

report 03

## Osumi Dojo for Science and Technology



In the Osumi Dojo of the 2015 spring semester, we undertook group work on "Big Data Mining" as a theme. After lectures from a consultant on big data utilization, Prof. Terano, Associate Prof. Takayasu, and a teaching assistant from the Department of Computational Intelligence and Systems Science, the students are divided into two groups. Group 1 focused on the "measurement of the effects of a business collaboration project", and analyzed the correlation between the number of the word-of-mouth reviews on recipe blogs and corporate promotion. Group 2 analyzed the "correlation between the consumption of cheese and the word-of-mouth reviews". Specifically, they analyzed the relationship between the over-the-year change of cheese consumption and the number of the word-of-mouth reviews as well as the product characteristics of cheese. The word of mouth in the internet is found to affect the awareness of the cheese products.

Both groups learned a lot. Although some problems remain to be solved, the efforts and creativities of both groups in such a short period produced good presentations.

report 05

## Yamada Dojo for Economics and Humanities



In the Yamada Dojo, 25 students, including non-affiliated students, participated in the "Lean Launchpad Workshop", which were held every other week from April to July. Every team developed a prototype based on their own business ideas, created a customer base of over 300 people, and sought orders. The winning team, which was the one to find the most promising customers, proposed a business based on gloves with a built-in sensor to monitor the user's health status.

Similar to last year, we held "d.school Comes to Tokyo Tech" event in July. A lecturer from Stanford University lead a "design thinking" lecture (about 150 people from inside and outside the university participated), and workshops (including 48 participants from other universities participated) over two days. The lecture was in English. Participants learned about users' perspectives, new ideas, and the importance of mindset. The take-away message was to "be creative, it is the most important!"

report 04

## Saito Dojo for Science and Technology



In the Saito Dojo, we opened a "Mono-Tukuri (Production and Manufacturing) Practice Dojo" in the spring semester. We gave a lecture on "manufacturing", visited a "Design & Manufacturing technology center", examined "Collaboration Center for Design & Manufacturing" at the university, and learned the basics of "Mono-Tukuri". In addition, the students experienced "Mono-Tukuri" first-hand using a 3D printer and a laser processing machine.

In group work, the students decided the "things" they wanted to make and conducted a series of processes (production process - production management - PDCA cycle - design review). The theme of Group 1 was "production of an original seal" (i.e., creating a stamp for international students). The theme of Group 2 was "production of a special-effects movie for the public relations of "Mono-Tukuri" (i.e., developing a prototype of the main building model). The students evaluated, reviewed, and prototyped to complete their products, which were unveiled during the final presentations.

These achievements will be displayed at Tokyo Tech Festival.

report 06

## Matsuki Dojo for Economics and Humanities



The Matsuki Dojo's themes are set from social problems on a global scale. Last year, 3<sup>rd</sup> term student's determined the general theme, "solution of energy problems through the use of unused resources". Then 4<sup>th</sup> term students worked on a project, "change of the forest industry in Japan" to take advantage of the natural forest resources in Japan. Students interviewed about 30 forestry leaders. Then the extracted and analyzed various issues in the Japanese forestry industry. From this they developed measures to address problems. These measures were refined with the assistance of active forestry managers who provided insightful feedback. Finally, the measures were implemented and the results were presented to the Director of the Ministry of Agriculture, Forestry and Fisheries.

In the classroom, top globally active leaders were invited to present as lecturers. Students were able to learn about the attitude, passion, and issues of leadership. On top of the experience students gained for six months at actual business, the dialogue with industrial leaders provided further insight.

# Other Activities

report 07

## Screening Camp August 10-12, 2015

The Academy for Global Leadership conducted a three-day candidate screening camp on August 10 - 12, 2015 at the International Productivity Center (Shonan Village, Hayama, Kanagawa). During the camp, the candidates divided into five groups. Each group worked on two assignments; one was announced in advance but the other was announced at the camp. After earnest group work, the candidates presented their solutions. The faculty vigorously evaluated each candidate's communication skills, humanities, and leadership skills based on the group work, presentations, and personal interviews. Then on the last day of the screening camp, candidates, faculty members, and affiliated students who supported the camp discussed the "leaders" of the camp.

