

Announcement of the PHITS Tutorial in Vietnam

Place: Institute for Nuclear Science and Technology, VINATOM

<http://www.inst.gov.vn/index.php/eng>

Address: 179 Hoang Quoc Viet, Nghia Do, Cau Giay, Ha Noi

Date: 2019 Aug. 27-30

Deadline for registration: 2019 July 26

Registration Fee: Free

Language: English

Eligibility for participation: None (Open to everybody¹)

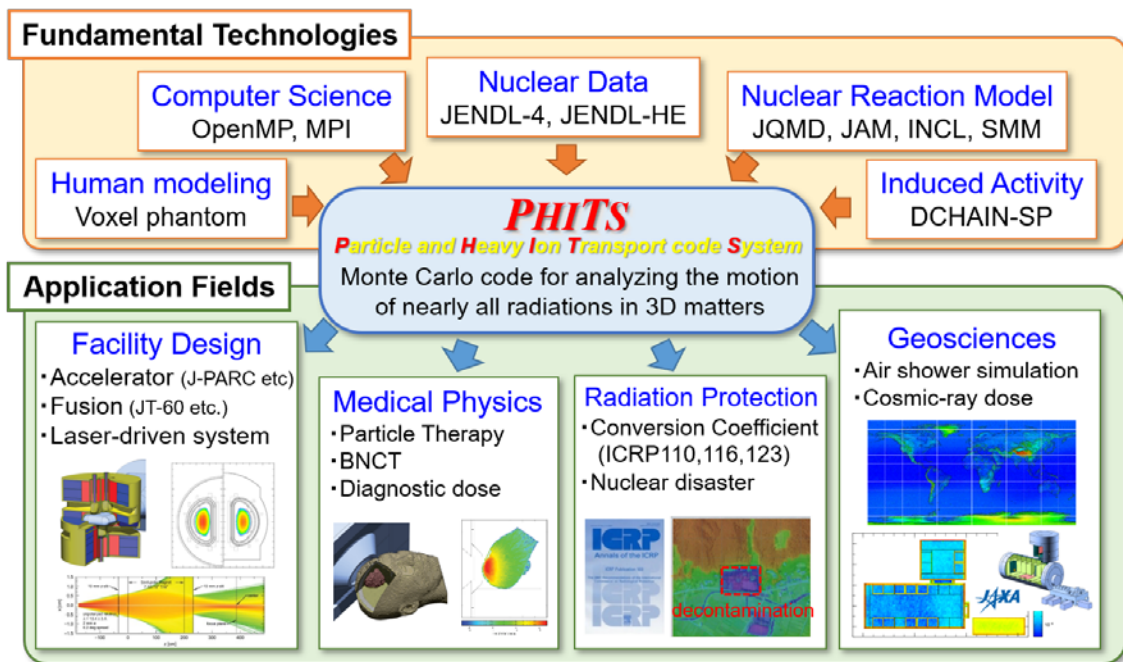
Lecturer: Dr. Tatsuhiko Sato, Leader of PHITS development team, JAEA, Japan

Prof. Lembit Sihver, Head of Radiation Physics, TU Wien, Austria, and Head of Applied Medical Physics Research / EBG MedAustron GmbH.

Local organizer: Dr. Le Ngoc Thiem (VINATOM)

This course is held as a part of The VINATOM/JAEA Follow-up Training Course on "Environmental Radioactivity Monitoring: ERM-9". 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 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>)

¹ Attendees must obtain the PHITS license in prior to the course. The distribution of the PHITS code is controlled by Japanese law, and we may not be able to accept the participation from country/institute of weapon development concern.



Overview of the PHITS code

If you would like to attend the course, you have to obtain the license of the latest version of PHITS. It is free of charge, and the instruction to get the license is given below (<https://phits.jaea.go.jp/howtoget.html>). When you submit the application form, please select “Submission of application form” in the contact page of PHITS website, and write “I would like to attend PHITS course in VINATOM, Aug 2019” in the message body. If you have already obtained the PHITS license, please select “Registration for PHITS tutorial”, and write “VINATOM, Aug 2019” in the column of “Tutorial to attend”.

Attendees must bring a laptop PC with either Windows or Mac OS. During the course, they will learn the basic usage of PHITS such as the construction of 3D geometry and the definition of source particles and tallies. At the end of the course, they will be encouraged to conduct PHITS simulation for their own purpose under support of lecturer. There is no particular skill that should be learned in prior to attending this course.

If you have any question about the course, please Email to Dr. Le Ngoc Thiem thiem.lnt@gmail.com (for Vietnamese), or PHITS office phits-office@jaea.go.jp (for non-Vietnamese) with your information (Affiliation, Nationality).

Tentative Program

Tuesday 27 August

Morning: Overview of the PHITS code and its application to radiological protection researches (as a part of The VINATOM/JAEA Follow-up Training Course)

(lunch)

13:30-14:30: Introduction and Installation

14:30-14:45: Break

14:45-16:00: Basic Lecture (input format & geometry)

16:00-16:15: Break

16:15-17:30: Basic Lecture (input format & geometry)

Wednesday 28 August

09:30-10:30: Basic Lecture (source definition)

10:30-10:45: Break

10:45-12:00: Basic Lecture (tally definition)

(lunch)

13:30-14:30: Basic Lecture (tally definition)

14:30-14:45: Break

14:45-16:00: Basic Lecture (parameter setting)

16:00-16:15: Break

16:15-17:30: Basic Lecture (parameter setting)

Thursday 29 August

9:30-11:30: Exercise (stop α , β , γ -rays & neutron)

(lunch)

13:00-14:30: Exercise (melt snowman by proton beam!)

