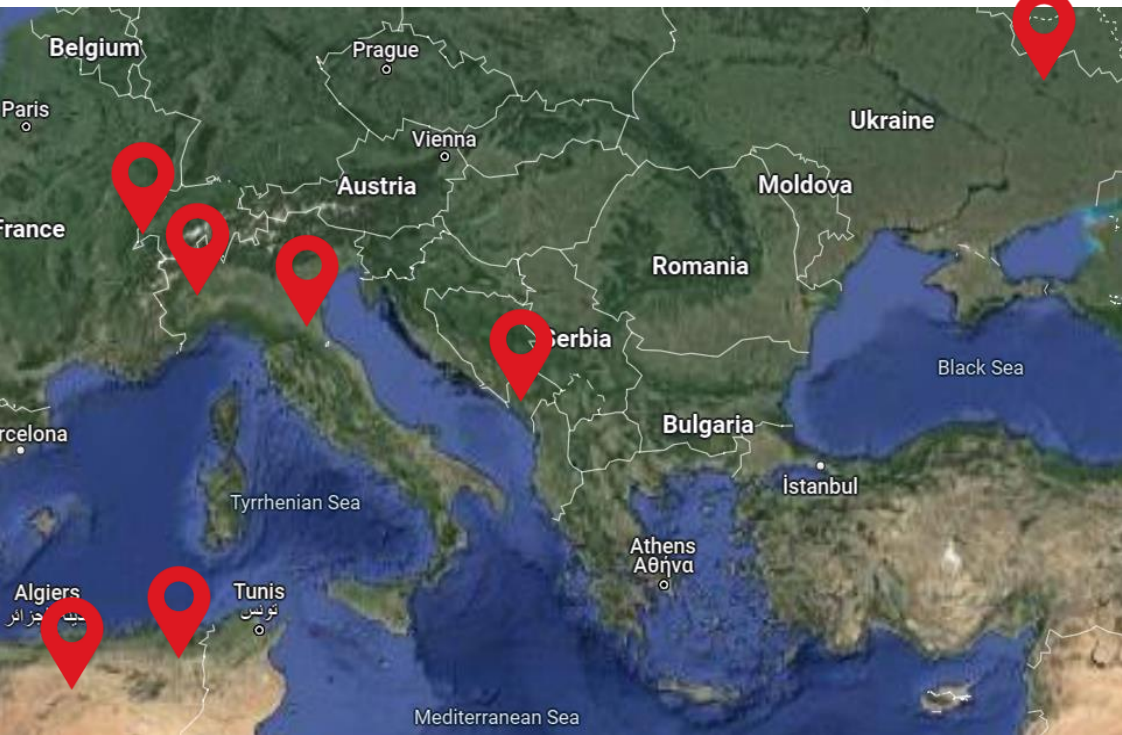


Particle Therapy Masterclass

PTMC Video Conference 15 March 2024

Friday 15 March 2024



| | |
|----|--|
| 1 | <u>SWITZERLAND, CERN</u> |
| 2 | MEXICO, UNAM, <u>Mexico City</u> |
| 3 | ITALY, INFN <u>Bologna</u> |
| 4 | ITALY, <u>Univ Piemonte Orientale</u> |
| 5 | UKRAINE, V.N. Karazin Kharkiv National University, Kharkiv |
| 6 | ALGERIA, Soumia High School, Constantine |
| 7 | ALGERIA, Fadila High school, Constantine |
| 8 | <u>MONTENEGRO, University of Montenegro, Podgorica</u> |
| 9 | INDIA, NISER <u>Bhubaneshwar</u> |
| 10 | <u>MEXICO, University of Sonora, Hermosillo</u> |



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



PTMC Video Conference 15 March 2024

16:00 → 17:55 Video Conference: 15 March 2024

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

Video Conference: Particle Therapy MasterClass 15 March 2024

Friday 15 Mar 2024, 16:00 → 17:55 Europe/Zurich

online <https://cern.zoom.us/j/63581336689?pwd=d09zb29BclZGZHFYRmNsRHl0RIA0UT09>

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

Description MODERATORS:

Yiota Foka (GSI), Monica Necchi (CNAO)

ASSISTANTS:

Nermine Muradi (University of Tetova)

