

# ScienceAgora 2012

## HIGHLIGHTS



# About Science Agora

Science Agora is an open place of encounter where science serves as a catalyst.

\*The Greek word "agora" means "place of encounter" or "meeting."

## History

Science has now become inseparably closely related with our daily lives. The fact that many scientific issues affect our whole of society, requires the participation and engagement of diverse stakeholders—and the public—besides expert groups in the scientific community. Thus, to ensure a better tomorrow of ours, we should take one more step forward: to be willing to be more informed of, and to think together about, what science brings us and the relationship between science and ourselves.

Science communication has been a key concept in the evolving links between science and society. People who are involved in this function, known as science communicators, might be teachers at schools who impart knowledge to students, as well as mediators or interpreters who involve people in finding out the values and meanings of specific scientific outcomes, sometimes giving feedback to scientists and policymakers who drive research activities.

Since its inception in 2006, Science Agora has been offering a place for such science communication activities, the number of its participants being increasing every year. The most recent Science Agora 2012 invited 212 programs offered by 191 organizing parties, and had roughly 2,250 exhibitors served for more than 4,000 visitors during the 2-day event. Science Agora welcomes unique proposals from any geographic areas; in reality, some very ambitious ones inspire other exhibitors and presenters to apply practices in their own context. In this way, Science Agora functions as a hub to evolve the network, and create expand the definition of science communicators.



Science Agora

## Political Background

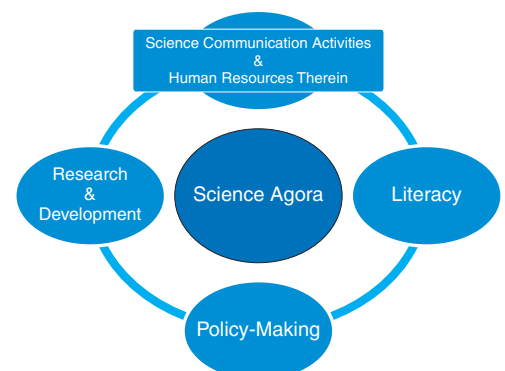
Science Agora is built upon on Japan's Science and Technology Basic Plan. The Third Plan (effective in FY2006-2010) includes a chapter entitled "Science and Technology to Be Supported by Society and the Public," in which promotion of science communication is described using expressions such as "Improving the Public Awareness of Science and Technology." The subsequent Fourth Plan (FY2011-2015) makes a further step forward in this effort; namely, to encourage involvement and collaboration with the public in national science and technology policy-making. Science Agora is positioned as a core place for the practice of science communication, as well as for discussions and dialogues among members of our society more broadly.

Science Agora has continued to be as open and multifaceted as possible. There are virtually no eligibility requirements for submitting proposals. Financial barriers are designed to be minimal for both exhibitors (no exhibitor fees) and participants (admission is free). Instead, it asks all the exhibitors to be communicative, and to make their presentation accessible to a wider audience. Thus, throughout the past seven events as well as the upcoming ones, it hosts not only large institutions, agencies, companies and academic societies but also individual researchers, educators, students, museum staff, freelancers, artists, comedians, and all kinds of volunteers.

Under the theme "Finding a good relationship between people and science," Science Agora 2012 focused on communication. This was aimed at thinking and discussing together about how to establish a better relationship between science and each individual of us in order to construct a better society after the experience of the Great East Japan Earthquake and the nuclear power plant accident. As a significant outcome of this year, Science Agora succeeded in focusing on science communication not only from the perspective of introducing the pleasures and wonders of science, but also from various other viewpoints.

