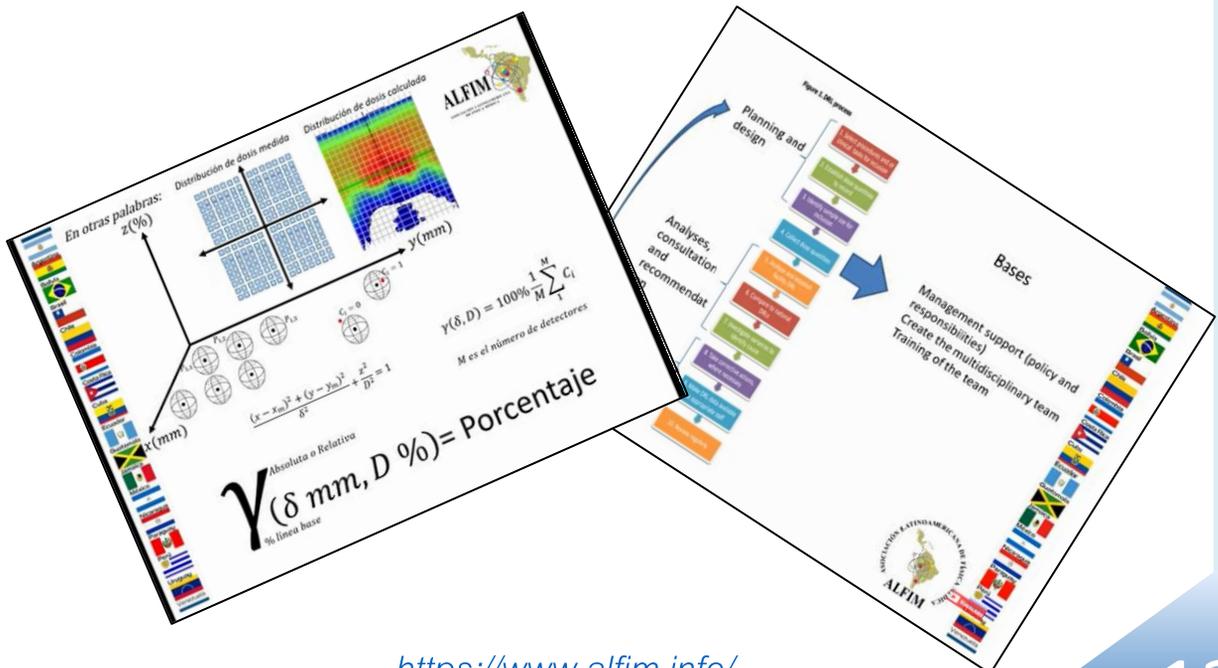
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ALFIM's MILESTONE 2024

- ❖ Support for initiatives to strengthen Radiation Protection in the region through conferences, virtual seminars, outreach, and project calls, etc.
- ❖ Granting of scholarships for different congresses and scientific-educational activities.
- ❖ Consolidation of activities from the Education and Continuing Education Committee with actions such as:
 - ✓ Periodic virtual seminars and updates on the YouTube channel.
 - ✓ Journey in celebration of the 40th anniversary of ALFIM with a series of scientific lectures titled "Insights on the use of Artificial Intelligence in diagnostic radiological medicine"
 - ✓ Development of the first international virtual course on "Diagnostic reference levels in Nuclear Medicine"



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"TOGETHER WE ARE STRONGER"

ALFIM 2025 Congress is getting closer!

To the entire community of medical physicists in Latin America and the Caribbean: we are pleased to announce that the X Latin American Congress of Medical Physics, the II Ibero-Latin American and Caribbean Congress of Medical Physics, and the IV International Symposium on Radiological Protection in Medicine are just around the corner. They will be held from March 9 to 12, 2025, in the majestic city of La Antigua Guatemala, a UNESCO World Heritage site known for its colonial beauty, stunning volcanoes, and rich history

Preparations are progressing with great enthusiasm to provide you with a congress of the highest academic quality, addressing the most current and relevant topics for medical physicists in our diverse fields of work: clinical practice, education, research, and regulation