[GENERAL QUESTIONS for BEFORE the MC](#)

[GENERAL QUESTIONS for AFTER the MC](#)

[PTMC QUESTIONS](#)



<https://indico.cern.ch/event/1355597/>

Moderators: **Yiota Foka (GSI), Monica Necchi (CNAO)**



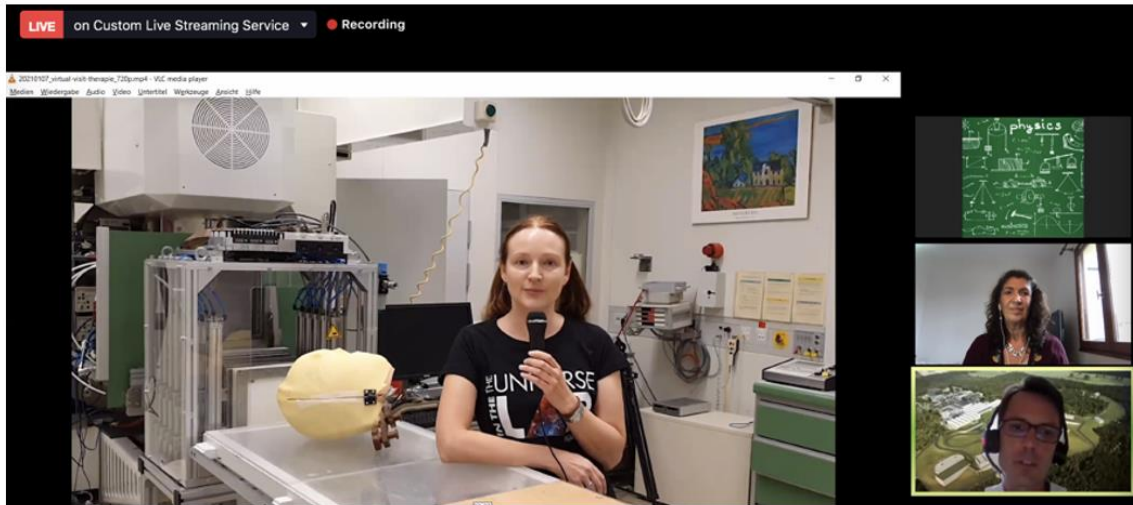
| | | |
|-------|--|-----|
| 16:00 | Welcome Speaker: Yiota Foka (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE)) | 5m |
| 16:05 | HITRIplus EU-funded project in support of Particle Therapy Speaker: Maria Monica Necchi (Fondazione CNAO (IT)) | 10m |
| 16:15 | Presentation from UNAM, MEXICO Speaker: Antonio Ortiz Velasquez (Universidad Nacional Autonoma (MX)) | 5m |
| 16:20 | Presentation from INFN Bologna, ITALY Speaker: Stefano Marcellini (Universita e INFN, Bologna (IT)) | 5m |
| 16:25 | Presentation from Univ Piemonte Orientale, ITALY Speaker: Marta Ruspa (Universita e INFN Torino (IT)) | 5m |
| 16:30 | Presentation from V.N. Karazin Kharkiv National University, UKRAINE Speaker: Dr Pylyp Kuznietsov (V.N. Karazin Kharkiv National University) | 5m |
| 16:35 | Presentation from Soumia High School, ALGERIA Speaker: Khemakhmia Abdeslem | 5m |
| 16:40 | Presentation from Fadila High school, ALGERIA Speaker: Khemakhmia Abdeslem | 5m |
| 16:45 | Presentation from University of Montenegro, Montenegro Speaker: Mara Scepanovic | 5m |
| 16:50 | Presentation from NISER Bhubaneswar, INDIA Speaker: Ganesh Jagannath Tambave (National Institute of Science Education and Research (NISER) (IN)) | 5m |
| 16:55 | Presentation from University of Sonora, Mexico Speaker: Alfredo Castaneda (Universidad de Sonora (MX)) | 5m |
| 17:00 | Presentation from CERN Speaker: Yiota Foka (GSI - Helmholtzzentrum für | - |
| 17:10 | Quiz | - |



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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

