

Make Life Visible

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Editors

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Preface

In recent years, marked advances in imaging technology have enabled the visualization of phenomena formerly believed to be completely impossible. These technologies have made major contributions to the elucidation of the pathology of diseases as well as to their diagnosis and therapy. Adding further promise for future development are imaging tools in the broad sense, such as optics and optogenetics – the revolutionary use of light to control cells and organisms.

From molecular imaging to clinical images, the Japanese are world leaders in basic and clinical research of visualization. We strive to foster innovative, creative, advanced research that gives full play to imaging technology in the broad sense while exploring cross-disciplinary areas in which individual research fields interact and pursuing the development of new techniques where they fuse together.

The 9th Specific Research Project, “Make Life Visible,” was established by the Uehara Memorial Foundation as a 3-year research project to support such research. In this Special Project, three areas (Sessions 1–3) were targeted from basic research to clinical application. Nineteen Japanese researchers were selected, and research was begun in 2015.

Session 1. Visualizing and Controlling Molecules for Life

Session 2. Imaging Disease Mechanisms

Session 3. Imaging-Based Diagnosis and Therapy

The 12th Uehara International Symposium 2017, entitled “Make Life Visible,” was convened in Tokyo from June 12 to 14, 2017. In this international symposium, we have built on the outcomes of the 9th Special Project, with presentations focusing on the cutting-edge findings of visualization technologies by the Japanese Special Project members as well as ten leading researchers invited from overseas.

The aim of this symposium was to be a forum for the presentation of the latest research outcomes, future prospects, and new strategies in visualization technology, from basic research to the clinical front lines (diagnosis and treatment).

Thanks to the speakers, most of the chapters contain a video file of this symposium, and we are very pleased to be able to publish the proceedings of this exiting symposium.

Tokyo, Japan
Saitama, Japan
Tokyo, Japan
Tokyo, Japan

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