# **KTINTERNATIONAL**





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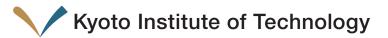
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## Encouraging Creativity KIT on the World Stage

Last November team KIT-Kyoto, composed of students from our Applied Biology and Architecture and Design Programs, competed in iGEM (International Genetically Engineered Machine), a synthetic biology competition held at Massachusetts Institute of Technology in the USA. In spite of not having any previous experience with the competition, they received an award. Project supervisor, Dr. Masamitsu Yamaguchi, talks about the significance of iGEM participation for KIT.

#### Professor Masamitsu Yamaguchi

Department of Applied Biology, Graduate School of Science and Technology

Widely publicized by such media giants as CNN and National Geographic, the international synthetic biology competition, iGEM, challenges students to innovate creative ways to apply genetic modification. Of 130 teams from renown universities all over the world, KIT-Kyoto received the Best Poster Award for their presentation poster design. We were the first Japanese university to win at iGEM. Our team also received a gold medal in the "absolute evaluation" as their work satisfied all criteria in that category.

The KIT team's innovation, an *E.coli* ink drawing pen, uses genetically modified *E.coli* by adding protein from the jellyfish, Aequorea Victoria (a bioluminescent hydrozoan jellyfish). The team drew acclaim for their unique "art with *E.coli*" theme that aimed to provide easy accessibility to bio-art. It was a perfect example of art and science converging at KIT. Their success was due in part to the strong impression they created by including a skit in their presentation and with their inventive poster design.

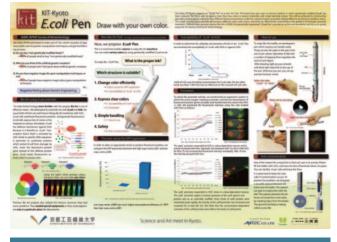
According to iGEM regulations, the majority of team participants must be undergraduates. Graduate students and professors like myself, must play only a supervisory role. The KIT students came up with the idea of forming an iGEM team all on their own and decided on their project contents. As a public wariness towards GM technology still prevails, they attempted to dispel the negative reputation of genetic engineering with the *E.coli* ink idea. The team felt that creating something as familiar to people as ink, would give genetic manipulation a new name.

I feel it was very meaningful for the students to plan their own research and unravel the solutions to the difficulties they encountered at such an early stage in their academic careers. This is because the type of scientific researchers now in demand in Japan are ones who can go beyond efficiently looking for solutions to research topics they have been instructed to pursue, and can advance to generating creative research topics on their own. At the beginning of the project, team members with no previous experience in a research laboratory had no idea where to begin with their work. It was highly satisfying to see how they puzzled out what they needed to do and matured daily as scientists. Experiencing international competition at such a young age is certain to have a positive impact on their studies. Observing them at the competition, I became keenly aware that taking on the world requires a higher proficiency in English than our students had, especially with regard to terminology. We urgently need to implement the study of specialized vocabulary in the first years of undergraduate English study.

The concept for the 2011 entry involves creating a simple diagnostic testing kit by introducing the human leukemia genome into drosophila melanogaster. Starting in 2011, only the top teams in Asia will attend the finals so the KIT team is striving to make the first cut at the regional level. Drosophila experimentation takes time to generate results. It is essential that they be extremely persistent with their research.

At present, KIT has a single team but in time, we hope to have more teams and a preliminary competition within KIT. Biomolecular Engineering and Information Technology are both highly developed programs at KIT and as such, iGEM provides the perfect opportunity for us to shine.

I go to supervise student research in a Vietnamese university every year. Students there were fascinated when I told them about this competition. Forming a joint team with students from a university abroad is another exciting possibility. I would like to see KIT international students add their strengths to the KIT-Kyoto team. KIT international students, we are eagerly waiting for your participation.



http://2010.igem.org/Team:KIT-Kyoto

### Kyoto, Integrating Traditional and Advanced Technologies

#### Krstikj Aleksandra

2011 Alumni, Division of Architecture and Design, Graduate School of Science and Technology Doctoral candidate, Division of Global Architecture, Graduate School of Engineering, Osaka University

Ms. Krstikj studied for 5 years in the National University "Ss Cyril & Methodius" in her hometown of Skopje (Macedonia) where she graduated with a degree in Architecture. After a 6 year professional career in the field of visual communications, she decided to advance her education. She came to Kyoto in April 2008 as a Japanese Government Scholarship student, where she obtained her Master's Degree in Engineering at Kyoto Institute of Technology. Since April 2011, she has been enrolled in the Doctoral Course at Osaka University where her specialty is Urban and Environmental Design.

Since an early age, technology and design have been my two passions. As we can see around us, nature always tries to achieve a perfect design in performance and beauty simultaneously. I think that architecture is a great profession that experiments, just like nature, with both function and appearance, making a product that people can use and enjoy. When I decided 4 years ago to continue my education in architecture, I was convinced that my new environment would have to be favorable in new opportunities and exciting experiences. Japan, as a leader in technology, as well as a country with some extraordinary architectural and urban designs, seemed the best choice.

After I received a Japanese Government scholarship I was overwhelmed with joy that I would be able to conduct research in a Japanese University. I chose KIT for my research because it provided the balance between technology and design, a balance I was always searching for. Its location in Kyoto, where even today a large number of traditional houses and traditional building techniques are preserved, was a big advantage. Moreover, KIT's philosophy is oriented towards preserving and upgrading the knowledge embedded in the tradition with cutting edge research in science and design.