9 -12 marzo, 2025
ANTIGUA, GUATEMALA

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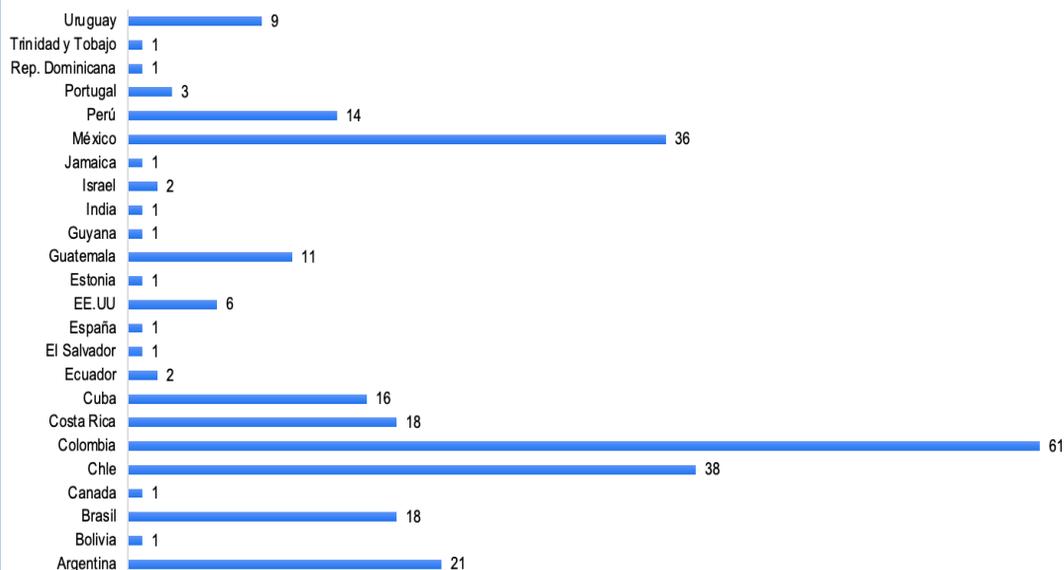
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A congress with a global reach!

We are pleased to share some key highlights:

- **265 original works** have been received in both oral and poster presentation formats.
- The submissions come from **24 countries**, including new contributions from Caribbean nations such as the Dominican Republic, Jamaica, Trinidad and Tobago, and Guyana (see Chart 1). Additionally, we have participants from as far away as India and Israel.
- For the distribution by thematic areas, see Chart No. 2.

Gráfico No.1: Cantidad de trabajos por país



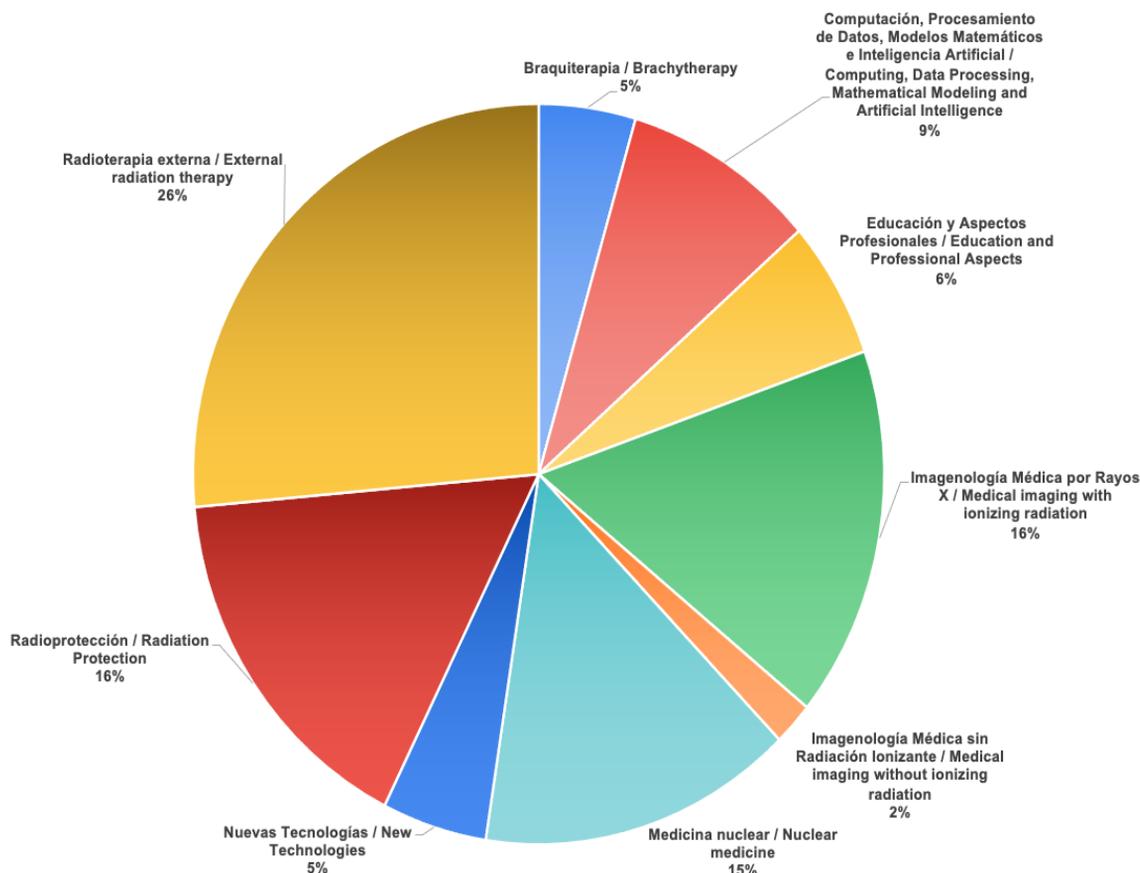
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Grafico No.2: Distribución por áreas temáticas



