

9th RIKEN-JCNS Joint Workshop 2025

The Neutron Beam Technology Team, Center for Advanced Photonics (RAP), and the Jülich Centre for Neutron Science (JCNS) will hold their joint workshop on compact accelerator-driven neutron sources (CANS), in a hybrid format (both online and in-person in Riken, Japan). The first joint workshop was held in 2017 at the RIKEN campus in Wako, Japan. The workshop has been held annually since 2017, alternating between RIKEN in Japan and JCNS, Forschungszentrum Jülich, in Germany. This year, it will take place at RIKEN.

The workshop aims to promote shared research topics focused on the development of neutron targets for neutron generation, neutron moderation techniques, and instrumentation systems for CANS at both institutes.

Access to the webinar for all three days of the joint workshop is provided through the following web link:

ZOOM link:

<https://riken-jp.zoom.us/j/98834072685?pwd=eKWz1S9Bou7Ta9qlr6Evq56viZynrJ.1>

The workshop will take place from June 16 to 18, 2025. There will be two types of presentations, each with the following durations:

- i. Invited presentation: Total duration of **30** minutes (25 + 5 minutes)
- ii. Regular presentation: Total duration of **20** minutes (15 + 5 minutes)




Presentation Slides Upload (Please upload your slides using the link below)

<https://riken-share.ent.box.com/f/2d16c278686d42b98d08a1b82c10374d>

Workshop organizers: Dr. Yoshie Otake (RIKEN)

Dr. Paul Zakalek (JCNS)

Workshop Coordinators:

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Day 1

Date 16-06-2025

Time (JST)	Time (CET)	Title	Speaker
16:00-16:10	09:00-09:10	Welcome address	Dr. Yoshie Otake
Session 1 -Chair: Dr. Tomohiro Kobayashi			
16:10-16:30	09:10-09:30	HBS project, current status and future steps	Dr. Paul Zakalek (JCNS)
16:30-16:50	09:30-09:50	Measurement of Low Energy Neutrons Scattered by a Graphene Sheet under a New Experimental Set-up with a Nozzle Type Collimator at RANS Cold Source	Dr. Yujiro Ikeda (RIKEN)
16:50-17:10	09:50-10:10	Harnessing the Complementary Properties of Methane and Parahydrogen for the Design of an Intense Very Cold Neutron Source for the High Brilliance Source	Dr. Maharaj Dalini (JCNS)
17:10-17:30	10:10-10:30	Coffee break [20 minutes]	
Session 2 -Chair: Dr. Paul Zakalek			
17:30-17:50	10:30-10:50	20 MeV Vanadium Target Development for HBS Phase I	Dr. Johannes Baggemann (JCNS)
17:50-18:10	10:50-11:10	Design and development of a lithium target compatible with a 3MeV proton beam	Sivaraj Aditya Sambamurthy (JCNS)
18:10-18:30	11:10-11:30	Optimization of the Target-Moderator-Reflector assembly for the High-Current Accelerator-Based production of Mo-99	Doruntin Shabani (JCNS)
18:30-18:40	11:30-11:40	Group Photo	
Session 3 -Chair: Dr. Johannes Baggemann			
18:40-19:00	11:40-12:00	Current status of the on-board neutron system RANS-III	Dr. Tomohiro Kobayashi (RIKEN)
19:00-19:20	12:00-12:20	Investigation of stagnant water visualization for on-site non-destructive testing of cable anchorages in cable-stayed bridges using neutron beams	Dr. Tomonori Fukuchi (RIKEN)

19:20-19:40	12:20-12:40	Detection of water between layers of road pavement using neutron beam at RIKEN accelerator-driven compact neutron source RANS-II	Dr. Sohei Imajo (RIKEN)
19:40-20:00	12:40-13:00	Start for large-scale measurements of 50 bridges	Dr. Yasuo Wakabayashi (RIKEN)
20:00-20:15	13:00-13:15	General discussion of Day 1	

Day 2 **Date 17-06-2025**

Time (JST)	Time (CET)	Title	Speaker
Session 4 -Chair: Dr. Johannes Baggemann			
16:00-16:30	09:00-09:30	Development of precise transmission neutron imaging technique and its prospect	Dr. Takehiko R. Saito, (RIKEN)
16:30-16:50	09:30-09:50	Neutron imaging at RANS-II	Dr. Takaoki Takanashi (RIKEN)
16:50-17:10	09:50-10:10	Evaluation of existing concrete structures using by neutrons	Dr. Maki Mizuta (RIKEN)
17:10-17:30	10:10-10:30	Recent Progress in Developing High-Resolution Neutron Imaging Using FGNEs and FNTDs	Dr. Muneem (RIKEN)
Coffee break [20 minutes]			
Session 5 -Chair: Dr. Tomonori Fukuchi			
17:50-18:20	10:50-11:20	Introduction to the NARI 70 MeV Cyclotron Project	Dr. Ting-Shien Duh (NARI, Taiwan)
18:20-18:40	11:20-11:40	Recent status of AISTANS	Dr. Koichi Kino (AIST)
18:40-19:00	11:40-12:00	Efficient beam transport in long instruments at HiCANS sources	Dr. Klaus Lieutenant (JCNS)
19:00-19:20	12:00-12:20	General discussion of Day 2 and Group Photo	

Day 3

Date 18-06-2025

Time (JST)	Time (CET)	Title	Speaker
Session 6 -Chair: Dr. Takakoi Takanashi			
16:00-16:20	09:00-09:20	Radiation Measurement Using Solar Cell and Progress Toward Social Implementation	Dr. Yasuki Okuno (RIKEN)
16:20-16:40	09:20-09:40	Evaluation of neutron dose rates at the HBS prototype target station	Dr. Jingjing Li (JCNS)
16:40-17:00	09:40-10:00	Beam shutters for unhindered access to neutron instruments	Dr. Ulrich Rucker (JCNS)
17:00-17:20	10:00-10:20	Design and Simulation of NARI's Neutron Diffractometer	Dr. Sheng-Long Jeng (NARI, Taiwan)
Coffee break [10 minutes]			
Session 7 -Chair: Dr. Yasuki Okuno			
17:30-17:50	10:30-10:50	Accelerator Developments for HICANS facilities	Dr. Andreas Lehrach (JCNS)
17:50-18:10	10:50-11:10	TE211 mode Single Hybrid Cavity linac for a Compact Neutron Source	Dr. S. Ikeda (Institute of Science Tokyo)
18:10-18:30	11:10-11:30	Modeling lunar albedo neutrons for water search	Dr. Hiroki Kusano (RIKEN)
18:30-18:40	11:30-11:40	General discussion of Day 3	
18:40-18:50	11:40-11:50	Closing remarks	Dr. Paul Zakalek