List of past themes

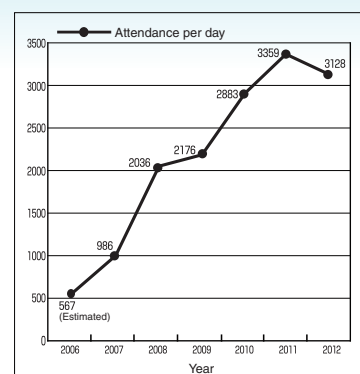
#	Year	Theme & Major Aim
1	2006	Creating a place of assembly where science and society are intertwined (Networking science communicators)
2	2007	Connect, and turn on the lights of future! (Broadening the field)
3	2008	Message from Japan for our future on Earth (Increasing diversity)
4	2009	Message from Japan for our future on Earth II (Sending out messages)
5	2010	A place where we think about science and our future (Expanding to new sectors)
6	2011	Planting the seeds of science for restoration from Japan earthquake
7	2012	Finding a good relationship between people and science



# Event Statistics

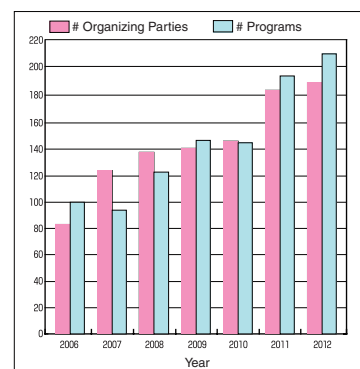
Science Agora enjoys steady growth. It has been contributing to expansion of networks among practitioners of excellence nationwide, and thus offers a myriad of communication opportunities for everyone at all ages.

#	Year	Date	Place	Attendance	# Programs	# Parties
1	2006	Sat-Mon, Nov. 25-27	Tokyo	1700 (estimated)	100	83
2	2007	Fri-Sun, Nov. 23-25	Tokyo	2959	94	124
3	2008	Sat-Mon, Nov. 22-24	Tokyo	6109	123	138
4	2009	Sat-Tue, Oct. 31-Nov. 3	Tokyo	8705	147	141
5	2010	Fri-Sun, Nov. 19-21	Tokyo	5934	145	146
6	2011	Fri-Sun, Nov. 18-20	Tokyo	7057	194	183
7	2012	Sat-Sun, Nov. 10-11	Tokyo	6255	212	191



Science Agora continues to reach out to science communicators in a broader sense, including sometimes those beyond conventional scientific communities. Exhibitors are expected to interact and learn on site so that the event induces improvement in their science communication skills, thereby helping deliver their experience to local activities.

Miraikan, or the National Museum of Emerging Science and Innovation, has served as one of the main venues of Science Agora since 2006. With its neighboring institutions and surroundings, the event offered an open, festival-style atmosphere for its visitors each time.

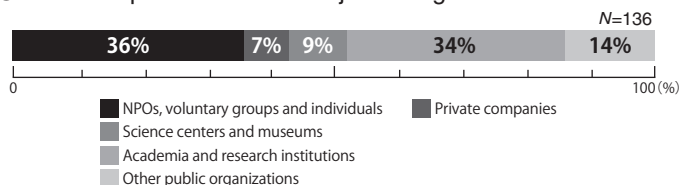


## 2012 Facts

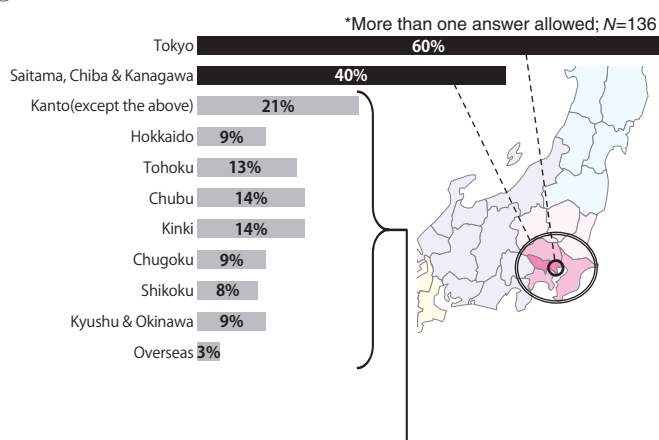
Everyone enjoyed communication, irrespective of their roles as exhibitors or visitors.

### Who exhibited?

⊙ A broad spectrum of sectors joined together.



⊙ The event showcased nationwide activities.



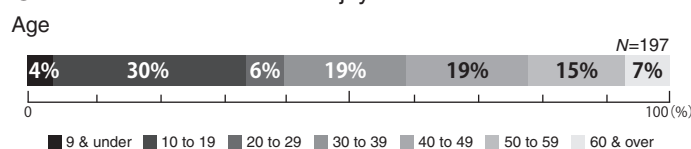
Almost half (49%) of exhibitors answered that they undertake activities outside of the greater Tokyo Area.

