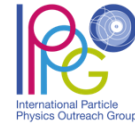


PTMC Video Conference 27 February 2024

PARTICLE THERAPY MASTERCLASS



Tuesday 27 February 2024

1	ITALY, INFN TORINO-1
2	ITALY, University & INFN Pavia - group 1, Torino
3	ITALY, UniCal & INFN - Cosenza
4	ALGERIA, Taib el Okbi High School, Oum el Bouaghi
5	ALGERIA, Ben Tobal High School, Mila



PTMC Video Conference 27 February 2024

Video Conference: Particle Therapy MasterClass 27 February 2024

Tuesday 27 Feb 2024, 16:00 → 18:00 Europe/Zurich

online <https://cern.zoom.us/j/68277769699?pwd=ZWkzUzlyVE1KU0ZHbi9rQmFlbURHdz09>

Yiota Foka (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))

Description MODERATORS:

Yiota Foka (GSI), Enrico Felcini (CNAO)

ASSISTANTS:

Nermine Muradi (University of Tetova)

[GENERAL QUESTIONS for BEFORE the MC](#)

[GENERAL QUESTIONS for AFTER the MC](#)

[PTMC QUESTIONS](#)



- [Animations](#)
- [GSI historic treatm...](#)
- [PTMC-VC-atGSI-Tre...](#)
- [PTMC-VC-atGSI-Tre...](#)
- [Survey](#)

<https://indico.cern.ch/event/1246303/>

Moderators: **Yiota Foka (GSI), Enrico Felcini (CNAO)**



16:00 – 18:00 Video Conference: 27 February 2024

Convener: Yiota Foka (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))

[Statistics of PTMC](#)

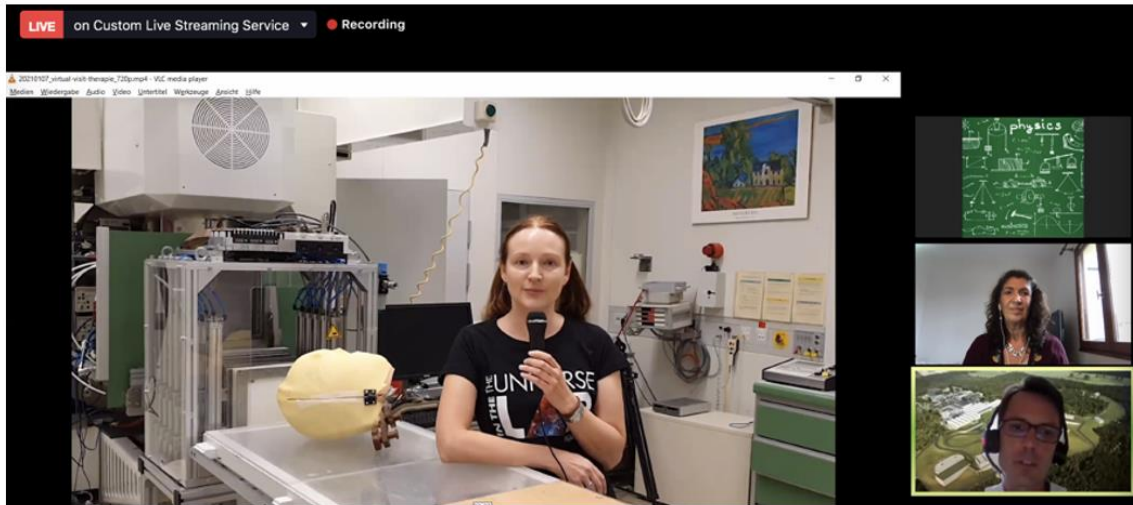
- 16:00 Welcome** (1m)
Speaker: Yiota Foka (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))
- 16:05 HITRIplus project in support of Particle Therapy** (10m)
Speaker: Enrico Felcini (Fondazione CNAO (IT))
[HitriPlusproject PT...](#) [HitriPlusproject PT...](#)
- 16:15 Presentation from INFN and Uni Torino, ITALY** (5m)
Speakers: Roberto Sacchi (University of Torino), Simona Giordanengo (INFN Torino)
- 16:20 Presentation from UniCal & INFN Cosenza, ITALY** (5m)
Speaker: Antonietta Olivieri (Unical & INFN - Cosenza (IT))
- 16:25 Presentation from Taib el Okbi High School, ALGERIA** (5m)
Speaker: Khemakhmia Abdeslem
- 16:30 Presentation from Ben Tobal High School, ALGERIA** (5m)
Speaker: Abdessalem Khemakhmia
- 16:35 Presentation from University & INFN Pavia, Italy** (5m)
Speaker: Susanna Costanza (University and INFN Pavia (IT))
- 16:40 Quiz** (8m)
[quiz-PTMC-2020-DS...](#) [quiz-PTMC-2020-DS...](#)