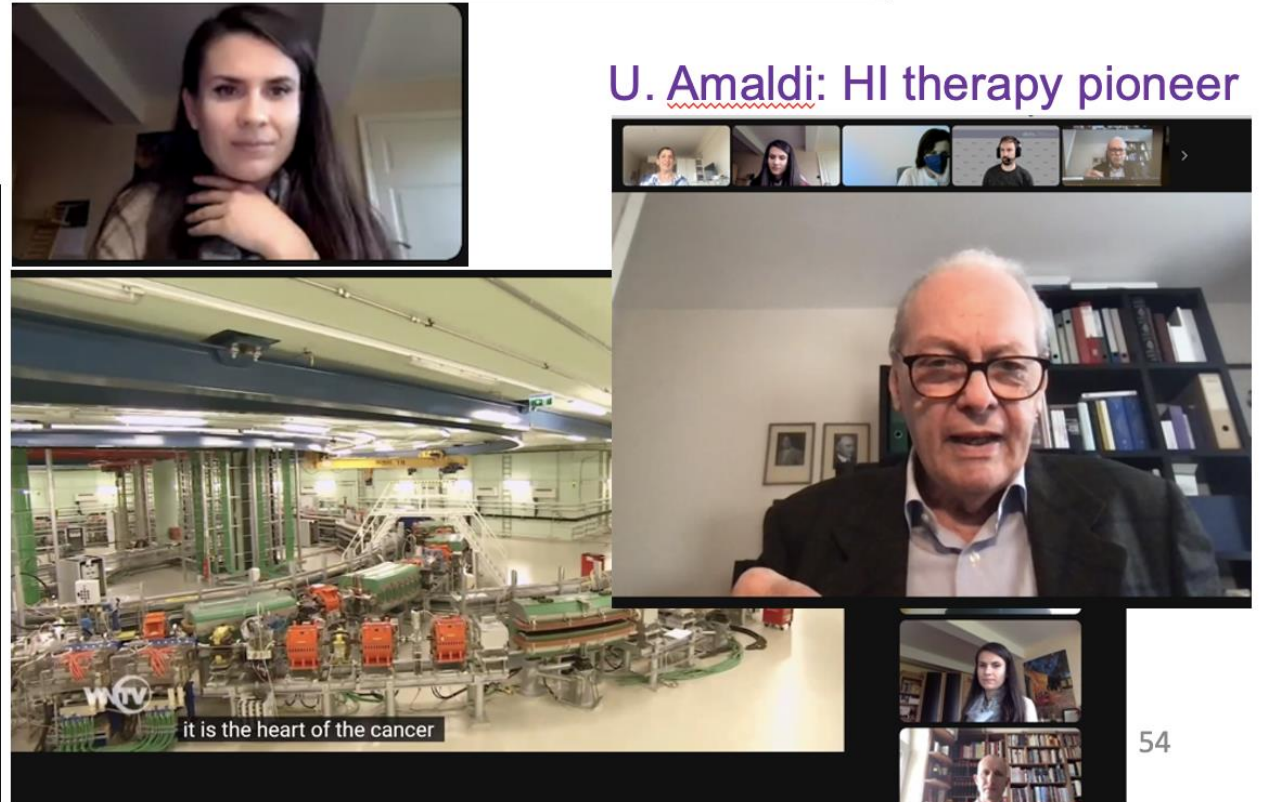
Marco Pullia



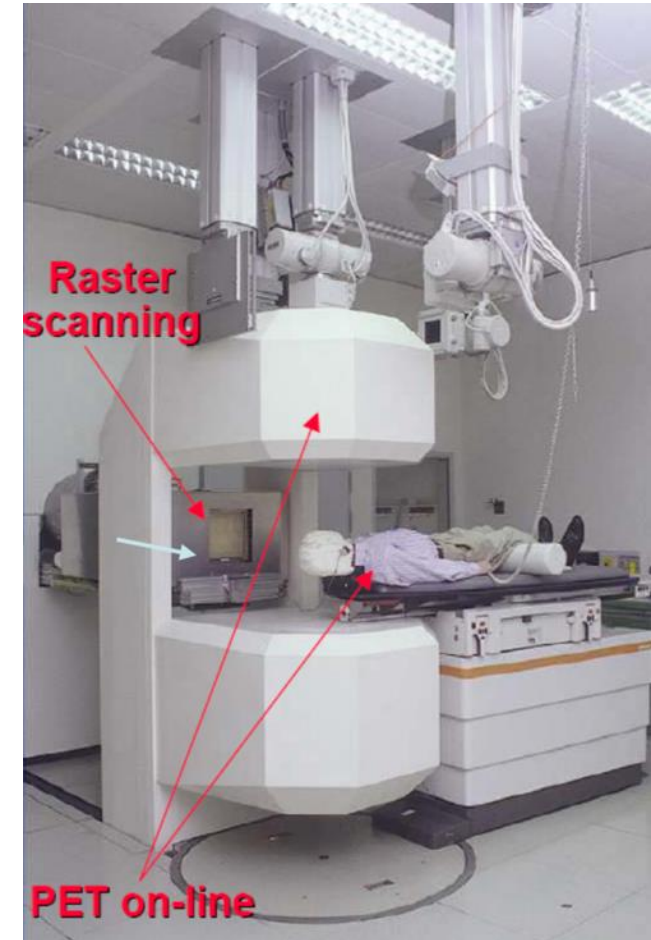
Federico Russo

Anna Gaia Lillo-Od...

