

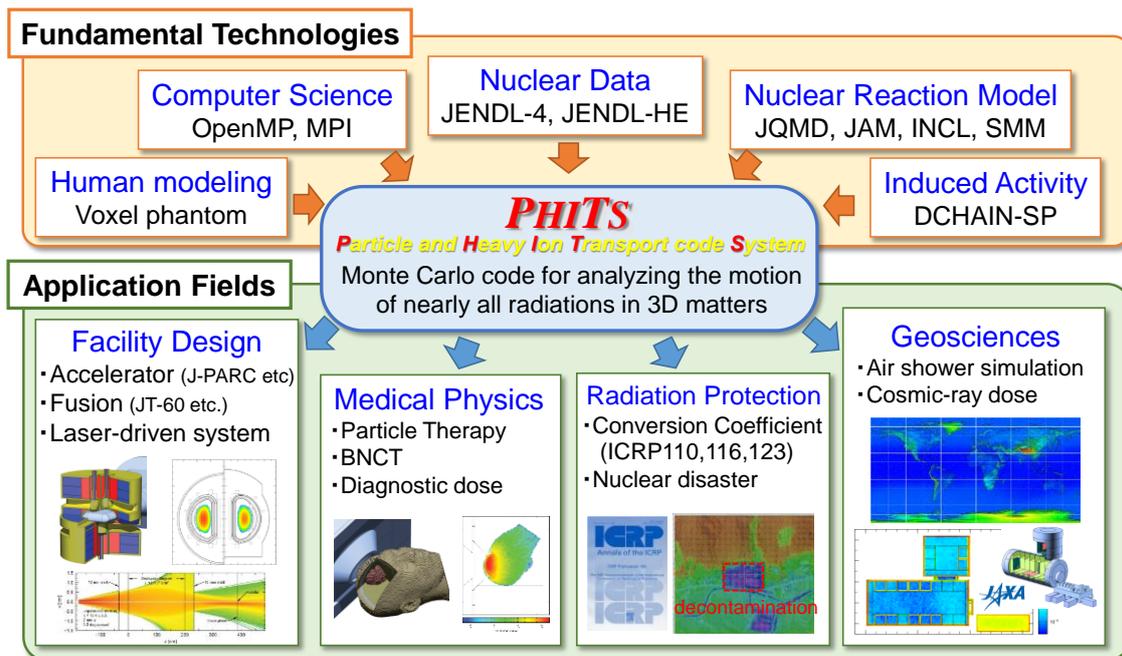
PHITS

Particle and Heavy Ion Transport code System

September 16-20, 2019, PHITS course (€500)

PHITS is a general-purpose Monte Carlo particle transport simulation code developed under collaboration between Japan Atomic Energy Agency (JAEA) and several institutes all over the world. It can deal with the transport of nearly all particles over wide energy ranges, using several nuclear reaction models and nuclear data libraries. PHITS can support your researches in the fields of accelerator technology, radiotherapy, space radiation, and many other fields related to particle and heavy ion transport. Please visit the PHITS website for more detail. (<http://phits.jaea.go.jp>)

Attendees of this course will learn the basics of PHITS such as the construction of 3D geometry and the definition of source particles and tallies. The basic courses are followed by advanced ones such as variance reduction techniques, definition of magnetic fields, and construction of voxel phantoms from CT images. The final part of the course is reserved for PHITS hands-on workshop to run attendees' own simulation under support of the tutors. No particular skills are required to participate to this course.



Tentative Program

Monday 16th Sep.

- 9:30-11:00: Introduction and Installation
- 11:00-12:00: Basic Lecture (Input format)
- 13:30-15:00: Basic Lecture (Geometry & source definition)
- 15:00-17:00: Basic Lecture (Tally definition)

Tuesday 17th Sep.

- 9:00-11:00: Basic Lecture (Parameter setting)
- 11:00-12:00: Exercise (Stop α , β , γ -rays & neutron)
- 13:30-15:00: Exercise (Melt snowman by proton beam!)
- 15:00-17:00: Advanced Lecture (Advanced source definition, Energy distribution)

Wednesday 18th Sep.

- 9:00-10:30: Advanced Lecture (Advanced source definition, Dumped source)
- 10:30-12:00: Exercise (Radioactive inventory calculation)
- 13:30-15:00: Advanced Lecture (Voxel phantom) [voluntary participation]
- 15:00-16:00: Advanced Lecture (Tetrahedral mesh) [voluntary participation]

Thursday 19th Sep.

- 9:00-11:00: Advanced Lecture (Variance reduction)
- 11:00-12:00: Advanced Lecture (Useful functions)
- 13:30-17:00: Hands-on simulation of each participant

Friday 20th Sep.

- 9:00-11:30: Hands-on simulation of each participant
- 11:30-12:00: Q&A
- 13:30- : Upon requests from participants [voluntary participation]

* Coffee breaks between sections are included