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

Virtual visits and video-conferences

Virtual visits during video-conference: GSI research institute, CNAO, MedAustron therapy centers



GSI moderators

CNAO moderator

medAustron moder.



Christian Graeff

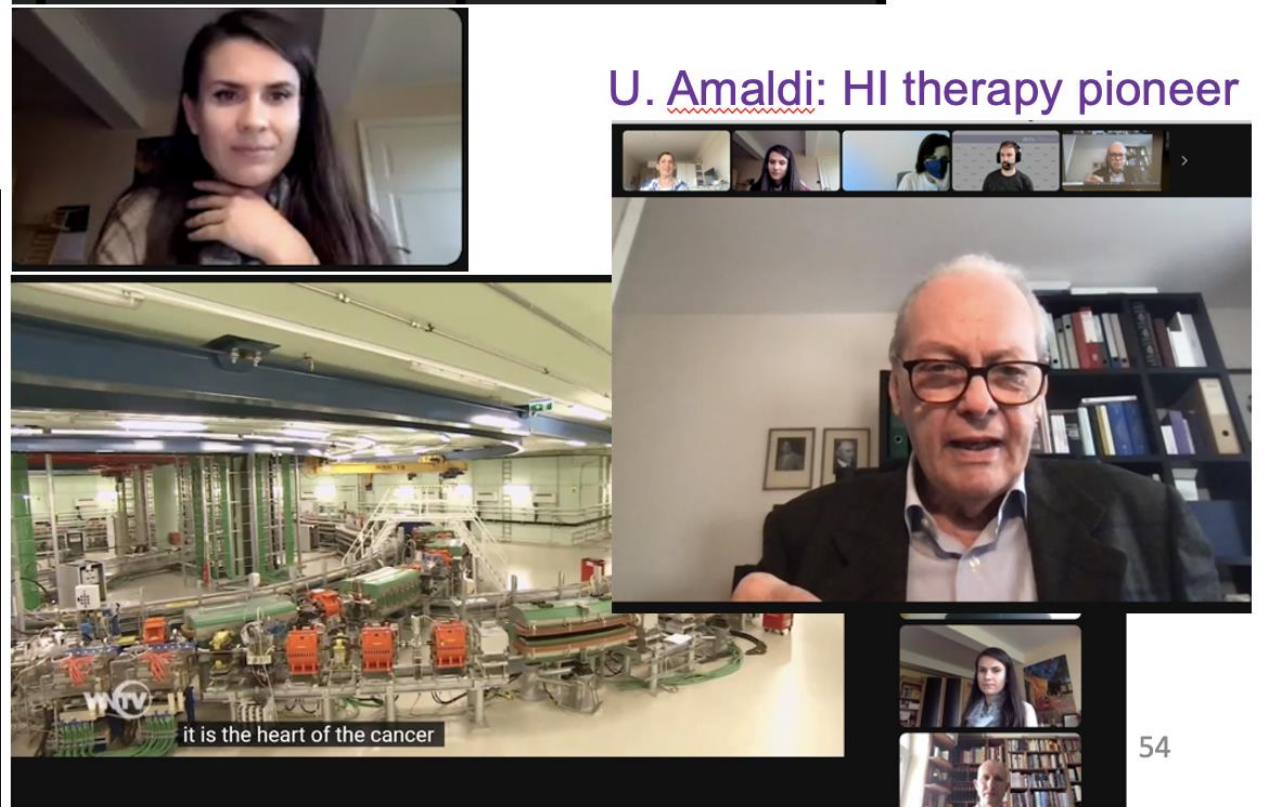
Marco Pullia



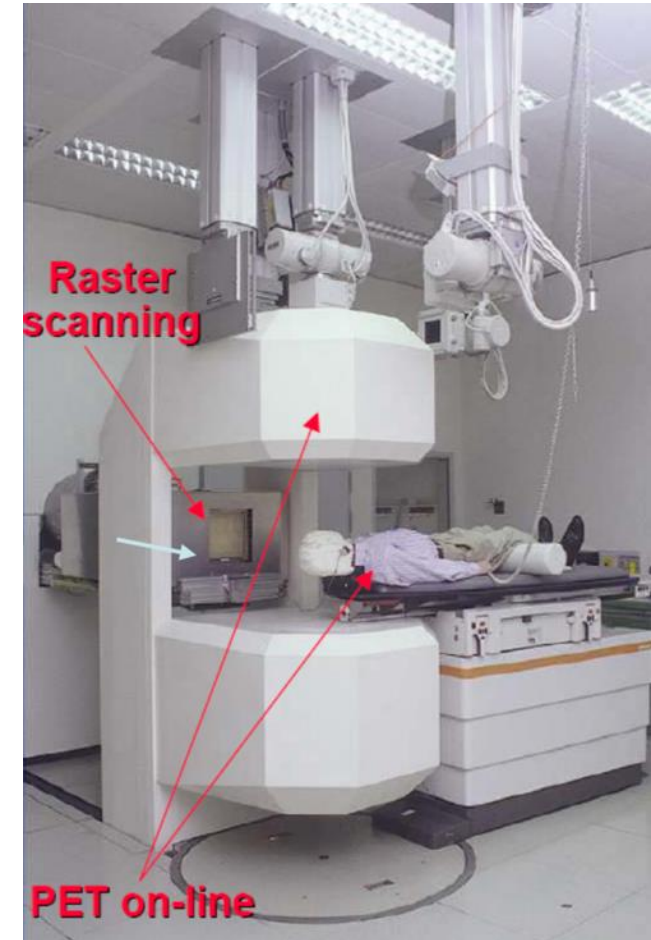
Federico Russo

Anna Gaia Lillo-Od...