Extensive scientific offerings

The preliminary program of the congress promises to be one of the most comprehensive to date, featuring a diverse range of activities that include:

- 12 refresher courses to update key knowledge (see Table 1).
- 7 plenary lectures with prominent international experts (see Table 2).
- 16 keynote presentations covering the most innovative topics (see Table 3).
- 6 roundtable discussions to debate the challenges and opportunities in the field (see Table 4).

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Tabla No1: CURSOS DE ACTUALIZACIÓN (REFRESHER COURSES)

ID	Tema	Presentador	Institución
A1	IA en Radioterapia	Gustavo Oliveira	
A2	IA en Radiodiagnóstico	Oliver Diaz	Univ. de Barcelona
A3	IA en MN diagnóstica	Ana Maria Marques da Silva	Pontifical Catholic University of Rio Grande do Sul (PUCRS)
A4	El papel del físico médico en la Salud Pública Global	Ileana Fleitas	OPS
A5	Comisionado de algoritmos de dosimetría basados en modelos para braquiterapia	Javier Vijande	Universidad de Valencia, España
A6	IAEA Remote and Automated QC Program in Radiography and Mammography	Virginia Tsapaki	NAHU, IAEA
A7	AI-based Quantitative Imaging Biomarkers	Robert Jeraj	Univ Wisconsin-Madison, US
A8	Herramientas de simulación Monte Carlo de código abierto para físicos médicos	Jose Ramos Mendez	University of California San Francisco, US
A9	Avances en Cámaras de Ionización	Carlos Eduardo de Almeida	Universidade Estadual do Rio de Janeiro, Brasil
A10	IA en Intervencionismo	Annalisa Trianni	Reparto di Fisica Sanitaria; Udine, Italy. Position
A11	El uso de programas comerciales en Terapia Metabólica	Erick Mora	Universidad de Costa Rica
A12	Uso y desarrollo responsable de la inteligencia artificial	Francisco Berumen	UNAM, México

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Tabla No.2: CONFERENCIAS PLENARIAS (PLENARY CONFERENCES)

ID	Tema	Presentador	Institución
P1	From LEO to Moon to Mars: Radiation Protection for Astronauts	Ramona Gaza*	NASA Johnson Space Center Human Health and Performance, USA,
P3	ALFIM/SEFM: "Inteligencia Artificial confiable: un pequeño paso para la IA, un gran salto para la física médica"	Oliver Diaz	Univ. de Barcelona
P2	Radioterapia FLASH: Como las ultra-altas tasas de dosis pueden revolucionar los tratamientos	Paola Ballesteros Zebadua	
P4	ALFIM/OEIA: "Spectral CT: Technological Advances and Emerging Applications"	Virginia Tsapaki	NAHU, IAEA
	ALFIM OIEA: "New challenges in radiation protection of patients in diagnostic and therapeutic medical applications: Recurrent imaging and second primary cancer"	Ola Homberg	PRP, IAEA
P5	To treat or not to treat? That's the question. Role of Molecular Imaging	Robert Jeraj	U of Wisconsin, Madison, EE.UU
P6	ALFIM/OPS "Requisitos Internacionales para Optimizar las Exposiciones Médicas"	Pablo Jimenez	OPS/OMS, Washington DC, EE.UU
P7	Emerging Imaging Technologies	Mahesh Mahadevappa	President-Elect AAPM