U. Amaldi: HI therapy pioneer

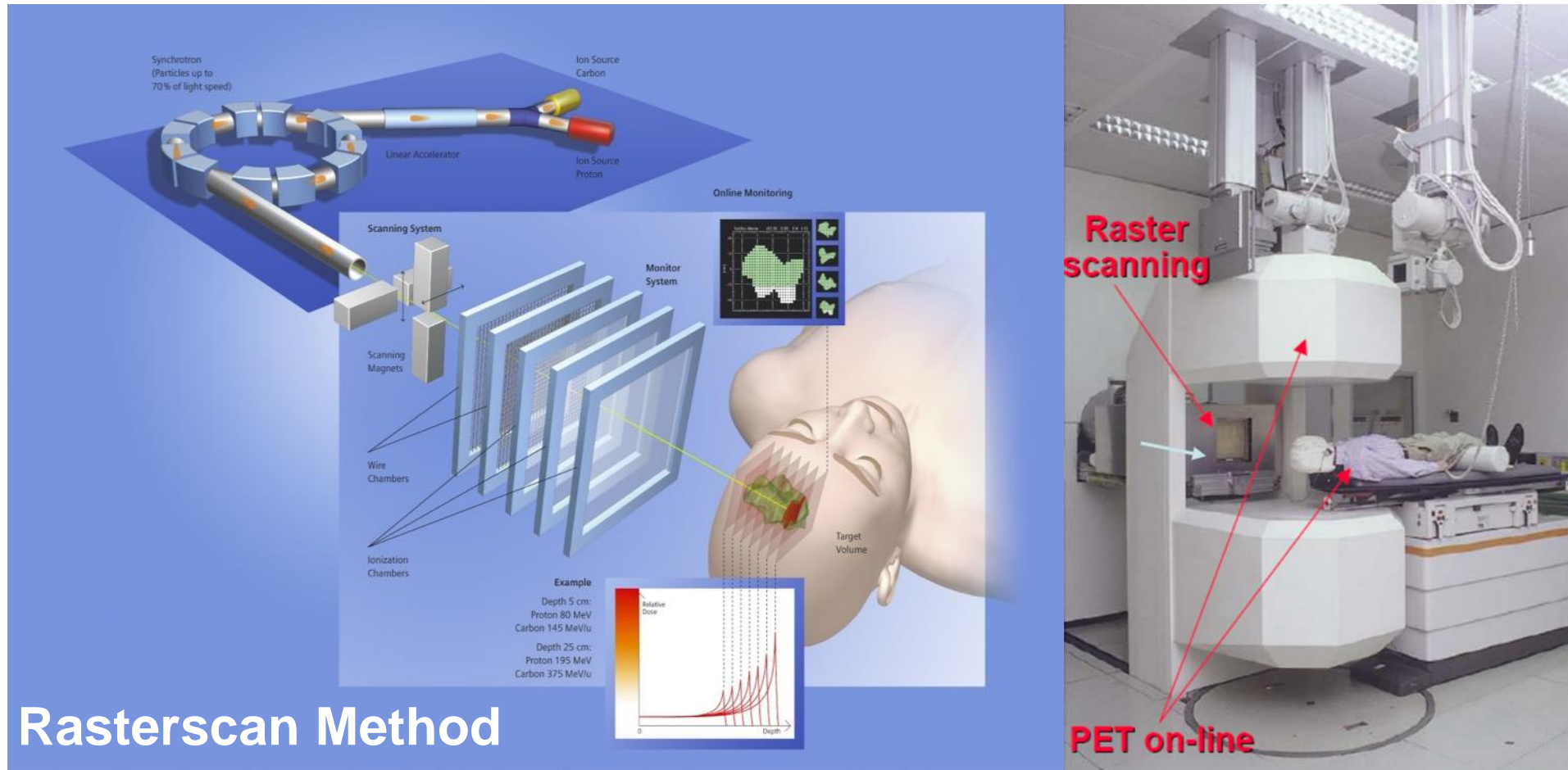


Heavy-ion research and heavy-ion therapy at GSI



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

Heavy-ion research and heavy-ion therapy at GSI