U. Amaldi: HI therapy pioneer

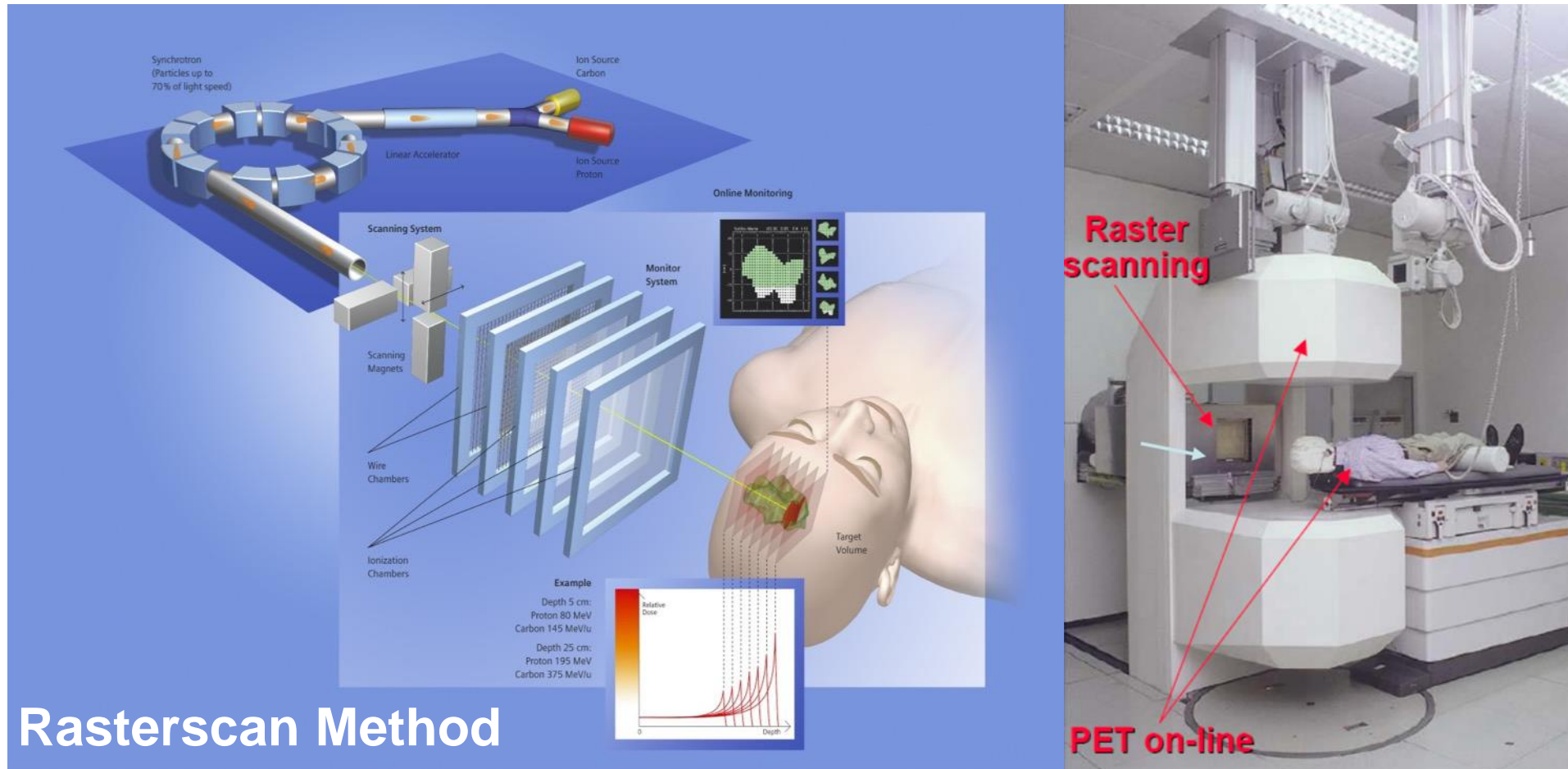


Heavy-ion research and heavy-ion therapy at GSI



Pioneered heavy-ion (carbon) therapy for cancer tumours in Europe (90s).