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Tabla No.3: NCONFERENCIAS MAGISTRALES (KEYNOTE SPEAKERS)

ID	Tema	Presentador	Institución
M1	KOALA: Affordable radiotherapy device	Magdalena Bazalova Carter	University of Victoria, Victoria BC, Canada
M2	Nuevos protocolos de dosimetría en Mamografía	Ioannis Sechopoulos	Radboud University, The Netherlands
M3	Estrategias para la implementación exitosa de la Dosimetría Interna en la Práctica Clínica	Nathaly Barbosa Parada	Universidad Nacional de Colombia
M4	The radiation oncology workforce in 2035: How advances in hardware and software will change our jobs in the next 10 years	Laurence DeCourt, MD*	MDAnderson
M5	Acceso global a la Braquiterapia ginecológica	Lijia Aviles	Oncoservice, Bolivia
M6	Documentos recientes de la ICRU: Desde la dosis individual en exposiciones agudas hasta la microdosimetría	María-Ester Brandan	UNAM, México
M7	Cuantificación del flujo sanguíneo miocárdio con PET/CT y SPECT/CT	Mauro Namías	
M8	Submitting a Manuscript for Publication	Stanley H Benedict	University of California Davis, Sacramento, CA
M9	Simulaciones estocásticas multi escala del daño por radiación: de lo fundamental a las tecnologías emergentes en radiación.	Jose Ramos Mendez	University of California San Francisco, US
M10	Hacia medicina de precisión más equitativa: oportunidades del ultrasonido diagnóstico	Ivan M. Rosado-Mendez	Medical Physics Department, University of Wisconsin-Madison

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Cont: CONFERENCIAS MAGISTRALES (KEYNOTE SPEAKERS)

ID	Tema	Presentador	Institución
M11	Cuantificación absoluta de Imágenes SPECT	Leonel torres	Cuba
M12	Leveraging proteomics to guide radioconjugate development	David Clark	Astra Zeneca
M13	Radiocirugía (SRS-SBRT)	Cesar de la Bianca (SRS-SBRT)	Sloan Memmorial Hospital, EE.UU
M14	Administración de Garantía de Calidad y prevención de accidentes	Francisco Aguirre	MD Anderson, EE.UU
M15	TBI&TMI con VAMAT	José Terruel	
M16	Potenciando la física médica en America Latina y el Caribe: Integrando una educación pionera con herramientas innovadoras para mejora los resultados de la educación y el entrenamiento	Simone Kudllovich	IRD, Brasil



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Tabla No.4: MESAS REDONDAS (ROUND TABLES)

ID	Tema	Presentador	Institución
MR1	Los Desafíos de los Cursos de Entrenamiento Clínico	Ricardo Ruggeri	Leben Salud, Argentina
		Isabella Barreto	Univ. Florida, US
MR2	Collaborative Research Initiatives	Robert Jeraj	Medical Physics Department, University of Wisconsin-Madison
		Manuel Arreola	Univ. Florida, US
		Javier Vijande	Universidad de Valencia, España
		Magdalena Bazalova Carter	University of Victoria, Canada
MR3	Career Panel for Students: Academia, Industry, Clinic, Government	M. Mahesh	Johns Hopkins, AAPM
		Peter Sandwall	Precision Physics, Inc.
		Gabriel Gonzalez	Autoridad Reguladora, Uruguay
		Gustavo Olivera	
MR4	El papel del físico médico en legislación/regulación	Alfredo de los Reyes	CSN, España
		Eduardo Medina	FRALC, Perú
		Cari Borrás	US
MR5	Aspectos prácticos de Radioterapia Externa	Francisco Aguirre	MD, Anderson, US
		Rodolfo Alfonso	Fundación INTECNUS, Bariloche, Argentina
		Cesar de la Bianca	Memorial Sloan Kettering Center, US

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Additionally, the International Atomic Energy Agency (IAEA) has confirmed the holding of two pre-congress courses as part of the regional project RLA 6091. Thanks to a special agreement, participants in these courses will be able to extend their stays and attend the congress with a 50% discount on registration.