Visit our website for additional data, program archives (including audiovisual recordings), hundreds of links, and other resources!

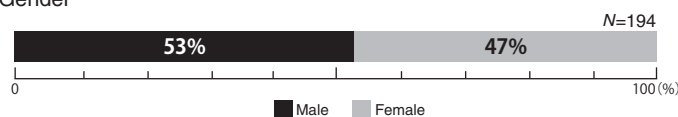
>> <http://scienceagora.org/>

### Who visited?

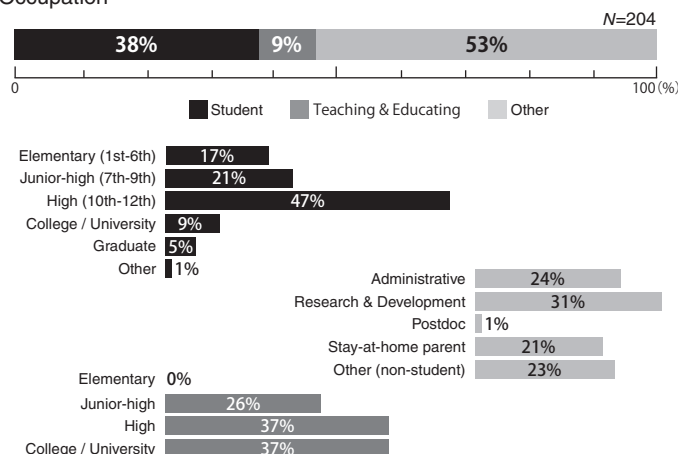
⊙ Both children and adults enjoyed the visit.



### Gender



### Occupation



# 2012 Individual Programs

## Opening Symposium

### Basic Principles

(1) Moving from *conveying* to *creating*

As well as communication aimed at *conveying* wonder and insight of science, we continue to expand our communication aimed at *creating* our society together.

(2) Promoting interaction and development activities

Science Agora is committed to its role as a “trade show” for diverse science communication activities. At Science Agora, we expect that new linkups will develop from our interactions, and that these developments will stimulate science communication in every region across Japan.

### Opening Symposium

Themed in accordance with Science Agora’s Basic Principles, an Opening Symposium and a Summary Session were held. At the Opening Symposium, a panel discussion was held emphasizing the expansion of communication aimed at *creating* our society together, in addition to communication aimed at *conveying* wonder and insight of science.

Opening Remarks: Michiharu Nakamura (President, Japan Science and Technology Agency)

Guest Speaker: Sadayuki Tsuchiya (Director-General of Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology)

Panelists: Mamoru Mohri (JST), Yukio Wakamatsu (Tokyo Denki University), Mari Oshima (Tokyo University)

Coordinator: Osamu Sakura (Tokyo University)



### Topic proposal: From *conveying* to *creating*

Mamoru Mohri

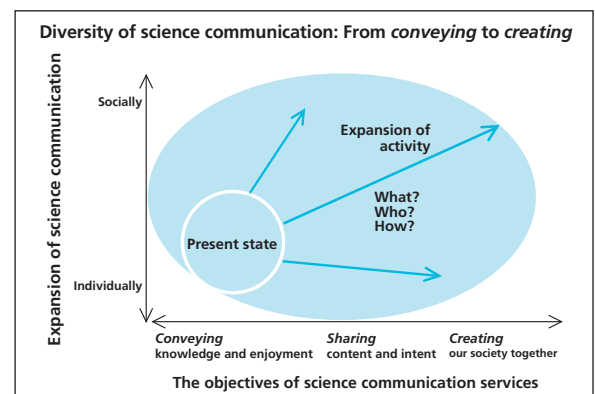
#### Communication that truly benefits general people

After experiencing the Great East Japan Earthquake of 2011 and the subsequent nuclear power plant accident, every single one of us is faced with certain questions: how are we involved with science and technology, and what are our choices moving forward? The judgments we make, enacted through politics and administration, impact not only our lifestyles but also international society and the generation of children who represent our future. We owe a responsibility to the society of the future. Unfortunately, various disagreements still exist regarding communication of science and technology. We absolutely must resolve these. What we need at present is communication that truly benefits general people. The Center for Science Communication was established with the goal of contributing to society through the implementation, systematization, and spread of this kind of science communication.