Heavy-ion research and heavy-ion therapy at GSI



Rasterscan Method

Haberer et al., NIM A , 1993

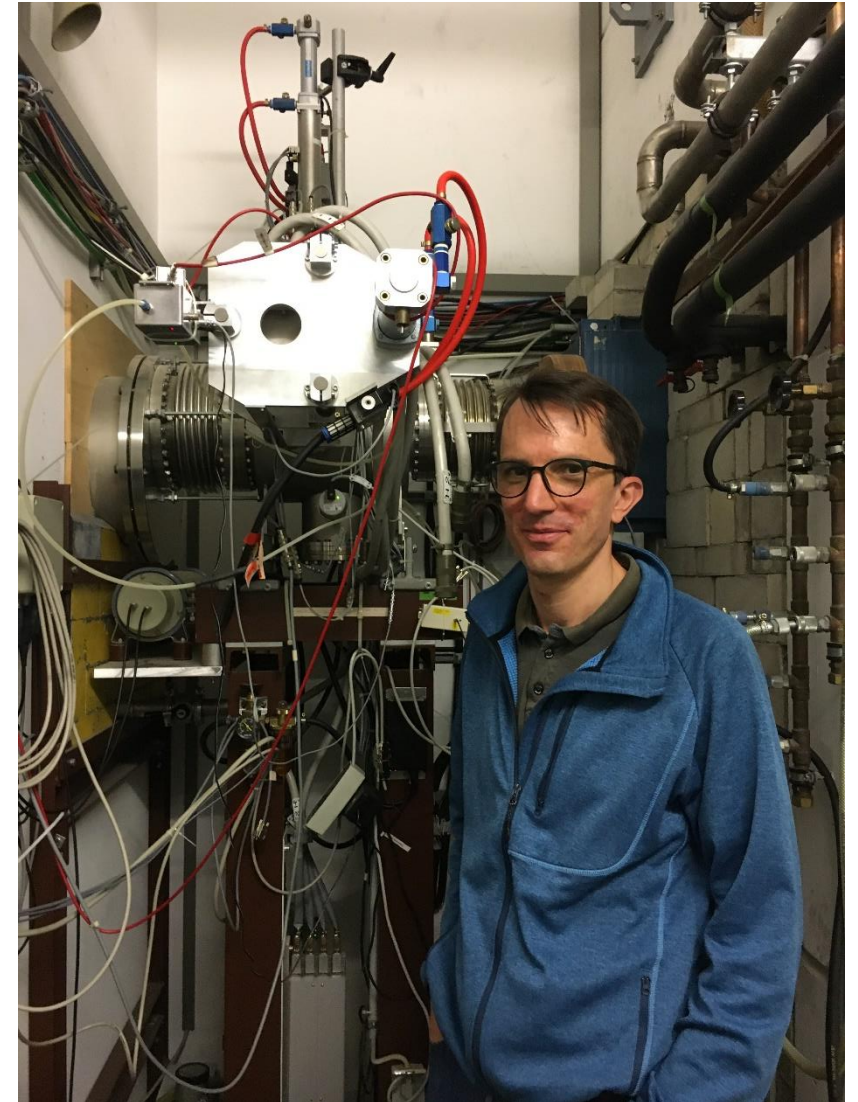
Implemented in the Heidelberg and Marburg Ion Treatment centers (HIT and MIT) in Germany

From the historic GSI therapy room Cave M



https://www.dropbox.com/scl/fo/y32povwa5jdi7gwrddmmu2/h?dl=0&preview=05-20210609_virtual-visit_therapie_en.mp4&rlkey=cqpllc473dlrjy1dyi95mfoje

What is behind the wall?



What is behind the wall?