Don't miss this unique opportunity!

We invite all interested parties to follow updates on the official pages of [ALFIM](#) and the [ALFIM 2025 Congress](#). Secure your spot by registering early to take advantage of the best prices. If you have any questions, feel free to contact us at alfim.congreso2025@gmail.com.

This congress will be a unique opportunity to share experiences, update knowledge, and collaborate with colleagues from around the world in an unmatched setting: La Antigua Guatemala, a destination that combines history, culture, and science in an exceptional way.

See you at ALFIM 2025!

Consejo Ejecutivo ALFIM y
Comité del Programa



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"TOGETHER WE ARE STRONGER"

History and Challenge

36 years ago, in the beautiful city of **Bariloche**, the **Argentine Society of Medical Physics (SAFIM)** was born, marking the beginning of a community dedicated to the advancement of this exciting discipline. This year, on **October 3rd and 4th**, we had the honor of reliving those first moments during the **14th Argentine Congress of Medical Physics**, an event that combined history, innovation and learning.

The congress brought together **212 attendees from various parts of the world**, who participated in **two days of talks** led by international, national and student leaders, the presentation of **more than 150 scientific papers** and a full day dedicated to **practical courses** designed to strengthen the clinic skills and techniques.

Together we celebrate the legacy of our society and reaffirm our commitment to the future of medical physics.

See you at the next Argentine Congress of Medical Physics!



SAFIM.ORG



NEWSLETTER

No. 4, December 2024



"TOGETHER WE ARE STRONGER"

FROM LATINAMERICA AND THE WORLD, CELEBRATING THE INTERNATIONAL DAY OF MEDICAL PHYSICS

At the **Argentinian Society of Medical Physics (SAFIM)**, we celebrate the **International Day of Medical Physics (IDMP)** by taking our profession beyond laboratories and hospitals, connecting it with the entire community interested in science and health. From **November 4th to 8th**, we organized **Medical Physics Week**, a virtual event featuring **10 carefully selected talks** on key topics such as **radiotherapy, nuclear medicine, diagnostic imaging, radiation protection, and education.**

We had outstanding professionals covering topics ranging from technological innovations and dosimetric models to training strategies and the development of clinical tools, providing a comprehensive and up-to-date perspective on medical physics. These presentations, originally delivered during the **14th Argentinian Congress of Medical Physics**, were shared to reach colleagues and students who could not join us in person.

The result was extraordinary: **over 250 attendees from more than 20 countries** across the region participated in this space for exchange and learning. Their enthusiasm and active participation reaffirm our commitment to continue promoting the development and strengthening of our professional community.

Did you miss it? Don't worry: all the talks are available on our **YouTube channel**, which you can access by clicking the link below.

We invite you to be part of this journey of knowledge and collaboration because, at SAFIM, we believe that **sharing is growing.**

[YOUTUBE](#)



[SAFIM.ORG](#)



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No. 4, December 2024



"TOGETHER WE ARE STRONGER"

The Mexican Society of Medical Physicists (SMFM) is an association of Medical Physicists established to promote and develop Medical Physics activities in Mexico. In 2024, it joined the celebration of the International Day of Medical Physics, under the theme: "Inspiring the Next Generation of Medical Physicists." The official poster prepared by the International Organization for Medical Physics (IOMP) was shared.

The activities organized this year were as follows:

- Seminar: *The Patient-Centered Future of Medical Physics*, by Todd F. Atwood, PhD., Division Director of Transformational Clinical Physics, University of California, San Diego, San Diego, CA.
- First SMFM Radiotherapy Planning Challenge, an event in collaboration with Elekta Mexico.
- First SMFM Open Doors Day at Christus Muguerza Hospital Alta Especialidad and the Centro Regional de Radioterapia Zona Norte. Students from the physics and engineering programs at the Universidad Autónoma de Nuevo León (UANL), Universidad de Monterrey (UEM), Tecnológico de Monterrey (ITESM), and Universidad Autónoma de Ciudad Juárez (UACJ) attended the event.

