

Purpose

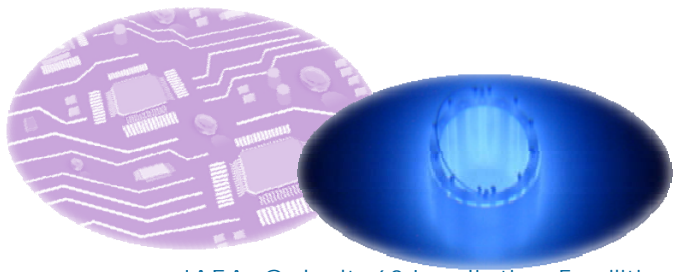
In the decommissioning work for TEPCO's Fukushima Daiichi Nuclear Power Station, the remote maintenance operations under intense gamma-ray irradiation conditions are inevitable. Developing radiation-tolerance robots or remote monitoring and handling systems is going to be an important issue.

These technologies can also form a good foundation for future development in innovative technologies such as the Gen-IV reactors, fusion power, etc., and have spin-off potential.

Japan Atomic Energy Agency (or JAEA) has ever carried out radio-resistance evaluations for electronic components or sensors as well as R&D on related basic technologies.

The purpose of the 2-day workshop is to bring together researchers from around the world who are interested in exploring the link between decommissioning work and sensor hardening-related technologies. In this workshop, we focus on the following topics:

- ◆ R&D on sensor/measuring technologies available under radiation environments
- ◆ R&D on radiation-resistant devices
- ◆ R&D on spintronics
- ◆ R&D on robot-related electronics



JAEA, Cobalt- 60 Irradiation Facilities



Iwaki Marine Tower



Marine Science Museum, (Aquamarine Fukushima)



LATOV Iwaki Business Innovation Center
 120 Aza-Tamachi Taira,
 Iwaki-city, Fukushima 〒970-8026

R2SRT2016

“ International Workshop on Radiation Resistant Sensors and Related Technologies for Nuclear Power Plant Decommissioning 2016 ”

19-20 April, 2016
Iwaki Japan

Venue :
LATOV, Iwaki city, Fukushima
Conference Language : English



Host organization is
Japan Atomic Energy Agency (JAEA)

JAEA-R2SRT2016@jaea.go.jp

Contact :
Japan Atomic Energy Agency
 Tokai Research and Development Center,

<http://www.jaea.go.jp/english/04/ntokai/access/>



Program

“ R2SRT2016 ”

19-20 April, 2016 Iwaki Japan

<DAY1 : 19 APRIL>

12:00- RECEPTION

13:00- OPENING REMARKS

SESSION- 1 (ROBOT-RELATED ELECTRONICS)

13:10- “ EVALUATION AND CHARACTERIZATION OF ELECTRONIC PARTS FOR THE EUROPA CLIPPER MISSION ”

MR. S. McCLURE (JPL)

“ R&D ON ROBOTS FOR THE DECOMMISSIONING OF FUKUSHIMA DAIICHI NPS ”

MR. KINOSHITA (IRID)

“ RADIATION TOLERANCE OF COMPONENTS ON THE SHELF ”

MR. S.KAWATSUMA (JAEA)

“ ELECTRONIC RADIATION HARDENING, A SYSTEM APPROACH ”

DR. A. DUPRET (CEA)

15:10- BREAK (20 MIN.)

SESSION- 2 (DECOMMISSIONING TECHNOLOGIES)

15:30- “ DECOMMISSIONING EXPERIENCES AT THE USDOE SAVANNAH RIVER NATIONAL LABORATORY ”

DR. K.KOSTELNIK (SRNL)

“ R&D AND INNOVATION IN INSTRUMENTATION AND MEASUREMENT FOR IMPROVED CORE SAFETY, PERFORMANCE AND CONTROL ”

DR. A. LYOUSSI (CEA)

“ OECD NEA ACTIVITY IN THE AREA OF THE USE OF ROBOTIC AND REMOTE SYSTEMS IN RADIOACTIVE WASTE MANAGEMENT AND DECOMMISSIONING ”

DR. V. LEBEDEV (OECD/NEA)

17:10- ADJOURN

18:00- WELCOME RECEPTION
(PLACE: IWAKI WASHINGTON HOTEL)

<DAY2 : 20 APRIL>

8:50- RECEPTION

9:00- GENERAL INFORMATION

SESSION - 3 (NEW MATERIALS)

9:10- “ SILICON-CARBIDE BASED THERMAL AND FAST NEUTRON DETECTORS FOR NUCLEAR REACTOR MONITORING ”

DR. L.OTTAVIANI (AIX-MARSEILLE UNIV.)

“ DEVELOPMENT OF DIAMOND RADIATION DETECTORS AND FETS FOR NUCLEAR POWER PLANTS ”

ASSOC.PROF. J.KANEKO (HOKKAIDO UNIV.)

10:10- BREAK (20 MIN.)

10:30- “ 4H-SIC MOSFETS AND LOGIC INVERTERS FOR RADIATION-HARDENED ELECTRONICS ”

ASSOC.PROF. S.KUROKI (HIROSHIMA UNIV.)

“ POSSIBILITY FOR AN IMAGE CAPTURING OF NUCLEAR DEBRIS MATTERS ”

DR. K.KUMANO (TOHOKU UNIV.)

“ DEVELOPMENT OF SUPER RADIATION RESISTANT METAL-OXIDE-SEMICONDUCTOR TRANSISTOR BASED ON SILICON CARBIDE ”

DR. T.OHSHIMA (QST)

12:00- LUNCH

SESSION - 4 (INNOVATION CONCEPT:SPINTRONICS)

13:30- “ EFFECTS OF SWIFT HEAVY ION BOMBARDMENT ON THE FUNCTIONAL PROPERTIES OF MAGNETIC TUN-

NEL JUNCTION AND EXAMPLES OF RADIATION HARD CIRCUITS DESIGN BASED ON THESE ELEMENTS”

DR. B.DIENY (CEA)

“ APPLICATION OF SPINTRONICS TO NUCLEAR TECHNOLOGY ”

DR.S.MAEKAWA (JAEA)

14:30- BREAK (20 MIN.)

SESSION - 5 (SENSORING TECHNOLOGIES)

14:50- “ ADVANCED CMOS IMAGE SENSORS DEVELOPMENT FOR HIGH SENSITIVITY, HIGH SPEED AND WIDE SPECTRAL RESPONSE ”

ASSOC.PROF. R.KURODA (TOHOKU UNIV.)

“ HIGH RADIATION RESISTANT VISUALIZATION TECHNOLOGIES USING SILICA BASED GLASS IMAGEFIBER ”

MR. T.TORIYA (FUJIKURA LTD.)

15:50- BREAK (20 MIN.)

16:10- “ PHOTONICS APPROACHES FOR PLANT DECOMMISSIONING ”

DR. Y.TAKIGUCHI (HAMAMATSU PHOTONICS)

“ DEVELOPMENT OF ONSITE/IN-SITU, RAPID AND RADIO-RESISTANCE REMOTE ANALYSIS BY OPTICAL FIBER BASED LASER INDUCED BREAKDOWN SPECTROSCOPY ”

DR. I.WAKAIDA (JAEA)

17:10- CLOSING REMARKS

17:20- ADJOURN