This year's camp was the 5th AGL screening camp. Twelve students will become the 5th term students in AGL from October 2015 and take programs for becoming real global leaders.



### From the administration office

This year marks the 4<sup>th</sup> year of AGL and is a turning point due to the establishment of the leading programs in doctoral education. Early graduates and AGL grew together, and are both looking ahead to a bright future. As the first AGL graduates pave their own paths, we look forward to hearing about their future.

# AGL NEWS

Academy for Global Leadership

006

## The first graduates

### The first AGL graduates have completed the program and ventured into the real world!

The initial planning for AGL commenced six years ago, but the program has only been in existence for four years. In March and June of 2015, the first two AGL graduates began their careers! Although this moment has been a long time in the making, it seems like it occurred in the blink of an eye. During this time, the faculty who engaged in the education and administration of AGL and the first students journeyed into the unknown. Together we paved a path to cultivate students' abilities necessary to be "global leaders". Hopefully, the early AGL students are not dissatisfied with their experience. I want to apologize for the "bumps in the road" as we navigated the early days, but mostly I would like to thank the first two graduates for helping us develop the program that we have today.

Fortunately, I am very pleased and reassured by the fact that the graduates and current candidates have indicated a sense of accomplishment by participating in the AGL curriculum. AGL was established to train selected PhD candidates to become top leaders who can effectively take initiative in a global society; students hone their skills such as cooperative engagement, creative problem-solving, open-mindedness, and international awareness as well as strengthen their research ability and creativity in their major academic field. Although the goal is quite clear, the path to success is difficult. The AGL curriculum is designed to cultivate basic competencies through structured opportunities. However, real global leaders are made in society through practical experiences.

In this sense, AGL is setting a high value on the career plan of each student. We expect that our students will improve their efficacy through experience as leaders in the field of their choice. AGL is designed to provide sufficient opportunities to enhance the students' ambitions. I strongly believe that providing opportunities is the ideal way to train future global leaders. Although this may seem somewhat "vague" as a curriculum, this is the conclusion that the faculty and students arrived at after their journey together for the last four years.

This issue of our newsletter highlights the experiences and plans of our first two graduates. I expect that they will continue to hone their abilities and establish a reputation as leaders by identifying and solving problems in their respective fields. Due partly to the courage and confidence that they gained from AGL, I am certain of their future success and look forward to hearing about progress. In closing, I wish these graduates the best of success and would like to thank you for continued support of the AGL program and its students.

Director **Isao Satoh**



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## The voice of the first two graduates

report 01



### Keita Azechi

AGL 1<sup>st</sup> term Student, Ph.D. in Engineering  
 2012 Joined AGL  
 2012 Completed the master's program of the Interdisciplinary Graduate School of Science and Engineering  
 2015 Completed the doctoral program of the Interdisciplinary Graduate School of Science and Engineering  
 Joined the business development department of Shizen Energy Inc.



### Why did you choose to participate in AGL?

The Accident at TEPCO's Fukushima Nuclear Power Stations in March 2011 strengthened my interest in research on renewable energy. I decided to enroll in the doctoral program, and the recruitment for AGL was just good timing. I was very drawn to the opportunities that AGL would provide because I was interested in improving my abilities in various areas.

### What are your fondest experiences in AGL?

I have two. One is my Off-campus Project in Germany. Germany is a world leader in renewable energy. It was amazing to gain a global perspective. The other is the planning and facilitation of the Workshop at Stanford University and the Indian Institute of Technology Hyderabad. Although I was originally interested in the workshop, my experience had a much larger impact than I could have imagined and has been invaluable at my current multinational workplace.

### How did AGL impact you?

AGL allowed me to develop a global perspective, especially in the renewable energy field. In addition, AGL made me aware of the difficulties of managing group work and taught me that teamwork is important to overcome these challenges.

### What are your career plans?

My short-term goal is to obtain a management-level position. In addition, I would like to gain work experience in a foreign country (particularly Germany) to increase my global perspective and establish a worldwide network. In the long term, I am flexible, but regardless of where I ultimately work, I hope to make Japan a world leader in the renewable energy field and contribute significantly to the world.

