



Particle Therapy MasterClass



<https://physicsmasterclasses.org/>

INTERNATIONAL MASTERCLASSES

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Some slides courtesy of Yiota Foka (GSI/CERN), PTMC 2021





From particle physics to particle therapy

- ~10 years in Particle Physics
- ~10 years in Medical Physics





Istituto Nazionale di Fisica Nucleare

- Ente pubblico nazionale di ricerca, dedicato allo studio dei costituenti fondamentali della materia e delle leggi che li governano.
- Un ambito di competizione internazionale
- L'INFN è stato istituito l'8 agosto 1951 da gruppi delle Università di Roma, Padova, Torino e Milano al fine di proseguire e sviluppare la tradizione scientifica iniziata negli anni '30 con le ricerche teoriche e sperimentali di fisica nucleare di Enrico Fermi e della sua scuola.
- Partecipazione dell'INFN alle attività di ricerca del CERN, il Centro europeo di ricerche nucleari di Ginevra
- Oggi l'ente circa 5000 scienziati

linee di ricerca





International Particle
Physics Outreach Group

INTERNATIONAL

MASTERCLASSES

hands on particle physics

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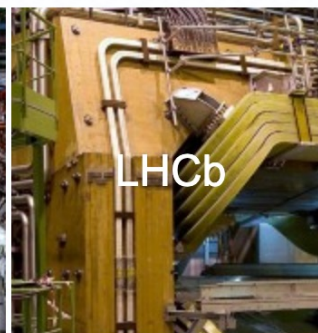
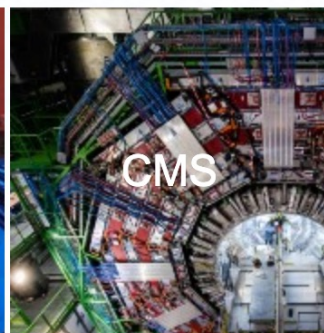
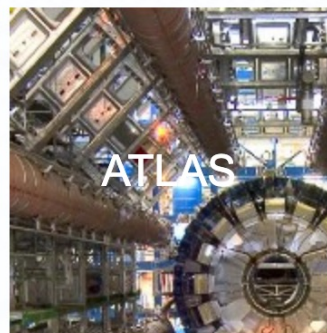
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International Masterclasses

18th International Masterclasses 2022





Scope of the Master Classes

Motivate	Transfer	Research	Meet
Motivate the next generations of scientists	Transfer scientific methods and real data to schools	Get insight into topics and methods of research	Meet other people from over the globe

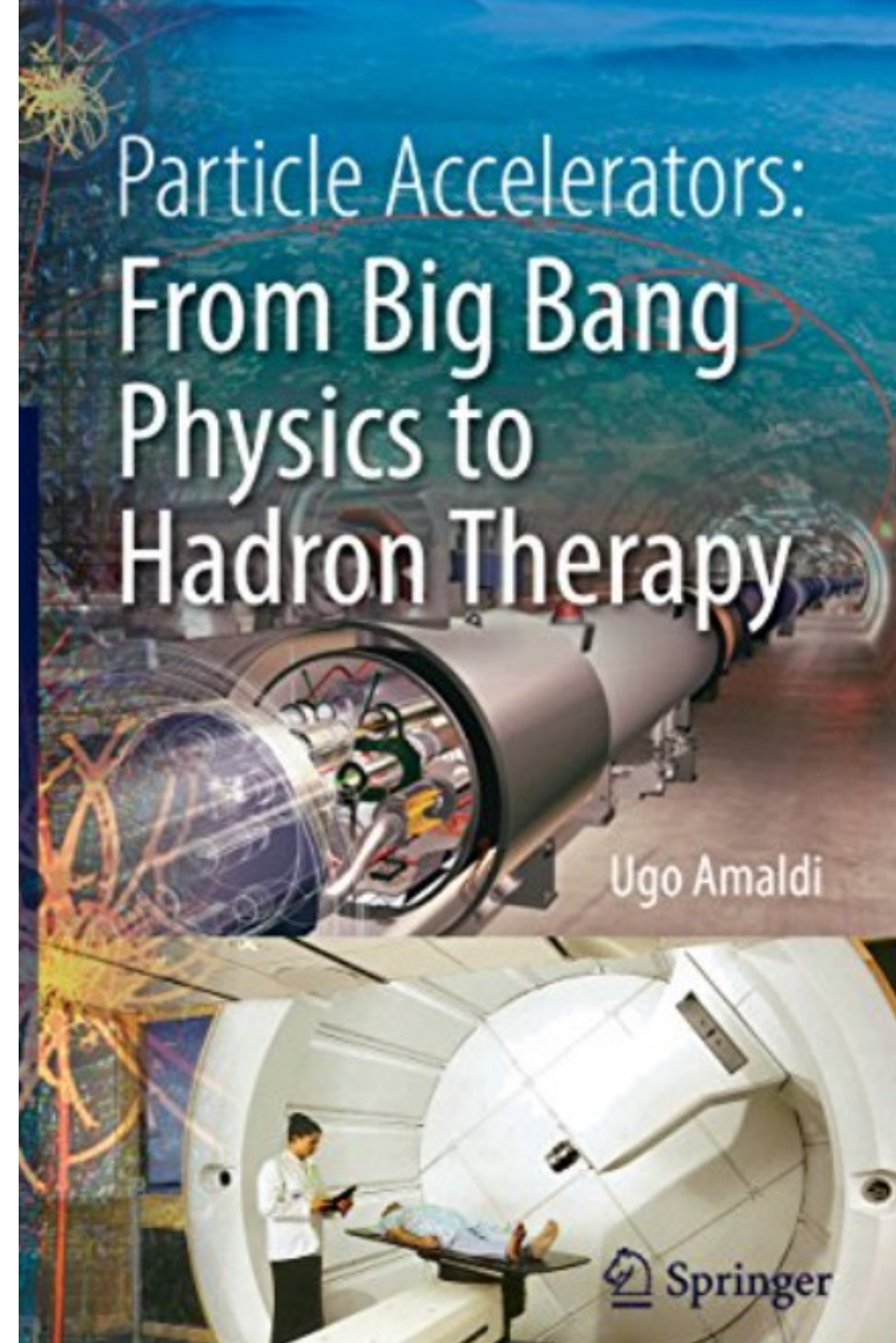
54 countries
255 institutes
15 000 students
5 weeks in 2021





- What is particle therapy?
- How one can use particles for cancer treatment?
- Accelerators for research and accelerators for cancer treatment
- How is fundamental research used in society?

These questions will be addressed today!





PTMC Participants, 8 March 2021



2022: Master classes
on other 18 days

International MasterClasses

<https://physicsmasterclasses.org/>

Programme of today

	Start time	End time	Activity
teoria	9.30	9.45	Welcome
	9.45	10.30	What is particle therapy?
	10.00	10.30	CNAO virtual visit
	10.00	10.30	Coffee break
	11.30	12.00	Particle Therapy at CNAO: Marco Pullia
	12.00	12.30	What is Treatment Planning?
	12.30	13.30	Lunch break
pratica	13.30	15.00	Hands—on session
	15.00	16.00	Discussion of results locally
	16.00	17.00	International Video conference with GSI, CERN, Mexico and Morocco

Scientists for a day !!