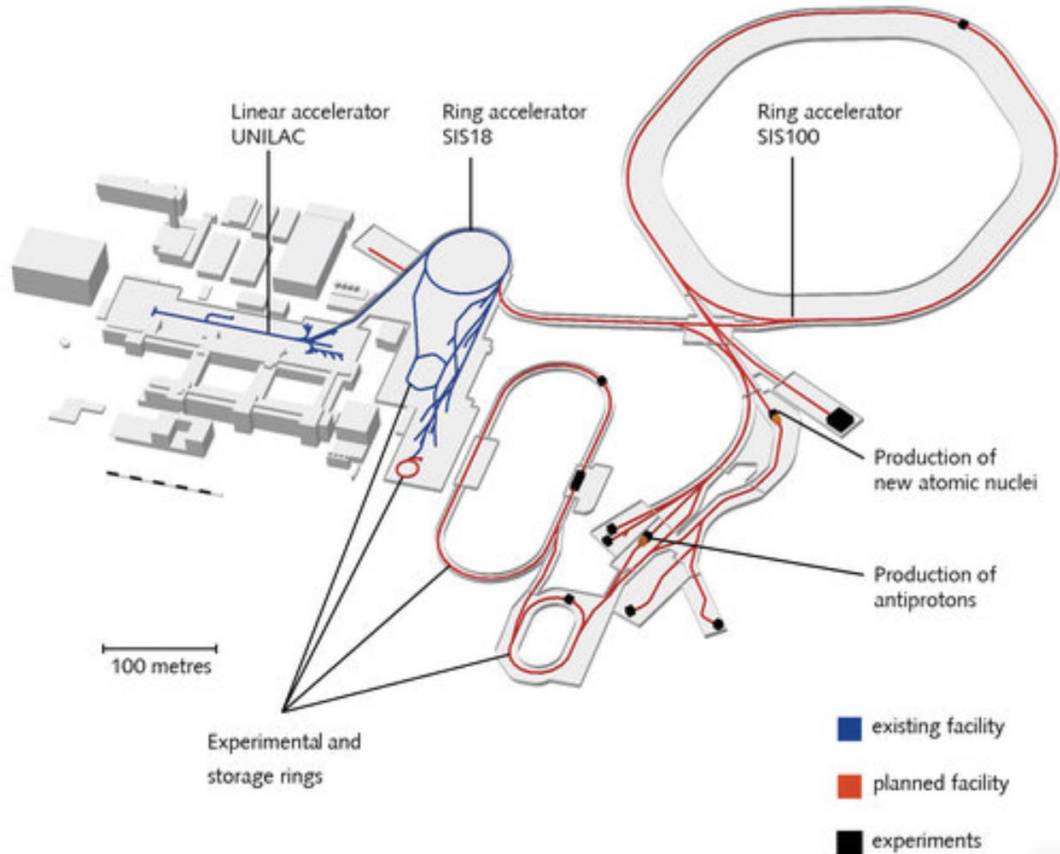


Photo: J. Mai / GSI Helmholtzzentrum für Schwerionenforschung

Four carbon-ion cancer therapy centers in Europe

MedAustron, Austria



CNAO, Italy



HIT, Germany



MIT, Germany

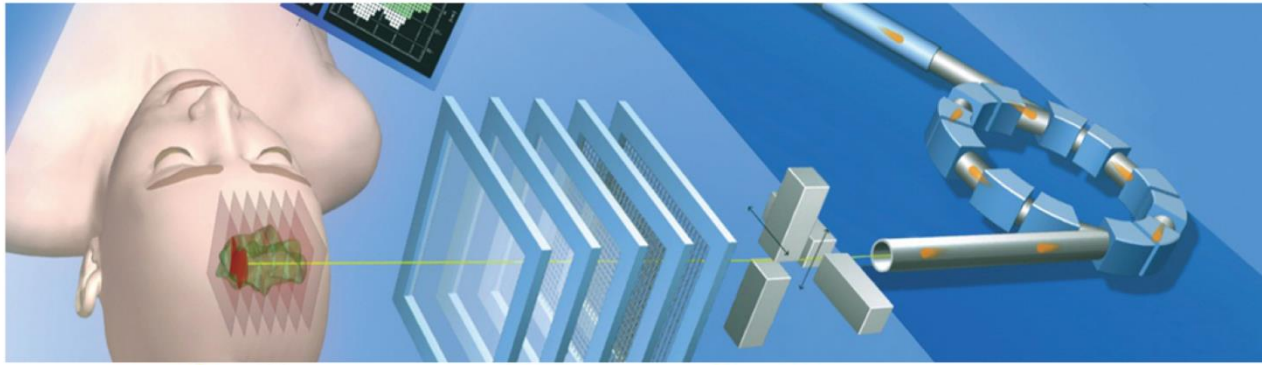


Virtual Hadron Therapy Center



Labels in the rendering include:



- R&D
- Ion Gantry
- Proton Gantry
- Beam Section
- Treatment Rooms
- Shielding
- Preparation Rooms
- Offices
- Consulting Area
- Reception
- Children's Area
- Imaging
- Control Room
- Particle Accelerator
- Cafeteria
- Presentation Room