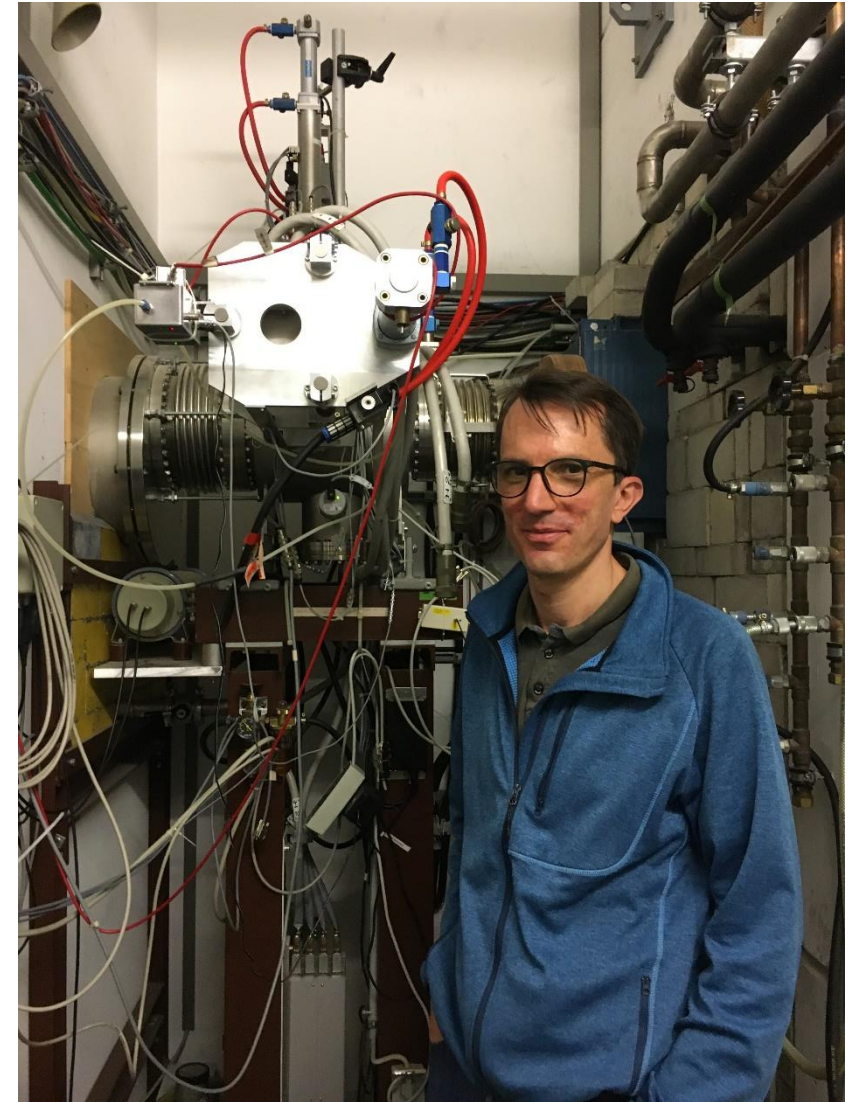


From the historic GSI therapy room Cave M



https://www.dropbox.com/scl/fo/y32povwa5j dj7gwr dmmu2/h?dl=0&preview=05-20210609_virtual-visit_therapie_en.mp4&rlkey=cqpl ic473dlrjy1dyi95mfoje

What is behind the wall?



