ECMP
EUROPEAN CONGRESS OF MEDICAL PHYSICS

EFOMP
EUROPEAN FEDERATION OF ORGANISATIONS FOR MEDICAL PHYSICS

In association with the Trination Conference

DGMP

OGMP
Österreichische Gesellschaft für Medizinische Physik

SGSMP
SSRPM
SSRFM

European Congress of Medical Physics

Munich, Germany
11–14 September 2024

www.ecmp2024.org

Welcome nation – France

sfpm
SOCIÉTÉ FRANÇAISE DE PHYSIQUE MÉDICALE

PRESS INFORMATION

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Conference Announcement

Bridging the future: 5th European Congress of Medical Physics

Munich (kf). Novel radiobiological and therapeutic concepts, artificial intelligence, new medical imaging techniques - many important discoveries and developments are being made in Medical Physics. From the 11th to the 14th of September 2024, the international community of Medical Physics will gather in Munich for the 5th European Congress of Medical Physics (ECMP). For the first time, the ECMP will be organised jointly with the Trination Congress of the German (DGMP), Austrian (ÖGMP) and Swiss (SGSMP) Societies for Medical Physics.

Under the motto *Bridging the future: from research to new clinical practice*, the congress offers a unique forum for exchanging the latest findings and innovative developments in all areas of Medical Physics. "Medical Physics is a domain in constant evolution. We are witnessing the start of a new era where many important discoveries and developments are happening, which will radically change our clinical practice in the next few years." According to the Trination Congress president, Katia Parodi, Munich, and the Congress president, Yolanda Prezado, Santiago de Compostela, the ECMP is an excellent opportunity to meet the leading minds in Medical Physics from all over Europe and beyond, and to discuss the latest developments in this field. "ECMP2024 will be an excellent opportunity for us to share ideas and experiences as well as to further enhance our collaboration with our industrial partners and sister organizations."

With the support of an outstanding international scientific committee, a cutting-edge program has been developed to address a broad spectrum of timely topics. The presentations will range from more clinical-oriented subjects in imaging and therapy to new ways of treating and imaging cancer and other diseases, along with more far-sighted topics such as Quantum Computing in Medical Physics. The brand-new Science Congress Centre in the research campus of Garching, closeby Munich, will offer an inspiring venue, host to major research infrastructures aiming to set a good example of how close interdisciplinary cooperation around the field of Medical Physics can bring basic research into innovative clinical practice.

All information and the conference programme can be found at: https://ecmp2024.org/. Registration to the special tours offered to visit the highlight research infrastructures in the research campus of Garching can be found here: https://ecmp2024.org/registration-1

Media representatives are cordially invited to the congress! We look forward to your reports. We will also be happy to put you in touch with contact persons for interviews.
Contact: katrin.franz@coventus.de

This press release is authorised for publication. Please send us a copy of any reprints.

Trination Congress President

Katia Parodi, Ph.D.
Ludwig-Maximilians-Universität München
Experimental Physics – Medical Physics

Congress President

Yolanda Prezado, Ph.D.
Center for Molecular Research and Chronic Diseases, Santiago de Compostela

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Venue

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Walther-von-Dyck-Straße 10
85748 Garching (Munich)

Conference Organiser

Conventus Congressmanagement & Marketing GmbH | Jena
Nicole Hirsch & Vanessa Pallister
M ecmp2024@conventus.de

Press contact

Katrin Franz
T +49 3641 31 16-281
M katrin.franz@conventus.de

Interview

Congress presidents unveil what can be expected from ECMP2024

Munich (kf). From the 11th to the 14th of September 2024, the international community of Medical Physics will gather in Munich for the 5th European Congress of Medical Physics (ECMP). The two conference presidents, Professor Yolanda Prezado, Santiago de Compostela, and Professor Katia Parodi, Munich, provide an outlook on the most important topics and developments that will be presented at the ECMP.

What are the most important topics and trends that will be discussed at the congress?