#### Expanding science communication: from *conveying* to *creating*

As indicated in the diagram, in order to build bridges both to aid understanding of research and to establish understanding with researchers, we have ways to *convey* wonder and insight of science. Because of their importance, these are widely implemented at Science Agora. On the other hand, our efforts also include communication aimed at *creating* our society together with both the general public and the scientific community, and we ask: Are they successfully *conveying* content and intent to society? Are they of benefit in seeking solutions? Working together with the public, the Center for Science Communication seeks to keep expanding the scope of science communication from *conveying* to *creating*.



## Summary Session

At Science Agora, we expect that new linkups will develop from our interactions, and that these developments will stimulate science communication in every region across Japan. In the Summary Session, an overall discussion spanning the entirety of Science Agora was undertaken, as well as reports on the activities of each zone (as a result of venue zoning).

Coordinator: Masataka Watanabe (Tsukuba University)

Advisor: Kazuo Kitahara (Tokyo University of Science)

Panelists: Reiji Takayasu (Japanese Council of Science Museums), Naohiro Takanashi (Tokyo University), Yuichi Ogawa (Tokyo University), Kazuo Otaka (Chiba City Museum of Science), Amane Koizumi (National Institute for Physiological Sciences)





## Exhibition Platform

More than 200 programs on site had identical methodologies. Larger institutions were able to exhibit at interactive booths, and individual volunteers were able to collaborate with each other to host symposia. Subjects also spanned from STEM education for lower-age children to cutting-edge technology developed by both academia and industry.

All the programs were required, however, to be communicative, as face-to-face discussion and experience define the core value at Science Agora.

Exhibition Platform	
Booths	66
Posters	38
Hands-on Programs	41
Symposia & Talks	21
Workshops & Cafés	31
Demonstrations	5
Combination of Above & Others	10
Total	212

## Zone Commentary

At Science Agora, since we expect that new linkups will develop from our interactions and that these developments will stimulate science communication in every region across Japan, we implemented venue zoning. There were many proposals for ways to categorize these zones: by researchers, media, schools, science museums, volunteers, visitors, government administration, companies, and so on. However, at this Science Agora, three Special Zones were established: a Researcher Zone, a Regional Linkup Zone, and a Student Presentation/Educator Interaction Zone. A new Welcome Zone, as well as a venue for conventional publically advertised exhibitors/presenters (either all-day or within a timeframe) was also established, known as the Social Zone. In addition to facilitating interaction both within zones and among various zones, we expect this to further facilitate independent interactions even after the end of the conference.

### Venue Zoning

**Welcome Zone:** Introducing the concept of Science Agora, and providing information to attendees about each zone (venue)

**Social Zone:** Demonstrations for children also to enjoy, presentations and discussions in meeting rooms, and a diversity of other programs.

**(Special) Researcher Zone:** Booths operated by research institutions, “researcher relay presentations,” and opportunities to see researchers in person.

**(Special) Regional Linkup Zone:** Presentations by science centers and museums serving as hubs for regional linkups, as well as universities and research institutions eager for linkups.

**(Special) Student Presentation/Educator Interaction Zone:** Student presentations, with participating schools eager for science education linkups.

### Researcher Relay Presentations

At Science Agora, the presentations aimed at a broad range of ages represented an extremely valuable experience for researchers too. In order to dispel any boring associations, researchers dressed up in costume as professors or as heroes to explain their research, each devising ways to alter their presentation style depending upon the age range of the visitors in attendance. With such a friendly atmosphere, there were a lot of questions asked and answered. High school students came prepared with a diversity of topics, and their questions just kept coming. I think the word “Researchers” in the program title gives the false impression of being too difficult, so next time I'll try to come up with a more enjoyable or funny title.