Particle Therapy Masterclass

Animations <https://indico.cern.ch/event/840212/page/18000-animations>

Research Institutes

	GSI/FAIR general science video, Courtesy of GSI
	CERN Video, Courtesy of CERN

Therapy Centres

	ENLIGHT Animations, Courtesy of ENLIGHT
	CNAO Video, Courtesy of CNAO
	HIT Video, Courtesy of HIT
	MedAustron Video, Courtesy of MedAustron MedAustron Behind the Scenes, Courtesy of MedAustron

PTMC Video Training 18 January 2024



Particle Therapy Masterclass

**Many thanks to the PTMC core team,
all moderators and local organisers,
the HITRIplus project
for contributions and support**

The HITRI*plus* project

Heavy Ion Therapy Research Integration *plus*



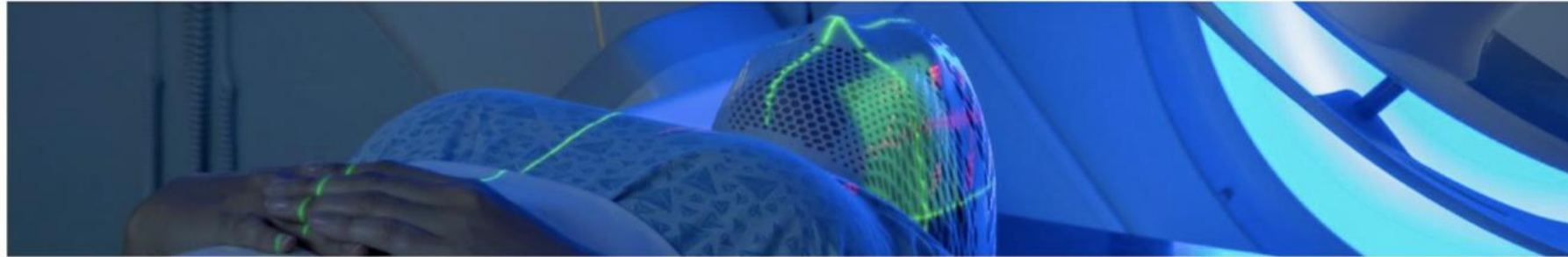
<https://www.hitriplus.eu/>



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



YouTube IT



HITRIplus

@hitriplus9177
102 iscritti

Iscritto

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INFORMAZIONI

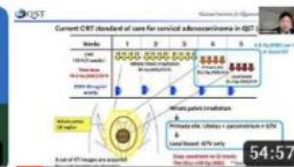


Video ▶ Riproduci tutti



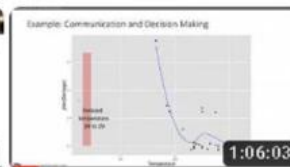
9th Seminar of HITRIplus -
FLASH radiotherapy with...

349 visualizzazioni • 1 mese fa



8th Seminar of HITRIplus –
The Past, Present, and...

31 visualizzazioni • 3 mesi fa



HITR Lecture 32: Key
aspects of safety in Partic...

33 visualizzazioni • 6 mesi fa



Final Lecture: Closing
Thoughts from Organisers

21 visualizzazioni • 6 mesi fa



HITR Lecture 31: External
Beam Ablation Medical...

