

## IAEA International Workshop of

Regional Training Course for Teachers to Introduce Nuclear Sciences in Secondary Schools through Innovative Approaches



February 18 to March 1 (2019)
- Tokyo, Tokai, and Fukushima Hosted by

















# **WS Overview**

| Time  | Sunday<br>17 Feb             | Monday<br>18 Feb [1]                                | Tuesday<br>19 Feb [2]                 | Wednesday<br>20 Feb [3]                   | Thursday<br>21 Feb [4]   | Friday<br>22 Feb [5]                     | Saturday<br>23 Feb [6]                                 |
|-------|------------------------------|---|---------------------------------------|---|--------------------------|--|--|
| АМ    | Arrival<br>at Tokyo          | -Opening(1,2)<br>-Lecture(1)<br>UTokyo              | -Lecture(5,6)<br>-Reporting<br>UTokyo | -Greetings<br>-Lecture<br>(7,8,9)<br>JAEA | -Visit<br>(JAEA)<br>JAEA | - Discussion<br>- Reporting<br>JAEA      | -Lecture<br>(12,13, S4)<br>UTokyo                      |
| Lunch |                              | UTokyo<br>restaurant                                | Free                                  | Bento                                     | Bento                    | Bento                                    | Bento  |
| PM    |                              | -Visit<br>(UTokyo)<br>-Lecture<br>(2,3,4)<br>UTokyo |                                       | -Experiment<br>(1a, 1b)<br>JAEA           | -Visit<br>(JAEA)<br>JAEA | -Lecture<br>(10,11,53)<br>JAEA           | -Experiment(2)<br>-Lecture(14)<br>-Reporting<br>UTokyo |
| Night |                              | Welcome<br>Party                                    | 7pm, UTokyo<br>to Tokai by bus        | -Shopping to<br>Mall by bus               |                          | Card-Game<br>Competition<br>(Applicants) |  |
| Stay  | (A)<br>Hotel Forest<br>Hongo | (A)   | (B)<br>JAEA or UTokyo<br>Dormitory    | (B)                                       | (B)                      | (B)                                      | (B)  |

| Time  | Sunday<br>24 Feb | Monday<br>25 Feb [7]                                    | Tuesday<br>26 Feb [8]   | Wednesday<br>27 Feb [9]             | Thursday<br>28 Feb [10] | Friday<br>1 Mar [11]               | Saturday<br>2 Mar |
|-------|------------------|---|---|-------------------------------------|-------------------------|------------------------------------|-------------------|
| AM    | Free             | 7am, Tokai to<br>Fukushima #1<br>NPP by bus             | -Reporting<br>-Making each<br>education plan<br>(Self-activity) | -Lecture<br>(S1, S2)<br>-Pedagogy 1 | -Pedagogy 3<br>JAEA     | = =:                               | Leaving<br>Tokyo  |
|       |                  | -Visit<br>(Fukushima#1<br>NPP)<br>-Lecture(15)<br>TEPCO |   | JAEA                                |                         |                                    |                   |
| Lunch |                  | Bento   |   | Bento                               | Bento                   | Bento                              |                   |
| PM    |                  |   |   | -Pedagogy 2<br>JAEA                 | -Pedagogy 4<br>JAEA     | -Pedagogy 6<br>-Conclusion<br>JAEA |                   |
|       |                  | 4pm, JAEA to<br>Iwaki by bus                            | 3pm, Iwaki to<br>Tokai by bus                                   |                                     |                         | 4pm, Tokai to<br>Hongo by bus      |                   |
| Night |                  | Hotel Buffet  |   |                                     | Farewell Party          | Free                               |                   |
| Stay  | (B)              | (C)<br>Spa Resort<br>Hawaiians                          | (B)<br>JAEA or UTokyo<br>Dormitory                              | (B)                                 | (B)                     | (A)<br>Hotel Forest<br>Hongo       |                   |



| Opening   | min | Lecturer              |
|---|-----|-----------------------|
| 1 Overview of the IAEA RAS/0/079 on Educating Secondary Schools | 20  | Dr. Sabharwal (IAEA)  |
| 2 Outline of the Training Objectives for IAEA TTWS 2019 JPN     | 10  | Prof. limoto (UTokyo) |

