

PROGRAM:

3rd IAEA RER6039 Regional Workshop on Hadron Therapy

Hadron Therapy Workshop: status and perspectives, plans for next generation facilities

Date: 18 and 19 October 2024

Venue: [Concert Hall](#), Thessaloniki, Greece

web page: <https://indico.cern.ch/e/HadronTherapyWorkshop>

(Times indicated are CEST i.e. UTC+2)

Friday 18th October 2024

SESSION 1 – HADRON THERAPY OVERVIEW

Moderators: Manjit Dosanjh

<u>Time</u>	<u>Title</u>
08:30 - 08:45	<i>Participants registration</i>
08:45 - 09:15	<i>Welcome Addresses</i> Maria Bigaki (IAEA CP, Papageorgiou), Sotirios Charisopoulos (IAEA), Sandro Rossi (HITRIplus, CNAO), Panagiotis Bamidis (AUTH, AHEPA)
09:15 - 09:35	<i>Historic and scientific evolution of Hadron Therapy</i> Ugo Amaldi (TERA) and Sandro Rossi (CNAO)
09:35 – 09:55	<i>Hadron Therapy in clinical practice</i> Ester Orlandi (CNAO, Uni Pavia)
09:55 – 10:15	<i>Radiobiology of Hadron Therapy</i> Angelica Facoetti (CNAO)
10:15 – 10:35	<i>HITRIplus project, its impact on boosting research in South East Europe and future perspectives</i> Sanja Damjanovic (GSI)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008548

10:35 – 10:55 *Socio-economic benefits of accelerator based Hadron Therapy facilities*

Sotirios Charichopoulos (IAEA)

10:55 – 11:30 *Coffee Break*

SESSION 2 – HADRON THERAPY DEVELOPMENTS AND FUTURE PERSPECTIVES

Moderators: Roberto Orecchia

<u>Time</u>	<u>Title</u>
11:30 - 11:50	<i>Hadron Therapy : from pioneering times towards the future</i> Manjit Dosanjh (Uni Oxford)
11:50 - 12:10	<i>SEEIIST facility design and alternatives</i> Maurizio Vretenar (CERN)
12:10 - 12:30	<i>CERN as an example of large scale infrastructure</i> Emmanuel Tsesmelis (CERN)
12:30 – 12:50	<i>Status and vision of the SEEIIST project</i> Leandar Litov (Uni Sofia)
12:50 – 13:30	<i>Round table – SEEIIST towards to the Future</i> <i>Introduction: cancer incidence in SEE, Mimoza Ristova (Uni Skopje)</i>
13:30 – 13:45	<i>Concluding remarks</i> Roberto Orecchia
13:45 – 15:00	<i>Lunch Break</i>



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SESSION 3 – EXPERIENCES OF MULTIPARTICLE THERAPY FACILITIES IN OPERATION IN EUROPE

Moderators:

<u>Time</u>	<u>Title</u>
15:00 - 15:20	<i>Hadron Therapy at GSI - where we come from, where we go</i> Konrad Lehmann (GSI)
15:20 - 15:40	<i>The HIT facility, technology, clinical applications and research: novel approaches in particle therapy</i> Andrea Mairani (HIT)
15:40 - 16:00	<i>The Marburg facility</i> Klemens Zink (MIT)
16:00 – 16:20	<i>The Krakow Hadron Therapy facility, lessons learnt</i> Pawel Olko (IFJPAN)
16:20 – 16:40	<i>Role of imaging</i> George Dedes (LMU)
16:40 – 17:00	<i>Coffee Break</i>



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SESSION 4 – ADVANCES IN ACCELERATOR TECHNOLOGIES FOR HADRON THERAPY FACILITIES

Moderators: Laura Vallow

<u>Time</u>	<u>Title</u>
17:00 - 17:20	<i>Accelerator developments for medical and societal applications</i> Yiannis Papaphilippou (CERN)
17:20 - 17:35	<i>Optimisation for pre-injectors for hadron therapy</i> Aris Mamaras (CERN/AUTH)
17:35 – 17:50	<i>Optimisation of double use linac injector for hadron therapy facilities</i> TBC
17:50 – 18:05	<i>An ion source project as a seed to boost development of accelerator technologies in Bosnia-and-Herzegovina</i> TBC
18:05 – 18:20	<i>Development of the first table-top X-ray FLASH system</i> Elpida Theodoridou (DKFZ, Uni Malta), Joao Seco (DKFZ, Uni Heidelberg)
18:20 – 18:30	<i>Concluding remarks</i> Laura Vallow
20:30	<i>Welcome addresses by political and other authorities</i> <i>Concert and Welcome Drink</i>