What is behind the wall?

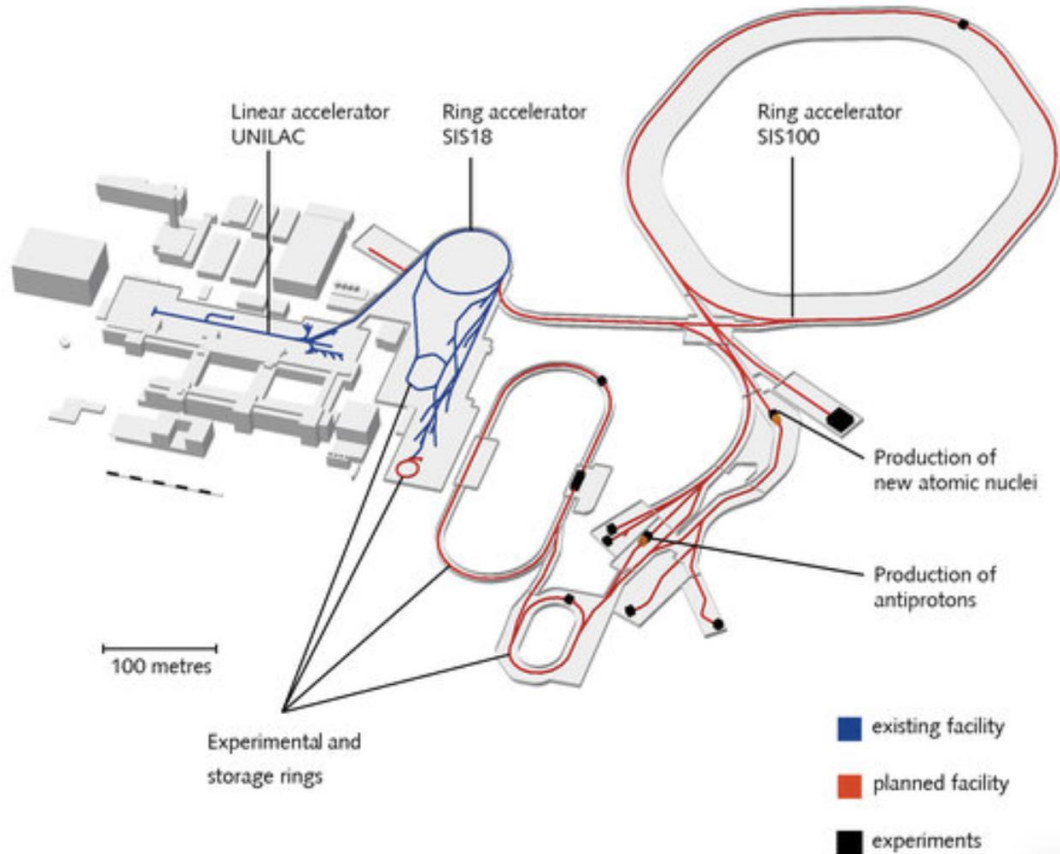


Photo: J. Mai / GSI Helmholtzzentrum für Schwerionenforschung

Four carbon-ion cancer therapy centers in Europe

MedAustron, Austria



CNAO, Italy



HIT, Germany



MIT, Germany



Virtual Hadron Therapy Center



R&D

Ion Gantry

Proton Gantry

Beam Section

Treatment Rooms

Shielding

Preparation Rooms

Children's Area

Imaging

Control Room

Particle Accelerator

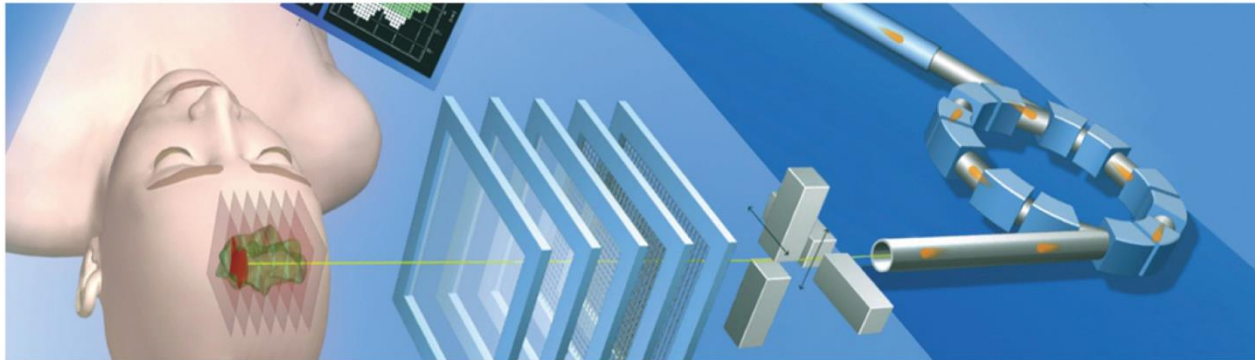
Offices

Consulting Area

Reception

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*



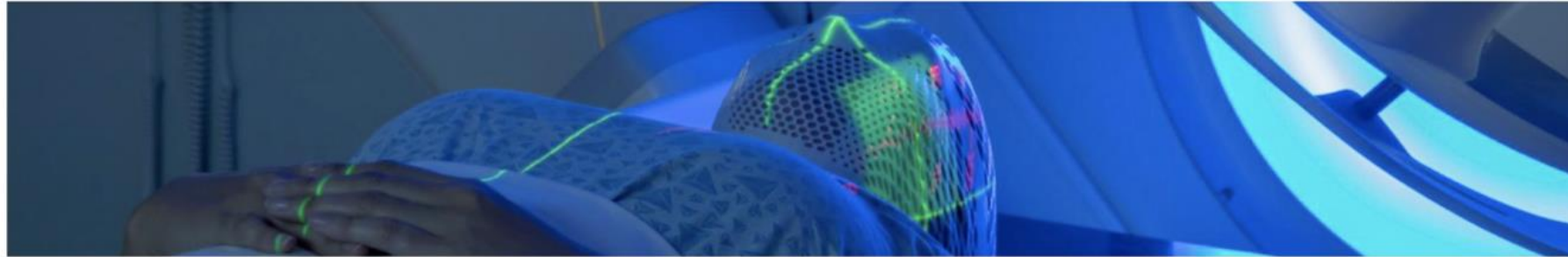
<https://www.hitriplus.eu/>



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YouTube IT



HITRIplus

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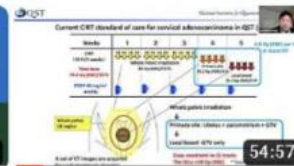


Video ▶ Riproduci tutti