|           | Lecture   | min    | Lecturer   |
|-----------|---|--------|--|
| 1         | Overview of Nuclear Applications                            | 45     | Dr. Sabharwal (IAEA)                                       |
| 2         | Basics of Nuclear Physics                                   | 45     | Ms. Katengeza (UTokyo)                                     |
| 3         | Radiation Biology   | 45     | MD, Dr. Fujii (NCC)  |
| 4         | Radiation Measurement and Dosimetry                         |        | A-Prof. Wakabayashi<br>(Kindai Univ.)                      |
| 5         | Social Viewpoint on Nuclear Application                     | 45     | A-Prof. Takashima (TUS)                                    |
| 6         | Over all Review of Radiation Basics                         | 60     | Movie  |
| 7         | Radiation Protection Concept                                | 45     | Prof. limoto (UTokyo)                                      |
| 8         | Radioactive Waste Management                                | 45     | Dr. Maeda (UTokyo/JAEA)                                    |
| 9         | Nuclear Non-Proliferation and Nuclear Safeguards            | 45     | Dr. Rodriguez (JAEA)                                       |
| 10        | Types of Nuclear Reactors and Their Safety & Security       | 45     | Prof. Okamoto (UTokyo)                                     |
| 11        | Types of Accelerators and Its Application                   | 45     | Prof. Uesaka (UTokyo)                                      |
| 12        | Extracurricular Activities of Nuclear S&T                   |        | Ms. Makabe (JAERO)   |
| 13        | Fukushima Daiichi NPP Accident and Way to Recovery          | 20     | Movie  |
| 14        | Radiation Education in Various Subject Classes              | 45     | Prof. Yamaguchi<br>(Fukushima Univ.)                       |
| 15        | Recent status of Fukushima Daiichi NPP and Future Scope     | 45     | TEPCO  |
| <b>S1</b> | Careers and Opportunities in Nuclear Science and Technology | 20     | Dr. Salame (IAEA)  |
| <b>S2</b> | Expected National Implementation Strategy for the Envisaged | 20     | Dr. Salame (IAEA)  |
| <b>S3</b> | Sustainability of HRD on Nuclear S&T and Its Motivation     | 45     | Dr. Sabharwal (IAEA)                                       |
| <b>S4</b> | Main Points and Future Scope on NS&T Secondary Education    | 45     | Prof. limoto (UTokyo)                                      |
|           | Pedagogy 1-6  | 3 days | Mr. Irawan (BATAN/IDN)<br>Ms. Pacheco (Dep Ed-NCR<br>/PHL) |

|    | Experiment  | min | Lecturer         |
|----|---|-----|------------------|
| 1a | Cloud Chamber Observation                                     |     | Mr. Toda (RADO)  |
|    |   | 60  | Ms. Takaki (ECP) |
| 1b | Shielding and Distance Experiments with Hand-made Air GM Tube | 60  | Team UTokyo      |
| 2  | Natural Radiation Survey with KIND                            |     | Mr. Kakefu (JSF) |
|    |   |     | Mr. Kato (JSF)   |

### **Dormitory (Hotel) Info.**

| (A) Hotel Forest Hongo   | (B) JAEA or UTokyo   | (C) Spa Resort Hawaiians  |  |
|--|--|---|--|
| (Bunkyo, Tokyo)  | Dormitory (Tokai, Ibaraki)   | (Iwaki, Fukushima)  |  |
| https://www.forest-<br>hongo.com/en/<br>Single No-smoking room | JAEA International Dormitory Single No-smoking room or UTokyo Dormitory Single No-smoking room | http://www.hawaiians.co.jp/ima<br>ges/pdf/pamphlet_eng.pdf<br>Single Room<br>(partly No smoking room) |  |

#### **Member of Team JAPAN**

| -  |                            |   |                                 |        |
|--|----------------------------|---|---------------------------------|--------|
|  | Takeshi IIMOTO<br>(Leader) | Professor<br>The University of Tokyo                  | Radiation Protection            | PhD/Mr |
|  | Genichiro WAKABATASHI      | Associate Professor<br>Kindai University              | Radiation<br>Measurement        | PhD/Mr |
| Hiroyuki IIZUKA  Tomohisa KAKEFU             |                            | Project Specialist<br>The University of Tokyo         | Radiation Bioscience            | PhD/Mr |
|  |                            | Manager<br>Japan Science Foundation                   | Radiation Education             | Mr     |
| l  | Takehiro TODA              | Technical Developer<br>RADO co.,ltd.                  | Cloud Chamber<br>Development    | Mr     |
| Rieko TAKAKI<br>(Secretariat)<br>Kayo MAKABE |                            | Lecturer<br>Energy Communication Planning             | Energy Communication            | Ms     |
|  |                            | Manager<br>Japan Atomic Energy Relations Organization | Nuclear Outreach                | Ms     |
| Itaru TAKAHASHI                              |                            | Lecturer Japan Atomic Energy Relations Organization   | Nuclear Outreach                | Mr     |
|  | Takayuki KOASHI            | Lecturer<br>The Japan Atomic Power Company            | Radioactive Waste<br>Management | Mr     |

### **Supporting Organizations**

| Ministry of Foreign Affairs (                 | Ministry of Education, Culture. Sports,<br>Science and Technology (MEXT)   |                                     |      |                |
|---|--|-------------------------------------|------|----------------|
| 外務省<br>Ministry of Fo                         | 文部科学省 MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY-JAPAN |                                     |      |                |
| The University of Tokyo (UT                   |  | Scientific & Technology Information |      |                |
| THE UNIVERSIT                                 | Forum (STIF)   |                                     | STIF |                |
| Japan Atomic Energy Agenc                     | Japan Nuclear Human Resource Development Network (JN-HRD Network)          |                                     |      |                |
| 国立研究開発法人<br>日本原子力和<br>Japan Atomic Energy     |  |                                     |      |                |
| RADI of Japan Science Foun                    | Japan Atomic Energy Relations Organization (JAERO)                         |                                     |      |                |
|   | 一般財団法人<br>日本原子力文化  |                                     |      |                |
| CHIYODA TECHNOL                               | Fuji Electric C  | Co., Ltd K C Consu                  |      | g Co.,         |
| COOPERATION  WALL CHIYODA TECHNOL CORPORATION | F Fuj  | i Electric                          |      | K C consulting |