Professor Yolanda Prezado: Many relevant topics in medical physics will be presented and discussed during the congress. Medical Physics is a very broad discipline spanning from radiation therapy to diagnostic imaging with ionizing and non-ionizing radiation, theragnostics, audiology, artificial intelligence (AI) etc. With the help of an amazing international scientific committee and the extraordinary large number of high-quality proffered submissions, we have put together a rich program aiming to provide a comprehensive view of the main developments and innovations in the different areas of medical physics. A variety of sessions focused on current clinical practices as well as new emerging trends still at the research and development level will be rounded by joint sessions organized by the European Federation of Organizations in Medical Physics (EFOMP) with different scientific societies at the European and international level, addressing selected timely topics of common interest. The attendees will be able to learn about new codes of practice in radiation therapy, how to implement clinically innovative radiotherapies, ethical aspects of artificial intelligence and how to implement AI solutions in daily healthcare, latest innovations in a variety of diagnostic imaging modalities, ultrasound mediated drug delivery radioprotection, audiology, and many other topics. There will be also a track fully dedicated to early career, in addition to sessions of interest to a broad audience, geared toward relevant education, training and professional matters.

What significance does the congress have for improving patient care?

Professor Yolanda Prezado: Many important discoveries and developments are happening which will radically change our clinical practice in the next few years. These are mainly rooted in advanced instrumentation and technologies, novel biological insights as well as tremendous new opportunities enabled by new computational approaches such as artificial intelligence and possibly quantum computing. By bringing together experts from the European Medical Physics communities as well as industrial

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M katrin.franz@conventus.de

representatives, we do hope that ECMP2024 will foster discussions and collaborations helping to translate new technologies and methodologies to improved clinical practice.

What is the special feature of the conference? What are you particularly looking forward to?

Professor Katia Parodi: For the first time, the European Congress of Medical Physics will be merged with the Trination congress of the German, Swiss and Austrian Societies of Medical Physics, promising to reach an unprecedented dimension in the number of attendees. Munich does not only offer a very attractive venue due to its convenient geographical location in the center of Europe, but can be regarded as a major European science hub, where the two main Universities (Ludwig-Maximilian University, LMU, and Technical University of Munich, TUM) have substantially invested in the field of Medical Physics. Both Universities host a chair for (bio)medical physics in their respective Physics Faculties, strongly linked to the University Hospitals and other renowned research centers like the Helmholtz Zentrum München and Max Planck Institutes. Educational offers include medical physics at the undergraduate and graduate level along with practical clinical training. This setting is rounded by many leading industrial providers in the medical sector, located in Munich and the Bavarian Medical Valley. In this spirit, the conference will be hosted at the university campus in Munich-Garching, and will give the possibility to visit unconventional major research infrastructures aiming to promote innovations in biomedical applications, like the Center for Advanced Laser Applications (CALA) and the Munich Compact Light Source (MuCLS). Relevant research topics will be also showcased in the scientific program through the plenary talk and the presidential symposium, addressing advances in X-ray imaging and ongoing developments of lasers toward novel sources of therapeutic ionization radiation. Hence, our hope is that the unprecedented dimension of the congress with such a unique setting will provide a stimulating and inspiring atmosphere for the conference participants.

The questions were asked by Katrin Franz.

All information and the conference programme can be found at: https://ecmp2024.org/

Media representatives are cordially invited to the congress! We look forward to your reports. We will also be happy to put you in touch with contact persons for interviews.

Your Press contact for further inquieries:
katrin.franz@coventus.de | Press and public relations

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Press Release

Presidential Symposium: Leibniz Prize winner presents concept for an electron particle accelerator the size of a microchip

Munich (kf). Medical physicists from all over the world will gather in Munich from 11 to 14 September 2024 for the 5th European Congress of Medical Physics (ECMP). Three internationally renowned pioneers have been invited to the presidential symposium, organised by the two congress presidents Prof. Yolanda Prezado, Santiago de Compostela, and Prof. Katia Parodi, Munich, to discuss promising technological concepts that could change clinical practice in the short to medium term. This symposium is well aligned with the central motto of this congress „Bridging the future: from research to new clinical practices".