Presenter: Masae Kanda



### The Exciting Human Body! The Land of Heartbeats

For this presentation I placed the emphasis on practical demonstration, showing attendees actual organs (human, pig, and cow heart specimens) and demonstrating the technique of cardiac auscultation. All of the items on display were individually created by our staff. A massive eye-catching model heart (around 1 square meter in size) made for this exhibition took three months to create. A Heart Quiz was distributed to all attendees, which proved very helpful in facilitating dialogue with attendees. In the Regional Linkup Zone, presenters such as science museums were able to exchange valuable information on developing exhibitions, loans, etc.; even after the end of the Agora, we are still receiving inquiries about study tours at our museum. I also took advantage of the opportunities for networking with useful contacts for future exhibitions.

Presenter: Nobuhiko Nakamura (Kawasaki Medical School Medical Museum)



# 2012 Individual Programs

## Advanced Science Research Presentations by School Students

Around 200 elementary, junior high, and high school students conducting scientific research presented posters showing their research results. The themes presented spanned the entirety of the sciences, with some groups presenting results achieved by school science teams while other students presenting individual research undertaken at university laboratories. Opinions were exchanged not only among participating school students and educators (science school advisors and university staff), but were also proactively exchanged with general attendees, making this a particularly stimulating program for the school students. We believe that the information and human connections obtained through this program will serve to foster and deepen future research and intellectual curiosity.

Convener: JST Center for Promotion of Science Education



## Bring Science to the City: How to Create a Science Festival

While the Youngster's Science Festival, which has close to 20 years of history, is well established in the various areas of Japan, a new type of science festival is taking root, involving both entire regions and adults too. This is a worldwide trend, and we can expect to see offshoots in every region of Japan as well. Our discussion centered on problem areas from the perspective of implementing these festivals, as well as future potential and methods of support and so on based on actual case studies both inside and outside Japan. Participants, including festival presenters, expressed their wish to see further expansion of the network by establishing future opportunities of this kind. With our sights set on the next Science Agora, we hope to examine and discuss the possibilities for future development.

Facilitator: Masataka Watanabe



## Prof. Kuro Love's Live Science Comedy: Experiment

I perform a live comedy show with authentic science as my subject matter, in order to make people laugh who ordinarily dislike or are not interested in science. The audience really likes it. At the last Science Agora, I performed my live show 22 times; I worked so hard I almost lost my voice! This year, I rose to the challenge of reworking everything, starting from the basic concept, in order to make it an even better show than last year. The audience certainly gathered for the show more quickly than last year, and it was a large audience too, so I was very happy!

Presenter: Kuro Rabu Kyouzuyu (Prof. Kuro Love)



## Risk Communication: Lessons Learned from Activities at Fukushima

Building upon more than a year and a half of risk communication experience following the Fukushima nuclear accident, this panel discussion shed light upon the various issues of risk communication in times of emergency, with panelists including scientists, journalists, and members of the general public. The various arguments were inexhaustible, and ultimately no conclusion was reached; the discussion will have to be continued in future. In regard to topics discussed, the impression of the convener was that in cases where the knowledge and values of the information-disseminating parties differ widely from the knowledge and values of the information-receiving parties, risk information is not correctly transmitted. The information-disseminating parties include the government, which is tied up in an overly rigid sense of values and does not know what it needs to do, as well as scientists, who have lost their sense of wonder at nature, and the mass media, who have lost their sense of journalistic mission. The information-receiving party (the general public), while holding diverse values, does not possess adequate knowledge; thus, it loses respect for special expertise. In order to overcome this obstacle, it was felt that the general public needs to understand the importance of the existence of broad-ranging special expertise, and needs to recover its sense of respect for specialist knowledge.

Convener: Masami Watanabe (Japan Radiation Research Society)



# Welcome International Participants!

As this event is mainly for the general public residing in Japan, the official language is Japanese. Non-Japanese speakers will still be able to enjoy firsthand experience and selected international sessions. If you are interested in visiting or exhibiting, please contact us at [agora@jst.go.jp](mailto:agora@jst.go.jp) or visit <http://scienceagora.org/>.



Science Agora 2013 on 9-10 November, at Odaiba Waterfront, Tokyo.



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