40 visualizzazioni • 7 mesi fa

Webinars



MANJIT DOSANJH

PROJECT LEADER, STELLA PROJECT

14th Seminar of HITRIplus – Accelerating the future: designing a robust and affordable radiation therapy treatment system for challenging environments



FRANCESCA ALBERTINI

SCIENTIFIC COORDINATOR, PSI

13th Seminar of HITRIplus – The EU-RAPTOR project



MAURIZIO VRETNAR

PROJECT LEADER, CERN

12th Seminar of HITRIplus – New trends and initiatives in accelerators for ion therapy of cancer



ALBERTO DEGIOVANNI

DEPUTY TECHNICAL DIRECTOR AND GROUP LEADER FOR ACCELERATOR PHYSICS AT AON ADAM, MEYRIN, SWITZERLAND



ANNA MARIA KOLANO

PHD, MEDICAL PHYSICIST, AON ADAM, MEYRIN, SWITZERLAND



STEPHEN MYERS

EXECUTIVE CHAIR ADAM SA, EXECUTIVE DIRECTOR AVO PLC, LOMI

11th Seminar of HITRIplus – LIGHT: a linear accelerator for cancer therapy, AVO-ADAM.



SEMI HARRABI

RADIATION ONCOLOGIST, UNIVERSITY HOSPITAL HEIDELBERG



ANDREA HAIRANI

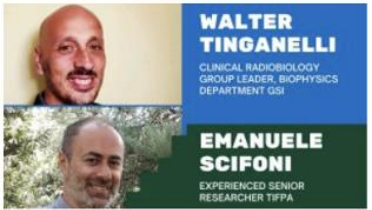
SENIOR PHYSICIST, HIT



THOMAS TESSONNIER

MEDICAL PHYSICIST AND RESEARCHER, HIT

10th Seminar of HITRIplus – Helium Ion Beam Therapy



WALTER TINGANELLI

CLINICAL RADIOBIOLOGY GROUP LEADER, BIOPHYSICS DEPARTMENT GSI



EMANUELE SCIFONI

EXPERIENCED SENIOR RESEARCHER TIFPA

9th Seminar of HITRIplus – FLASH radiotherapy with Carbon ions: is it possible to combine high LET and FLASH benefits? Experimental and modeling studies.



NORIYUKI OKONOJI

CHIEF PHYSICIAN FOR THE DEPARTMENT OF CHARGED PARTICLE THERAPY RESEARCH AT THE NATIONAL INSTITUTES FOR QUANTUM SCIENCE AND TECHNOLOGY, QST HOSPITAL

8th Seminar of HITRIplus – The Past, Present, and Future of CIRT for Cervical Cancer: Implementation of “Immuno-CIRT” considering the radiation-induced anti-tumor immune response.



FELIPE CALVO

DIRECTOR OF THE PROTON THERAPY UNIT, CLINICA UNIVERSIDAD DE NAVARRA

7th Seminar of HITRIplus – Health – value of particle therapy in 2022: clinical evidences and innovative opportunities



INSA SCHRÖDER

GROUP LEADER STEM CELL DIFFERENTIATION AND CYTOGENETICS GROUP, BIOPHYSICS DEPARTMENT, GSI

6th Seminar of HITRIplus – Human organoids: a new model system for pre-clinical studies of toxicity and effectiveness of particle therapy



KLEMENS ZINK

SCIENTIFIC AND TECHNICAL DIRECTOR, HIT

5th Seminar of HITRIplus – Marburg Ion Beam Therapy Center: Innovations in Physics and Radiobiology



PIERO FOSSATI

SCIENTIFIC DIRECTOR, CARBON IONS PROGRAM DIRECTOR

4th Seminar of HITRIplus – CIRT at MedAustron: the first 200 patients



THOMAS HABERER

SCIENTIFIC & TECHNICAL DIRECTOR AT THE HEIDELBERG ION BEAM THERAPY CENTER

3rd Seminar of HITRIplus – Ion Beam Therapy at HIT: Options for Multi-Ion Treatment and Research



PROF. KAREN KIRKBY

LEADS RESEARCH IN PBT AND FLASH BETWEEN UNIVERSITY OF MANCHESTER AND THE CHRISTIE

2nd Seminar of HITRIplus – INSPIRE project



SANDRO ROSSI

GENERAL DIRECTOR OF CNAO

Opening Seminar of HITRIplus – The status and perspectives of CNAO



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