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Saturday 19th October 2024

Session 5 – INDICATIONS FOR HADRON THERAPY

Moderators: Arnold Pompos, Joao Seco

<u>Time</u>	<u>Title</u>
09:00 - 09:20	<i>Indications and clinical applications of HT at the Marburg facility</i> Fabian Eberle (MIT)
09:20 – 09:40	<i>Chordoma treatments at CNAO</i> Maria Rosaria Fiore (CNAO)
09:40 – 10:00	<i>Sarcoma treatments in Greece</i> TBC
10:00 – 10:20	<i>Modern radiation therapy techniques for head-and-neck cancer</i> Petros Alexidis (PAPAGEORGIU)
10:20 – 10:40	<i>Proton versus photon radiation therapy: advantages and disadvantages</i> Efstathios Kamperis (PAPAGEORGIU)
10:40 – 11:00	<i>Personalization of Hadron Therapy for H&N cancers: Patient Triage Based upon Bioindicators of Radioresistance</i> Michael D. Story (Mayo Clinic)
11:00 – 11:05	<i>Concluding remarks</i> Arnold Pompos, Joao Seco
11:05 – 11:30	<i>Coffee Break</i>



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SESSION 6 – SOCIO-ECONOMIC ASPECTS RELATED TO HADRON THERAPY

Moderators: Sandro Rossi

<u>Time</u>	<u>Title</u>
11:30 - 11:50	<i>Tools to support the EU networking on hadron therapy</i> Lisa Licitra (CNAO, Uni Milan)
11:50 – 12:10	<i>Hadron therapy cost-benefit analysis applied to operations in CNAO</i> Maria Vittoria Livraga (CNAO)
12:10 – 12:30	<i>Caring for cancer patients: the CNAO social approach</i> Silvia Meneghello (CNAO)
12:30 – 12:45	<i>Citizen and Patient Science</i> Stefania Oikonomou (Web2Learn)
12:45 – 13:00	<i>Empowering patient advocacy and cancer prevention</i> Panagiotis Bamidis (AUTH/AHEPA, ELEVIT) <i>The role of biomedical and clinical engineering societies in advancing and promoting Hadron Therapy on a national and international level</i> Alkinoos Athanasiou (AUTH, ELEVIT)
13:10 – 13:30	<i>Hadron Therapy in Greece</i> EOPPY Delegate TBC
13:30 – 13:35	<i>Concluding remarks</i> Sandro Rossi
13:35 – 15:00	<i>Lunch Break</i>



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SESSION 7 – PEDIATRIC ONCOLOGY AND ROLE OF HADRON THERAPY

Moderators: Antonio Capizzello, Emmanouel Chatzipantelis, Papakonstantinou Eugenia, Semi Harrabi

<u>Time</u>	<u>Title</u>
15:00 - 15:20	<i>Hadron therapy state-of-the art in pediatric oncology-clinical aspects</i> Sabina Vennarini (CNAO)
15:20 - 15:40	<i>Treatment planning for pediatric cancer tumour treatments</i> Silvia Molinelli (CNAO)
15:40 - 16:00	<i>Pediatric patients referred for hadron therapy</i> Barbara Rombi (TRENTO)
16:00 -16:20	<i>Pediatric patients commonly referred for Radiotherapy</i> Capizzello Antonio (AUTH / AHEPA)
16:20 – 16:50	<i>Coffee Break</i>
16:50 – 18:20	<i>Panel discussion: Paediatric Oncology in Greece</i> Emmanouel Chatzipantelis (AHEPA), Eugenia Papakonstantinou (IPPOKRATEION) Nikos Foroglou (AHEPA), Christos Stefanidis (IPPOKRATEION), George Giakoumetis (AHEPA)
18:20 – 18:30	<i>Concluding remarks</i> Semi Harrabi



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SPEAKERS FUNCTIONS AND AFFILIATIONS

[Speakers biographies, functions and affiliations can be found here.](#)

SESSION 1 – HADRON THERAPY OVERVIEW

Ugo Amaldi

Founder and president of the TERA foundation, Novara, Italy

Sandro Rossi

Director General, National Centre for Oncological Hadrontherapy (CNAO), Pavia, Italy

Maria Bigaki

Program Office Manager at Papageorgiou General Hospital, Thessaloniki, Greece

Ester Orlandi

*Chief of Clinical Department, National Center for Oncological Hadrontherapy (Fondazione CNAO), Pavia, Italy
Department of Clinical, Surgical, Diagnostic, and Pediatric Sciences, University of Pavia, Pavia, Italy*

Angelica Facoetti

Head of experimental Radiobiology activities at CNAO, Pavia, Italy

Sanja Damjanovic

Senior Researcher, EU-office, GSI, Germany

Sotirios Charichopoulos

IAEA Technical coordinator of Regional Project Cooperation project RER6038 that supports capacity building in South East Europe

SESSION 2 – HADRON THERAPY DEVELOPMENTS AND FUTURE PERSPECTIVES

Manjit Dosanjh

*Former Senior Advisor for Medical Applications at CERN, Geneva, Switzerland.
Visiting Professor at University of Oxford (U.K.). She has coordinated the ENLIGHT (European Network for Light Ion Hadron Therapy) Network since 2006. She is the Networking Pillar for the HITRIplus project.
Project Leader for STELLA (Smart Technologies to Extend Lives with Linear Accelerators)*



