

【Name of the institution】

Institute of Industrial Science (IIS), the University of Tokyo

【Project title】

International Exchange Program for Young Researchers on Highly Integrated Multi-Functional Micro & Nano Systems

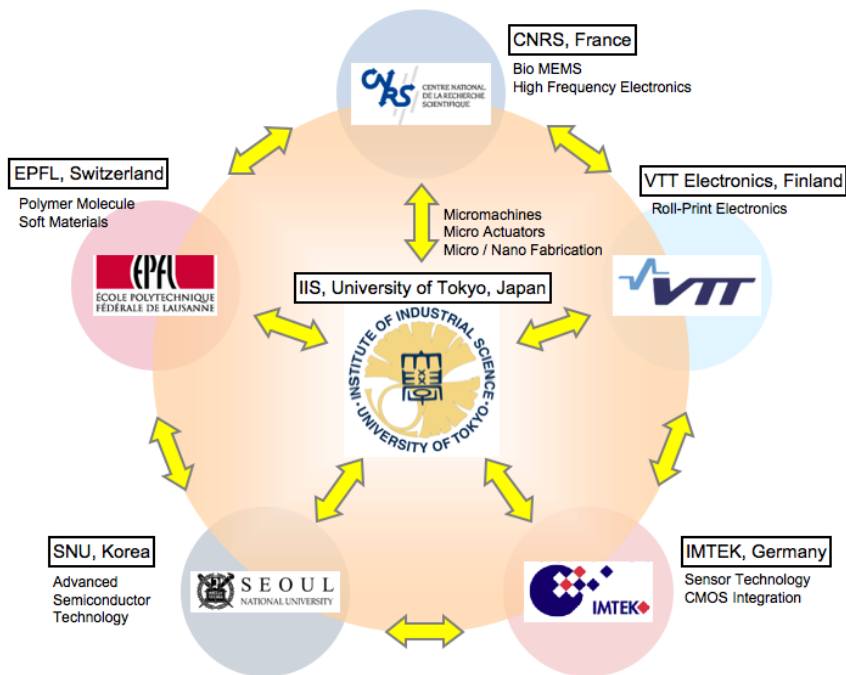
【Project outline】

The faculty members with the Center for International Research on Micro Mechatronics (CIRMM) in the IIS, the University of Tokyo, Tokyo, Japan, have been promoting and leading fundamental and application research projects on the emerging MEMS / NEMS (Micro / Nano Electro Mechanical Systems) for more than ten years ever since the dawn of this field. With the aids of this ITP program and the guideline of the Basic Program for Science and Technology formed by the Japanese government, we are going to design the next decade to be a significant leap forward to create novel technologies of scientific and industrial impacts through the power of MEMS and NEMS. As a backbone of this ITP program, we set a new technological concept “highly integrated multi-functional micro and nano systems,” where we place significance on the establishment of design and fabrication methodology of such systems that deliver a totally new function by integrating one or more hetero-functional elements such as integrated circuits, micromechanical components, optics, chemical and bio-chemical reaction, by utilizing new materials other than the conventional silicon, and/or by extending the integration scale into large area with tremendous numbers of small elements. Based upon such innovative concept, each faculty member of this project will conduct research topic that would lead the rest of the field of each expertise. We, the research groups at the IIS, the University of Tokyo, have hosted more than 80 foreign researchers, students and postdoctoral fellows in the past 10 years, and most of them are back in home country and actively conducting extended research on MEMS and NEMS. It is now our time to use the established international researcher network to train and educate young researchers in Japan, by sending them to our foreign partner labs, and we will make them capable of leading the science and technology of next generation.

【Partner universities and institutes】

- Sciences et Technologies de l’information et de l’ingenierie (ST2I), Centre National de la Recherche Scientifique (CNRS), Paris, France
- Microsystems Laboratory, Ecole Polytechnique Federale de Lausanne (EPFL), Lausanne, Switzerland
- Department of Microsystems Engineering (IMTEK), University of Freiburg, Freiburg, Germany
- Inter-University Semiconductor Research Center, the Seoul National University, Seoul, Korea
- Center for Printed Intelligence, VTT Electronics, Oulu, Finland

Japan Society for the Promotion of Science (JSPS)
 International Training Program (ITP) for Young Researchers
**International Exchange Program for Young Researchers on
 Highly Integrated Multi-Functional Micro & Nano Systems**
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Training Programs through the International Research Network NAMIS
 (Nano & Micro Systems)
 Research Promotion by Workshops, Seminars, and Researcher Exchange Programs
 Student Exchange Programs
 Sharing Lab Utilities and Equipment
 Organizing International Joint Projects



【Contact】

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