14:30-14:45: Break

14:45-16:00: Advanced Lecture (complicated source definition)

16:00-16:15: Break

16:15-17:30: Advanced Lecture (complicated source definition)

Friday 30 August

9:30-12:00: Practical Simulation for Each Participant

CV of Lecturer

Name

Tatsuhiko Sato

Position/Organization

Principal Researcher / Japan Atomic Energy Agency

Specially appointed professor / Osaka University



Education and employment history

1996 Mar. B.Sc., Department of Nuclear Engineering, Kyoto University

1998 Mar. M.Sc., Department of Nuclear Engineering, Kyoto University

2001 Mar. Ph.D., Department of Nuclear Engineering, Kyoto University

2001 Apr. Researcher, Japan Atomic Energy Research Institute

2005 Oct. Researcher, Japan Atomic Energy Agency (due to re-organization)

2011 Oct. – Principal Researcher, Japan Atomic Energy Agency

2018 Dec. – Specially appointed professor, Osaka University (Cross appointment contract)

Major professional accomplishments

He is the principal investigator of the current PHITS development team. He also used the code by himself for cosmic-ray research and medical physics. He developed a model for estimating the terrestrial cosmic-ray fluxes for both solar quiet and storm periods based on the airshower simulation performed by PHITS. He also developed a model for estimating the therapeutic effects of charged particle therapy and boron neutron capture therapy based on the microdosimetric simulation performed by PHITS. He is a member of International Commission on Radiological Protection (ICRP) Committee 2 since 2017. He published more than 140 peer-reviewed papers including 45 corresponding-author ones. They have been cited by more than 3,000 times, and his h-index is 25 (according to Google Scholar).

Awards

2007 Mar. Award for Distinguished Technology Development, Atomic Energy Society of Japan

2010 Jan. Award for Young Investigator, Innovative Nuclear Research and Development Program, Japan Science and Technology Agency

2010 Apr. The Young Scientists' Prize, The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology

2014 Mar. Special Award for Distinguished Technology Development, Atomic Energy Society of Japan

Name

Lembit Sihver

Position/Organization

Head of Radiation Physics / Technische Universität Wien.

Head of Applied Medical Physics Research / EBG MedAustron GmbH.

Education history

1986: MSc in Chemical Engineering, KTH, Sweden.

1988: Licentiate of Technology in Nuclear Chemistry/Nuclear Physics, Uppsala University, Sweden.

1990: Dr. of Technology (PhD) in Nuclear Chemistry/Nuclear Physics, Uppsala University, Sweden.

1997: Conferment of the title of Associate Prof. (Docent) of Nuclear Chemistry, KTH, Sweden.

Employment history

1990-1991: Researcher at Uppsala University, Sweden.

1991-1992: Science and Technology Agency Scientific Fellow at NIRS, Japan.

1993-1995: Visiting Scientist at the "GSI Helmholtz Centre for Heavy Ion Research" (GSI), Germany.

1995-2002: Senior Specialist and Product Group Leader at the staff of ABB/Westinghouse Atom AB, Sweden.

2002-2005: Full Professor of Nuclear Chemistry, Head of Nuclear Science and Engineering Group, Div. of Nuclear Chemistry, Dept. of Chemistry, Chalmers University of Technology, Sweden.

2005-2016: Full Professor of Nuclear Science and Engineering, Head of Nuclear Science and Engineering Research Group, Div. of Nuclear Eng., Dept. of Applied Physics, Chalmers University of Technology, Sweden.

2015 – present: Head of Radiation Physics / Technische Universität Wien, Austria, and Head of Applied Medical Physics Research / EBG MedAustron GmbH, Austria.

Adjunct Professor Positions

Sunway, University, Malaysia; Chalmers, Sweden; East Carolina University, USA; RMC, Canada; Soochow University, China; University of Houston, USA; Texas A&M University, USA; Roanoke College, USA.

Major professional accomplishments

Sihver's major research areas are medical radiation physics, nuclear physics, particle and heavy ion transport, radiation protection and dosimetry. He has developed MSc and PhD courses and programs in Nuclear Engineering, Radiation Protection and Dosimetry, Nuclear Physics, Nuclear Chemistry, Radiation Physics in Engineering and Medicine, Science TU You - Science - Communication in Practice, Monte Carlo Technique, Nuclear Fuel Cycle, etc. He has extensive experience of supervising project workers, BSc, MSc and PhD students, as well as interns and post docs. He is an official peer reviewer for around 30 international scientific journals, and he is an editorial board member of 3 international scientific journals. He has published 134 peer-reviewed papers, 213 peer-reviewed conference proceedings, 5 international patents, 110 laboratory and company reports, and nearly 400 oral and poster presentations at international meetings and conferences. His publications have been cited around 3,800 times, and his h-index is 27 (according to Google Scholar).

