



Announcement of the 2nd PHITS Tutorial in Madrid, Spain 2026



Universidad Politécnica de Madrid

Venue:

Escuela Técnica Superior de Ingenieros Industriales
Calle José Gutiérrez Abascal, 2
28006 Madrid, Spain



<https://www.industriales.upm.es>

Dates: 24th to 27th March 2026

Deadline for registration: 19th February 2026 (people with PHITS License)

Registration Fee: Free

Language: English

Course contents:

- 1) Beginner course (Basic + exercise lectures), for people starting with PHITS
- 2) Intermediate course (Hands-on session + advanced lectures), for people with beginner diploma in PHITS

Maximum number of participants: 30 in the Beginner course, and 20 in the Intermediate course (accepted by order of registration and profile).

PHITS Lecturers:

Dr. Tatsuhiko Ogawa (Japan Atomic Energy Agency), Japan
Dr. Hiroshi Iwase (High Energy Accelerator Organization, KEK) Japan

Local organizers and lecturers in Monte Carlo Codes and applications:

Dr. Gonzalo García (UPM) gf.garcia@upm.es (queries and questions)
Dr. Emilio Castro (UPM)
Dra. Nuria García (UPM)
Dr. Oscar Cabellos (UPM)
Dr. Eduardo Gallego (UPM)

Eligibility for participation: Open to everyone who has PHITS license

Admission to the course will be in order of registration, based on the profile of the candidates.

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 research in the fields of accelerator technology, radiotherapy, space radiation, and in many other fields which are related to particle and heavy ion transport phenomena. See PHITS website in more detail. (<http://phits.jaea.go.jp>)

If you would like to attend the course, **you must obtain the PHITS license in prior to the registration process**. PHITS a code free of charge, and the instruction to get the license is given in (<https://phits.jaea.go.jp/howtoget.html>). For persons belonging to an institute in Spain or other pre-approved countries listed on the website, we recommend obtaining the license via OECD/NEA databank because the approval process is much faster, in the next link: <https://databank.io.oecd-nea.org/>

Deadline to obtain the license for new users and attend the course January 23rd 2026

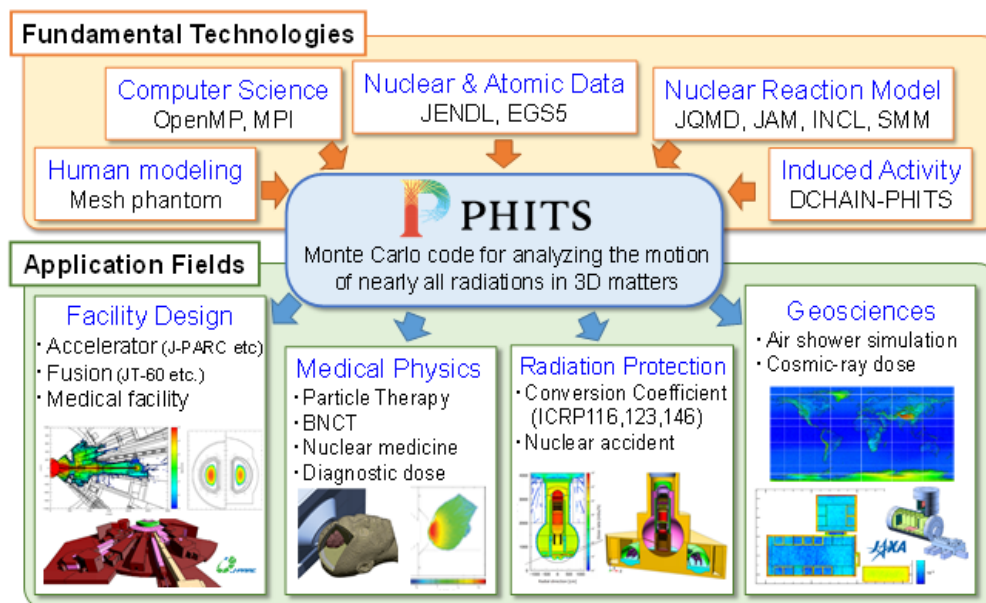
After obtaining the PHITS license, please complete the registration form in the next link: PHITS Workshop 2th edition Madrid (Spain): Rellenar formulario

In the registration process, when you select the course level, we strongly recommend taking the beginner course if you have not taken the PHITS course before, and the intermediate course if you have some experience with PHITS or another Monte Carlo code.