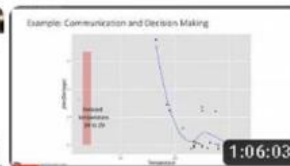
9th Seminar of HITRIplus -
FLASH radiotherapy with...

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 A.O. AD.A.M. MEYRIN, SWITZERLAND



ANNA MARIA KOLANO

PHD MEDICAL PHYSICIST, A.O. AD.A.M. MEYRIN, SWITZERLAND



STEPHEN MYERS

EXECUTIVE CHAIR ADAM SA, EXECUTIVE DIRECTOR AVO PLC, UK

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



SEMI HARRABI

RADIATION ONCOLOGIST, UNIVERSITY HOSPITAL HEIDELBERG



ANDREA HAIRANI

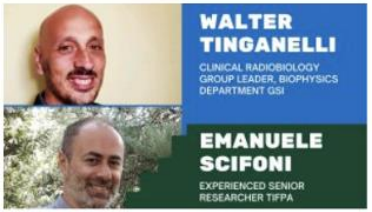
SENIOR PHYSICIST, HIT



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

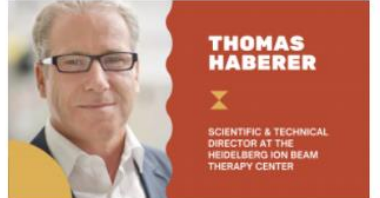
5th Seminar of HITRIplus – Marburg Ion Beam Therapy Center: Innovations in Physics and Radiobiology



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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