

Greetings from The President of Imaging Society of Japan

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I am Masahiko Fujii from Keio University Institute at SFC, and I have been appointed as the president of the Imaging Society of Japan since this April.

ICJ2024, held June 12-14 in a hybrid format at Suzukakedai Campus of Tokyo Institute of Technology and online, saw a significant increase over last year with 62 presentations and 294 participants, returning to the levels seen before the spread of COVID-19 infection. About 80% of the attendees visited the venue, making the event a perfect fit for the conference slogan, “Come, See, and Talk about the Future of Imaging Technology”. Under this slogan, I would like to talk about the relationship between “connection” and “Innovation” in my inaugural address as president, in the hope that “Connection” among many participants will be born and continue to develop further.

In Japan, “Innovation” is often incorrectly interpreted as “Technological Revolution”. This is said to be due to the fact that “Innovation” was translated as “Technological Revolution” in an economic white paper published in 1958. There are various opinions on the definition of innovation, but the concept of “New Combinations” presented by the economist Schumpeter in his Theory of Economic Development in 1912 has its origins in this concept. In the book, he categorized the actions and states required to create new combinations (innovations) into five categories, and it is clear that innovation is not brought about by technological revolution alone. And in 2007, Henderson et al. published a paper entitled “Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms”. In their paper, they presented a portfolio in which the horizontal axis is Reinforced/Overtaken of core concept and the vertical axis is unchanged/changed in the relationship (architecture) between the core concept and its components, they advocated four starting points that lead to innovation.

In this portfolio, there are two types of innovation that do not change the core concept: “Incremental Innovation,” which is created by fixing the architecture, and “Architectural Innovation,” which is created by changing the architecture. Fixing the architecture and making efforts within the organization based on Dominant Design may improve performance, and significant progress called as technological revolution may lead to Incremental Innovation. However, when performance improvement can no longer be expected due to technology maturity or other factors, there is a need to change the architecture to achieve Architectural Innovation. In the search for a new architecture,

it is clear that we must not remain confined to an organization based on dominant design and its values (performance axis) in order to confirm how they relate to the core concept and the direction and appropriateness of existing or new technologies and approaches. We need to go outside the organization, connect with other engineers/researchers, have a Transactive Memory of who has what expertise, knowledge and experience (I think of this process as creating an encyclopedia table of contents for myself.), and start discussions with the appropriate people listed in the Memory. I believe that scientific society is the best place to do this. It is said that 80% of our lives depend on chance events. However, it is the “Planned Happenstance Theory” proposed by John D. Krumboltz that says that we can make contingent events happen for us.

Scientific society is not just a place to present and discuss research results. Of course, this is not to be disparaged, but the further connections that are made from the presentations and discussions may lead to innovations. I hope that you will join and come to the scientific society and understand that these voluntary connections outside your organization can contribute not only to your personal growth but also to the development of the organization to which you belong.

I introduced my theory on the relationship between connection and innovation. It may have seemed a bit forced, but I believe it symbolizes the current state of imaging technology and the role of the Imaging Society of Japan.

Finally, based on the aforementioned my ideas and taking into consideration the situation of the Imaging Society of Japan, the following are the President's Policies for the activities and management of the Imaging Society of Japan in 2024.

1. Expanding the places (applications, supply chain) where ISJ scoping technology can be utilized
2. Expanding the Role of the Society: Fulfilling the Role of the ISJ as a Place for Growth of Engineers and Researchers
3. Increase the participation of young and female engineers and researchers in the organization and activities of the ISJ
4. Improve the value and recognition of the ISJ existence.

I would like to continue to work with all of you for the development of the Imaging Society of Japan and for the social implementation of the value created by imaging technology. Thank you very much for your continued support.