Attendees must bring a laptop PC with either Windows or Mac OS. There is no particular skill that should be learned prior to attending the beginner course, but we recommend taking a brief look of PHITS tutorial video on YouTube to grasp the image of the tutorial contents.

<https://www.youtube.com/playlist?list=PLe8Wrr-sE8vy-ygWoAqWVrvK89PfxUFYO>

If you have any question about the course, or you need a letter for a visa, please contact directly with the local organizers at UPM in Spain, Dr. Gonzalo García, gf.garcia@upm.es



Overview of the PHITS code

Program

Tuesday, 24 March	Hour	Beginner	Intermediate
	10.30 - 11.00	Welcome and registration of participants	
	11.00 - 11.15	Presentation of the Course (Remarks from local organizer and lecturers)	
	11.15 - 13.00	General lectures in Monte Carlo codes and applications (UPM lecturers)	
	13.00 - 14.30	Lunch Time*	
	14.30 - 16.00	Installation and Introduction Beginner	Installation and Introduction Intermediate
	16.00 - 16.30	Coffee Break*	
	16.30 - 18.30	Input format Geometry & Material & Source 1 definition	Miscellany about input/geometry/material/source Mini Workshop (presentation from participants)

Wednesday, 25 March	Hour	Beginner	Intermediate
	9.00 - 10.30	Source 2	Parameter setting
	10.30 - 11.00	Coffee Break*	
	11.00 - 13.00	Tally definition 1	Nuclear reaction physics
	13.00 - 14.30	Lunch Time*	
	14.30 - 16.00	Tally definition 2	D-chain
	16.00 - 16.30	Coffee Break*	
	16.30 - 18.30	Exercise stop radiation	Detector exercise

Thursday, 26 March	Hour	Beginner	Intermediate
	9.00 - 10.30	Parameter setting	Options
	10.30 - 11.00	Coffee Break*	
	11.00 - 13.00	Exercise melt snowman	RT-PHITS
	13.00 - 14.30	Lunch Time*	
	14.30 - 16.00	Options	Scripts
	16.00 - 16.30	Coffee Break*	
	16.30 - 18.30	Exercises multiplier and miscellany	Shielding exercise
	20.30 - 22.30	Social Dinner**	

Friday, 27 March	Hour	Beginner	Intermediate
	9.00 - 10.30	Hands-on exercises	Hands-on exercises
	10.30 - 11.00	Coffee Break	
	11.00 - 12.30	Wrap-up and Q&A session	
	12.30 - 13.00	Final remarks, certificates of attendance	
	13.00 - 14.00	Farewell Cocktail**	

* For coffees and lunches, attendees can purchase a voucher directly at the Faculty Restaurant

** Social dinner and Farewell cocktail courtesy of the Organizers

Lecturers' Profile

Name

Tatsuhiko Ogawa

Position/Organization

Principal Researcher / Japan Atomic Energy Agency

Education and employment history

2012 Mar. Ph.D., Department of Nuclear Engineering and Management, University of Tokyo

2012 Apr. Post-doc fellow, Japan Atomic Energy Agency

2019 Dec-2020.Dec – Visiting researcher, French Commission of Atomic Energy and Alternative Energies

2025 Jul. Principal Researcher, Japan Atomic Energy Agency



Research area and outcome.

He is one of the developers of the current PHITS development team. He also used the code by himself for irradiation effect studies. As one of the PHITS authors, he developed models to leverage nuclear data such as event-reconstruction model and nuclear de-excitation model, heavy-ion fragmentation model, and truck-structure model. He published more than 110 peer-reviewed papers, which have been cited more than 4,000 times (according to Google Scholar).

Name

Hiroshi Iwase

Position/Organization

Associate Professor / High Energy Accelerator Research Organization (KEK)

Education and employment history

2003 Mar. Ph.D., Department of Quantum Science and Energy Engineering, Tohoku University

2003 Apr. Postdoc, Gesellschaft fuer Schwerionnen Forschung (GSI)

2006 Oct. Assistant Professor, Radiation Science Center, KEK

2021 Apr. Associate Professor, Radiation Science Center, KEK



Research area and outcomes

He is a member of PHITS development team. His activity on PHITS was mainly in the period when RIKEN, GSI, and MSU were going to develop their own RI beam facility, and he contributed the use of PHITS in these research laboratories. In KEK he is involved in radiation safety and also SOKENDAI education. Presently his research themes are improving the photo-nuclear models and low energy heavy ion reactions in PHITS.