The Patient-Centered Future of Medical Physics

7 DE NOVIEMBRE 17:00 h (GMT-6)

Todd F. Atwood, PhD
Associate Professor and Senior Associate
Division Director of Transformational Clinical Physics
University of California, San Diego.

Se requiere registro previo:
bit.ly/4hvx2nu

2024
SEMINARIOS SMFM

SOCIEDAD MEXICANA DE FÍSICOS EN MEDICINA

For more detailed information, please refer to the quarterly SMFM newsletter available on the SMFM website: <https://smfm.mx/>

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"TOGETHER WE ARE STRONGER"

FROM LATINAMERICA AND THE WORLD

On behalf of Engineers Australia, the Australasian College of Physical Scientists and Engineers in Medicine, The International Union for Physical and Engineering Sciences in Medicine, The International Organization for Medical Physics and The International Federation of Medical and Biological Engineering, we are excited to promote this event that promises to be a milestone in the realms of Biomedical Engineering and Medical Physics. World.



In the ever-evolving landscape of medicine and healthcare, the fusion of leading research and technological innovation is propelling us toward a future where the boundaries are beyond what any of us may have imagined just a few years ago. The 2025 IUPESM World Congress, in Adelaide, South Australia, is your gateway to the opportunities with which we are presented. The Congress theme is aligned with worldwide initiatives of equitable healthcare in a sustainable world: Bridging the Gap: Science, Technology, and Clinical Practice for a Sustainable



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"TOGETHER WE ARE STRONGER"

IUPESM World Congress on Medical Physics and Biomedical Engineering 2025

incorporating EPSM/ABEC 2025, ICMP 2025 and AOCMP 2025

29 September – 4 October | Adelaide Convention Centre

Join the brightest minds from around the world and network with scientists, engineers, researchers, innovators and corporations in this fantastic opportunity to expand your endeavours. The Congress will provide a unique opportunity to make new acquaintances in an environment where they will be sharing the very latest research, technologies and thinking that stands to collectively shape the future of healthcare delivery.

Mark your calendars and begin your preparations to join us in Adelaide 29 September – 4 October 2025.

Prof Eva Bezak, ACPSEM, Convenor, Medical Physics

Mr Adrian Richards, BME Chapter, Engineers Australia, Convenor, Biomedical Engineering

<https://wc2025.org/>



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"TOGETHER WE ARE STRONGER"

FROM LATINAMERICA AND THE WORLD

63rd Annual PTCOG Conference

PTCOG 63
BUENOS AIRES 2025

63rd ANNUAL PTCOG
CONFERENCE

2-7 JUNE 2025
BUENOS AIRES,
ARGENTINA

ptcog63.org
#PTCOG63

The 63rd Annual Conference of the Particle Therapy Cooperative Group (PTCOG 63) is being held on behalf of the PTCOG Executive Committee and the Local Organizing Committee and will take place from June 2-7, 2025 in Buenos Aires, Argentina. This is a particularly special event as it marks the first time that PTCOG is hosting the Annual Conference in South America, for more information:

[CLICK AQUI](#)



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FROM LATINAMERICA AND THE WORLD



The AAPM Spring 2025 Clinical Meeting will be held at the M Hotel in Henderson, NV. This meeting brings together medical physicists to learn, update, and discuss practical information designed to aid in the clinical integration of emerging technologies shaping tomorrow's treatments.

For more information:

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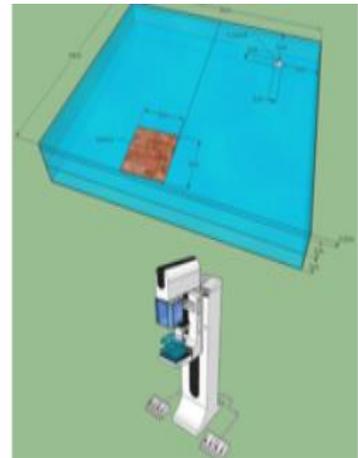
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FROM LATINAMERICA AND THE WORLD



The COI of Leben Salud, through the Medical Foundation of Río Negro and Neuquén, is inviting all institutions interested in the participation of the individual project of the IAEA CRP called "Expansive implementation of ATIA in Latin America and the Caribbean." For more information:

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MEFOMP Medical Physics Conference 2025, organized in cooperation with the International Atomic Energy Agency, will be held from 8 to 11 February 2025 in Kuwait City, for more information: :

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A practical and theoretical course in Radiotherapy Physics will be held from 4-8 March 2025. The course is designed primarily for radiotherapy physicists, but highly relevant to other oncology professionals, for more information: :

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The Technical Meeting on Radiation Protection Challenges in Modern Nuclear Medicine will be held virtually from 28 to 30 April 2025 in Vienna, Austria, for more information: :

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"TOGETHER WE ARE STRONGER"

Did you know that...?

In October, the 37th Annual Congress of the European Association of Nuclear Medicine (EANM) was held in the city of Hamburg, Germany. The congress lasted 5 days and offered a very extensive and rich program, which reflected the latest advances in the area of Nuclear Medicine. Argentina, Brazil, Chile, Colombia, Costa Rica and Mexico gave the present presenting works developed in their respective countries.

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For International Medical Physics Day...

The Ecuadorian Association of Medical Physics (AEFIM), the Guatemalan Association of Radiological Protection (AGPR) and the Ecuadorian Association of Radioprotection (AERP), with the support of Fisika Medika Radiological Diagnostics held the 1st Virtual Medical Physics Conference that featured several talks with exhibitors from all over the region.

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In Argentina, the Argentine Society of Medical Physics (SAFIM) held Medical Physics Week with a series of virtual talks where prominent professionals presented their work exhibited at the 14th Argentine Congress of Medical Physics. The content can be accessed from the SAFIM YouTube page.



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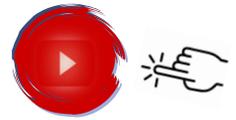


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"TOGETHER WE ARE STRONGER"

Did you know that...

The American Association of Medical Physicists (AAPM) released valuable new educational resources for the medical physics community. We invite you to explore his videos on his YouTube channel.



The **Master's Degree in Medical Physics at the National University of Colombia** received accreditation from the International Organization for Medical Physics (IOMP), being the first in the region. We congratulate our colleagues on their achievement !



International Organization for Medical Physics (IOMP)

CERTIFICATE OF ACCREDITATION

Master in Medical Physics (MSc- MP)
Universidad Nacional de Colombia, Bogotá, Colombia

The IOMP accreditation board certifies that the Master in Medical Physics (MSc-MP) at Universidad Nacional de Colombia, Bogotá, Colombia having met its requirements is granted accreditation

commencing 1st November 2024 until 31st October 2029

Arun Chougule
Professor Arun Chougule
Chair, Education and Training Committee &
Chair, Accreditation Board



John Damilakis
Professor John Damilakis
President, IOMP



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"TOGETHER WE ARE STRONGER"

Did you know that...?

MIRDsoft.org hosts free software applications designed and developed to support the medical radiation dose community, other products will be added and become available. Users will receive periodic newsletters and updates regarding the website after free registration.

Software	Description	Projected release on MIRDsoft.org
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 MIRDcalc	Organ level RP dosimetry	(online)
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 MIRDcell V4	Cellular level RP dosimetry	(online)
--	-----------------------------	----------

 MIRDy90	Y90 microsphere partition calculation tool	(online)
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 MIRDdcm	Dicom report converter	(online)
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 MIRDfit	Curve fitting	(online)
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 MIRDct	CT dosimetry	(online)
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MIRDrefs	Isotope reference worksheets	2024
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MIRDpvc	Partial volume correction	2024
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MIRDmc	Monte-Carlo RP dosimetry	2025
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additional projects to be added, stay tuned

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BOLETIN INFORMATIVO

No. 4, December 2024



“ JUNTOS SOMOS MAS FUERTES”



As we close the year 2024, it is time to reflect with pride on the achievements we have reached together in our beloved ALFIM. This has been an extraordinary year, marked by significant progress and the consolidation of our organization as a benchmark for medical physics in the region.

Thanks to the enthusiasm, commitment, and collaboration of all of you, we succeeded in implementing innovative projects, strengthening continuous education, and fostering greater knowledge exchange among our member countries.