Professor Dr Peter Hommelhoff, experimental physicist at Friedrich-Alexander-Universität Erlangen-Nürnberg and winner of the prestigious Gottfried Wilhelm Leibniz Prize will present the exciting concept of the 'Accelerator on a Chip'. In his current research project, Hommelhoff is working on making particle accelerators more compact. He and his team are working on an electron particle accelerator that is only the size of a microchip. The aim is to develop a miniature particle accelerator for medical, industrial and research applications. According to the prize winner, this could, for example, enable revolutionary radiation sources with which tumours could be treated in a very targeted manner.

Professor Issam El Naqa is head of the Department of Machine Learning and the Department of Radiation Oncology at the Moffitt Cancer Centre in Tampa. Besides being a pioneer in the innovative use of artificial intelligence (AI) and quantum computing in medical Physics (which he will address in another exciting dedicated session in the congress – 12.09.2024, 14 – 15 p.m. - Quantum computing in medical physics), in this presentation our distinguished guest from US will delve into the timely topic of ionizing radiation acoustics. In particular, he will discuss future prospects and challenges for the clinical application of acoustic waves generated by pulsed ionising radiation with X-rays, electrons and protons for dosimetry as well as imaging during the therapeutic irradiation.

Finally, **Professor Andrew Harrison**, Dolní Břežany / CZ, will give an overview of the latest innovations and prospects of high-power lasers for laser-driven radiotherapy, presenting the new possibilities of the ELI European Research Infrastructure Consortium (ELI, https://eli-laser.eu/). Located in Dolní Břežany/Czech Republic, just a few minutes' drive from Prague, the Extreme Light Infrastructure (ELI) offers high-power laser technology with a wide range of applications for applied and basic research. This unique laser technology is suitable for analysing materials and fast processes in atoms, molecules, plasmas or solids, but also for accelerating particle beams. Prof Harrison is thus highlighting another highly interesting concept for the future of modern radiotherapy in addition to Prof Hommelhoff.

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Presentation of the topic at ECMP 2024:

Presidential Symposium
Friday, 13.09.2024, 11:00 - 12:30 a.m.

- Accelerator-on-a chip (Hommelhoff/Erlangen / DE)
- Ionizing radiation induced acoustics (El Naqa/Tampa, Florida / US)
- Laser-driven radiation therapy: Recent innovations and future directions (Harrison/Dolní Břežany / CZ)

All information and the conference programme can be found at: https://ecmp2024.org/

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5th European Congress of Medical Physics

Invitation to the press conference

Many important discoveries and developments are being made in medical physics that will radically change clinical practice in the coming years. These include advances in X-ray imaging and the further development of beam delivery at ultra-high dose rates and even investigating laser technologies as new sources for generating ionising radiation to treat tumours.

We cordially invite you to the press conference on the occasion of the 5th European Congress of Medical Physics.

Date: **Friday**, **13.09.2024**
Time: **9 – 10 a.m.**
Venue: **Science Congress Center Munich**
Walther-von-Dyck-Straße 10
85748 Garching, Raum Orion

Online participation in the press conference will also be offered!

Dialogue Partner:

Prof. Dr. Yolanda Prezado, Chair ECMP
CiMUS (Center for Research in Molecular Medicine and Chronic Diseases), Santiago di Compostela

Prof. Dr. Katia Parodi, Chair DGMP, ÖGMP, SGSMP
Ludwig-Maximilians-University Munich, Experimental Physics – Medical Physics

Prof. Dr. Markus Buchgeister
Public Relation DGMP/ Moderator press conference
Berliner Hochschule für Technik, Fachbereich II, Mathematik-Physik-Chemie

Current Topics:

- Overview of the latest research results and cutting-edge technologies in the field of medical physics
- Prospects of new beam delivery schemes and accelerator concepts including laser-driven radiation sources - Can new accelerator technologies become the basis for innovative ways to treat tumours?

Thank you for sending a brief confirmation of your participation in the ECMP2024 press conference to katrin.franz@conventus.de. We will be happy to send you the access code for online participation in the press conference shortly before the congress.

All information about the conference can be found at: ecmp2024.org/

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