



# MICRONANO

## C O N T E N T S

- New Year's Greetings / 1
- Column / 2
- Activities of the Micromachine Center / 3
- Activities of the BEANS Laboratory / 6
- Members' Profiles / 8

**MICROMACHINE CENTER**  
<http://www.mmc.or.jp/>

**BEANS · TRA**  
<http://www.beanspj.org/lab/>

## New Year's Greetings

As we welcome in 2011, it gives me great pleasure to wish you all a happy New Year and to offer some thoughts on this new beginning. First, I would like to express my gratitude to all who have given their cooperation and support to the Micromachine Center and the BEANS Laboratory.

Approximately one year and three months have passed since September 2009, when I assumed the post of chairman for both entities. During this period, Japan's economy has begun to show some signs of recovering from the failure of Lehman Bros. and the Dubai debt crisis, but the state of Japan's industry has not yet stabilized due in part to financial crises in Greece, Ireland, and other EU countries, the effects of a strong yen, and increased competition in manufacturing industries from emerging nations such as China. In order to break out of this situation, it is essential that we intensify our efforts in technological development, which is the key to keeping Japan's industries internationally competitive. For this reason, it remains vital for us to continue intensifying our efforts in technological development related to MEMS and other micro/nano fields, now considered important industrial technologies. As chairman I will strive to continue our efforts in developing micromachines, MEMS, and other micro/nano fields, and I shall be grateful for your support.

To accomplish this, the BEANS Project (the Hetero-functional Integrated Device Technology Development Project) was launched in 2008 to develop core process technologies required for creating innovative next-generation devices and to build a platform for this development, with the aim of developing applications in a wide range of fields that include energy and the environment, safety and security, and health and medical care, as well as in traditional fields of application. We hope to increase and expand the market for micro/nano devices by creating new devices to support Japan's industry across diverse fields. It gives me great pleasure to announce that we have received high marks through the first half of the project. For the remaining two years, we will concentrate all of our efforts toward implementing the BEANS Project, focusing on research activities aimed at producing results that will lead to commercialization.

The previous year also marked the beginning of the G-device Project aimed at developing an advanced sensor network and environmentally friendly manufacturing processes. Through this project, we installed advanced manufacturing equipment at AIST Tsukuba for fabricating 8-inch MEMS devices and began preparing the groundwork for the Tsukuba Innovation Arena NMEMS in close cooperation with the MEMS Industry Forum of the Micromachine Center and AIST.

In addition to constructing TIA-NMEMS, the Micromachine Center has continued working to create a better environment for MEMS industrialization in Japan by promoting international standardization in MEMS fields and performing activities aimed at industrial exchange and vitalization, for example.

Further, in response to the three laws on reforming the public interest corporations system, the Micromachine Center submitted an application to the Cabinet Office for changing its current public interest status to that of a general incorporated foundation.

In the event that our application is approved, we will reevaluate our roles and responsibilities as a general incorporated foundation and will continue our activities in the hope of contributing to Japan's international competitiveness in industry and to the creation of a future affluent society.

Finally, on behalf of the Micromachine Center and the BEANS Laboratory, I would like to offer you all my sincerest wishes for a fruitful year. Thank you and Happy New Year!



**Hisao Sakuta,  
Chairman**  
 Micromachine Center  
 BEANS Laboratory