### Do you have any advice for someone who strives to be a global leader?

My advice would be to take action and contact an AGL faculty member even if you are slightly interested in AGL. Small actions can lead to great leaps. As an undergraduate, it may be difficult to understand all that AGL can offer. I started working for a private company in April. Since then, I have realized that the AGL program has been extremely valuable. I truly believe that "the regret for not acting is always worse than the regret for taking a chance".

Enrollment Ceremony (October 01, 2011)



report 02



### Yuta Aoki

AGL 1<sup>st</sup> term Student, Ph.D. in Science  
 2012 Joined AGL  
 2012 Completed the master's program of the Graduate School of Physics  
 2015 Completed the doctoral program of the Graduate School of Physics  
 Research Fellow, International Education and Research Center of Science, Tokyo Institute of Technology



### Why did you choose to participate in AGL?

When I looked at the Government's response to the Great East Japan Earthquake on March 11, 2015, I realized the necessity of policy proposals by the scientific community in Japan. I applied to AGL because I wanted the opportunity to learn about the relationship between "science and society", especially the relationship between "science and public policy". Scientists make policy proposals to the government on a daily basis in Japan, but the Great East Japan Earthquake made me realize that the way of policy proposals must be improved. The announcement of the establishment of AGL occurred at a very opportune time for me.

### What are your fondest experiences in AGL?

I enjoyed many of the projects, especially the Off-campus and Dojo Completion Projects. For my Completion Project, I researched problems with low-dose radiation risks after the Fukushima nuclear power plant accident, which is one of the major political issues in Japan. I marshaled the confrontation points of various theories about low-dose radiation exposure and summarized the scientific basis of each theory to generate a comprehensive report. I presented my findings to the Fukushima Nuclear Accident Investigation Board sponsored by Ginza Ojima Toshio Lab. This opportunity allowed me to fulfill my initial target of "making proposals on issues related to public policies based on available scientific knowledge". My Off-campus Project involved collaborative research with UC Berkeley in which I researched the science and technology policy in the United States. I investigated how the San Francisco Bay Area, including Berkeley, developed as a world-leading research and innovation center. Then I reported the realities of the science and technology policy in the United States since the Manhattan Project (the atomic bomb development project during World War II).

### How did AGL impact you?

For me, the AGL activities were almost completely integrated with my laboratory research activities. I was able to expand the range of my daily research activities by participating with a sense of purpose in AGL. For example, I participated in the subcommittees for "Social Responsibility of the Physicist" and "Environmental Physics" in the Physical Society of Japan as well as examined the state of policy proposals by the scientific community and science and technology policy in the US by attending annual meetings of the American Physical Society. The accumulation of these day-to-day research activities helped me greatly to determine the focus of my Completion and Off-campus Projects. My AGL experiences were also beneficial in other activities. For example, I was a Resident Assistant at the Tokyo International Exchange Center for international graduate students and researchers from May 2010 to March 2015. I used my AGL experience to organize research recitals for the residents several times, which were complete successes and went off without a problem.

### What are your career plans?

I strive to continue my research activities in the academic world. At the same time, I would be active in science and society, especially the interface between science and public policy. There are two directions for the relationship between science and public policy: "Science for Policy" and "Policy for Science". Because I feel "Science for Policy" is weak in Japan, this is the area I am most interested in. As revealed in the Great East Japan Earthquake, scientists must have knowledge beyond their professional field, especially in times of crisis. Hence, I plan to actively learn not only in my area of expertise but other areas as well. I aim to be a scientist who can respond to the expectations by society as needed.

### Do you have any advice for someone who strives to be a global leader?

Some students might have a clear goal of the future already, while others only have a vague idea. To determine your future, I think it's important to identify how the world you live in will change and find what role will be required there. It is imperative to have a broad vision. The world is full of information. Pay close attention by keeping up with current trends, reading about previous trends, and analyzing how past trends will influence the future. And you will find what role you can play in the tide of history. Because AGL provides many opportunities to experience the world you have not seen before, I highly recommend that you challenge yourself in every endeavor and consider applying to AGL.