We look forward to 2025 with enthusiasm and great expectations. Our X Latin American Congress of Medical Physics, to be held from March 9 to 12 in Antigua Guatemala, promises to be an unforgettable event. This gathering will provide a unique opportunity to learn, share experiences, strengthen networks, and reaffirm our commitment to advancing medical physics in the region. We invite everyone to be part of this historic moment, which will undoubtedly mark a new milestone for our community.

During this holiday season and as New Year's Eve approaches, we sincerely wish that each of you enjoys good health, cherished moments with your loved ones, and renewed energy for the year ahead. May 2025 find us united, inspired, and ready to continue building a promising future for medical physics in our region.

With gratitude and best wishes,
ALFIM Executive Council



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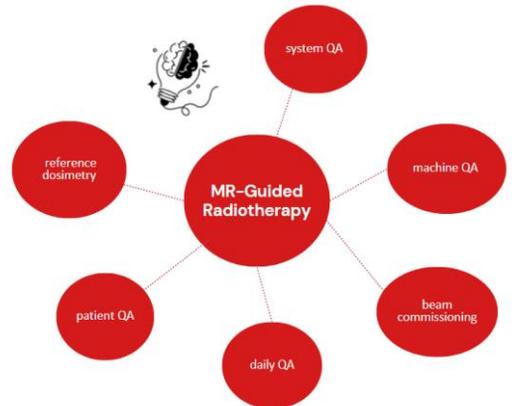
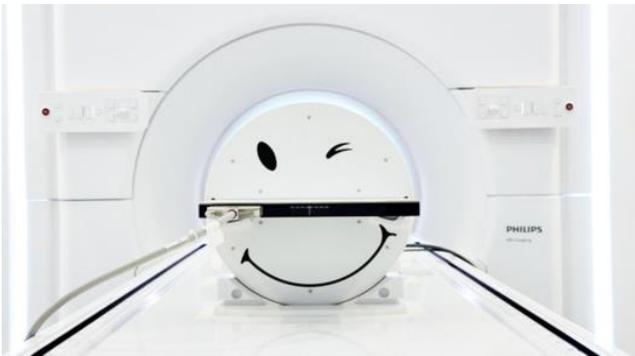
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Dosimetry solutions and quality control

OCTAVIUS 4D MR

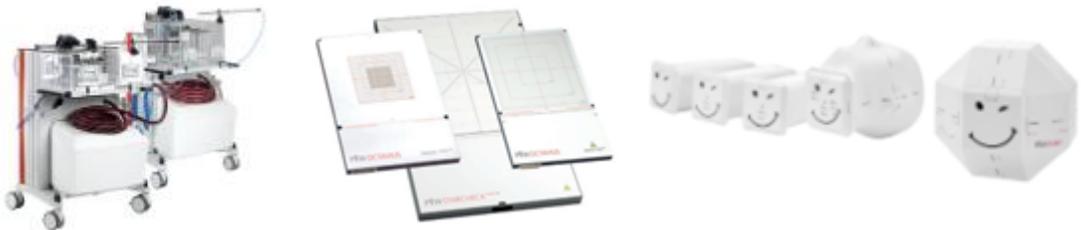


The new modular system for independent 3D patient plan verification and machine QA measurements at MR linacs.



By measuring the dose in a volume entirely independently from the treatment planning system, OCTAVIUS 4D MR is capable of detecting errors in the treatment planning system that might otherwise pass unnoticed.

Discover the complete portfolio of PTW solutions for dosimetry and quality assurance at MR linacs



Scientific publications of interest ★★★★★

MR compatible OCTAVIUS and phantom systems are suitable for plan QA in a 1.5T MR-Linac

MR-OCTAVIUS 4D with 1500 MR and 1600 MR arrays is suitable for plan QA in a 1.5 T MRI-Linac

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✓ Articles, books and documents of Interest:

Sergei V. Jargin. Exaggeration of consequences of low-dose radiation exposures with special reference to cataracts. Imaging and Radiation Research (2023) Volume 6 Issue 1

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Orlandi, E., Lillo, S., Camarda, A.M. *et al.* The clinical roadmap in a dual-beam hadrontherapy centre: tumour-based and patient-tailored selection criteria, management of range uncertainties and oncological patient pathway. *Health Technol.* **14**, 1043–1050 (2024)

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