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Maurizio Vretenar

Group leader of CERN NIMMS Next Ion Medical Machine Study

Emmanuel Tsesmelis

CERN International Relations, Prof Uni Oxford

Leandar Litov

Associate Professor in Particle Physics. Head, Atomic Physics Department · Faculty of Physics, Uni of Sofia

Roberto Orecchia

Scientific Director and Head of the Department of Medical Imaging and Radiation Sciences, European Institute of Oncology-IEO IRCCS, Milan, Italy

SESSION 3 – EXPERIENCES OF MULTIPARTICLE THERAPY FACILITIES IN OPERATION IN EUROPE

Konrad Lehmann

Senior Researcher, Biophysics Department, GSI, Germany

Andrea Mairani

Prof. Dr. Group Leader, Medical Physicist at Heidelberg Ion Beam Therapy Center, Germany

Klemens Zink

Technical director, Marburg Ion Therapy Centre, Germany

Pawel Olko

Head of Division of Applications of Physics, Institute of Nuclear Physics Polish Academy of Sciences (IFJ PNA)

George Dedes

Scientific Staff Member, Senior Lecturer, LMU, Munich, Germany

SESSION 4 – ADVANCES IN ACCELERATOR TECHNOLOGIES FOR HADRON THERAPY FACILITIES

Yiannis Papaphilippou

Group Leader of CERN Accelerators and Beam Physics group

Aris Mamaras

PhD Student at CERN and AUTH, Thessaloniki, Greece



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Lazar Nikitovic TBC

PhD, Researcher at CERN, Technical Uni Riga, Uni Montenegro

Amar Ajanovic TBC

PhD, Researcher at CERN, Group Leader at UNSA, Sarajevo, BiH

Elpida Theodoridou

MSc Student at DKFZ and Uni Malta

Laura Vallow

Department chair, Professor of Radiation Oncology, Mayo Clinic Florida, US

SESSION 5 – INDICATIONS FOR HADRON THERAPY

Fabian Eberle

Priv.-Doz. Dr. med. Senior physician, ion beam therapy, Marburg Ion Therapy Center, Germany

Maria Rosaria Fiore

Radiation Oncologist (Chordoma and Chondrosarcoma – Sacrum and Spine), CNAO, Pavia, Italy

Yiannis Boukovinas TBC

Medical Oncologist, Head of Oncologic Unit at Bioclinic, Thessaloniki, Greece

Petros Alexidis

Radiation oncologist at Interbalkan European Medical Center, Papageorgiou General Hospital and AUTH, Thessaloniki, Greece

Efstathios Kamperis

Radiation oncology consultant at Papageorgiou General Hospital, Thessaloniki, Greece

Michael D. Story

Prof, Consultant, Mayo Clinic, Florida, USA

Joao Seco

Professor and Division Head, BioMedical Physics in Radiation Oncology, German Cancer Research Center (DKFZ) and University of Heidelberg, Germany



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Arnold Pompos

Professor of Physics, Associate Vice Chair for Strategic Initiatives and Capital Investments, The University of Texas Southwestern Harold C. Simmons Comprehensive Cancer Center, USA

SESSION 6 – SOCIO-ECONOMIC ASPECTS RELATED TO HADRON THERAPY

Lisa Licitra

*Director SC of Medical Oncology Department, Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy.
Associated Professor at Università degli Studi di Milano, Italy.
Scientific Director of the Italian National Center for Oncological Hadrontherapy, CNAO, Pavia Italy*

Maria Vittoria Livraga

Head of Finance and Administration at CNAO, Pavia, Italy

Silvia Meneghello

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Stefania Oikonomou

Political Scientist, digital learning and social participation expert at Web2Learn

Panagiotis Bamidis

*Professor, Medical Physics, Informatics and Medical Education, Aristotle University of Thessaloniki School of Medicine
President, Hellenic Society of Biomedical Technology (ELEVIT)*

Alkinoos Athanasiou

*Assistant Professor of Neurosurgery, Aristotle University of Thessaloniki (AUTH)
Vice-President, Hellenic Society of Biomedical Technology (ELEVIT)*

SESSION 7 – PEDIATRIC ONCOLOGY AND ROLE OF HADRON THERAPY

Sabina Vennarini

Head of Pediatric Radiation Unit in INT Fondazione IRCCS Istituto Nazionale Tumori and Senior Clinical Consultant for Pediatric Proton Therapy CNAO, Pavia, Italy

Silvia Molinelli

Medical physicist responsible for treatment planning and carbon ion modelling, CNAO, Pavia, Italy

Semi Harrabi



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Radiation oncologist (Oberarzt), University Hospital Heidelberg, Primary responsible for Heidelberg Ion Beam Therapy Centre

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