As I learned soon after my arrival, the positive image that KIT has as a university is due to the professors and all the academic staff at KIT who work very hard and are strongly dedicated to their research objectives. However, as a foreigner from a culture so different than Japan's, what amazed me most was the warm welcome and support, both personally and professionally, from everyone but especially from my professor, Dr. Hyuga and the members of my Japanese architecture lab. Thanks to their support, I was able to participate in many research projects and learn a great deal about traditional machiya house design and

construction technique. In the laboratory I learned the importance and the methods used in conservation of traditional houses and historic areas in Japan. This was an invaluable experience since it provided me the grounds on which I am basing my current research in Osaka University.

Currently, I am working on the conservation of a historic area in my hometown Skopje. I am researching the possibilities of conserving the historic architectural and urban patterns and their reinterpretation in new evolved design models. I feel very privileged that I still have great support from Professor Hyuga, as well as my new advisor. We are working together to broaden our knowledge and contribute to the conservation of our built environment.

One of my dearest memories in KIT is the graduation ceremony in March 2011. In front of the President, I was given the honor of speaking in the name of my generation to express our gratitude for the support and guidance we received. I was very nervous since the speech I wrote in Japanese, I couldn't memorize. The Tohoku Earthquake was a devastating blow to everyone in Japan, and I was deeply saddened and worried. However, what I learned from my years in KIT is that I always have to do my best, for myself and the people around me, therefore I tried hard to overcome my nervousness. After the ceremony, when some of my colleagues came to thank me for my speech I suddenly felt so happy. The happiness in my heart was even bigger because my mother was attending the ceremony and she couldn't stop the happy tears in her eyes. Despite the Tohoku disaster, she insisted on coming to Japan and expressing her own deepest gratitude to my professor and everyone that supported me. It was a wonderful day that I will always remember.

My experiences in KIT have lead me to recommend it to any individual who is dedicated to improving his/her knowledge and

> abilities. In a friendly warm atmosphere, you will be able to pursue your professional goals and enjoy the warm hospitality and beauty of Kyoto.



Tea Ceremony in Marikouji Kaikan 2009 We wore beautiful kimonos thanks to the previous director of International Affairs and enjoyed practicing tea all day.



Students from Professor Hyuga's lab and I Conducting a Survey in Skopje's Old Bazaar, Macedonia, 2009



Graduate program Commencement 2011

# **Enjoying Life as an International Student in Kyoto Safe, Convenient and Worry-free**

#### Influences on Kyoto from the Tohoku Pacific Earthquake

On March 11th, an unprecedented disaster occurred off the Pacific coast of northeastern Japan. Kyoto, located in western Japan, avoided disaster only to suffer in the aftermath of exaggerated international media coverage of the disaster and nuclear power plant accident. KIT hasn't escaped this influence. To appeal to persons around the world regarding the safety and security of Kyoto, KIT has interviewed four international students about their lives here since the 3/11 earthquake.



#### Phone Call from Italy Alerts Student of Earthquake

**Furuyama:** Before we begin our round table discussion, I would like to express my condolences to all those who lost property and loved ones in conjunction with the Tohoku Pacific Earthquake. We hope that every day will bring progress in restoration of the affected areas. At the time of this earthquake, which devastated northeastern Japan, Kyoto, more than 500 kilometers away, registered tremors of one to three on the Japanese seismic intensity scale of seven. Where were you and what were you doing at the time of the earthquake?

**Thi Tu Anh:** I was in Nagasaki, Kyushu and saw the earthquake news on TV. Nagasaki didn't shake at all but I was concerned about Kyoto. I called a friend in Kyoto but she said she didn't even know there had been an earthquake.

**Mauro:** That was my experience, too. I didn't feel a single shake. I didn't know about the earthquake until my mother called from Italy. (laughter)

**Furuyama:** Kyoto registered a maximum seismic intensity of three but many people didn't realize an earthquake had occurred. Fortunately, no building in Kyoto was damaged. Teng-san and Daryl-san where were you when the earthquake hit?

**Teng:** I was taking advantage of spring break to visit my home in China. I was surprised to see the news.

**Daryl:** I came to Japan in April, so I was still in Singapore at the time of the quake.

**Furuyama:** Were you worried about returning to Japan? Was your family against your coming?

Teng: Reports on the earthquake were constantly on the news so,

yes, my friends and family were against my return. A friend in Kyoto told me everything was fine here but to be honest, I was nervous until I saw things for myself. Looking out the train window on my way back to Kyoto from Kansai International Airport, I was relieved to find that nothing seemed any different than before. Of course there wasn't any damage in Kyoto, either. When I told my family and friends they were pleased to hear it.

#### Campus Radiation Levels Normal

**Furuyama:** The KIT International Affairs Office held a briefing for the international students immediately after the earthquake.

**Thi Tu Anh:** At the briefing they provided practical advice on what we should do if another earthquake occurred. I don't speak Japanese very well yet, so I appreciated the English briefing. The office had also sent us an e-mail right away to confirm our safety. This was very reassuring. My advisor was also very helpful.

**Daryl:** Before I came to Japan, I was quite concerned about radiation from the accident at the Fukushima Nuclear Power Plant.

**Furuyama:** We set up equipment and monitored radition levels on campus for over a month. The measurement methods we used never turned up radiation levels high enough to have any adverse health effects.

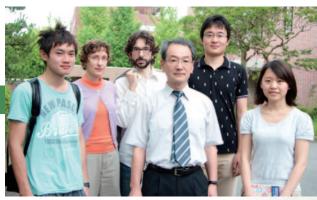
**Mauro:** My parents were also seriously concerned about the effects of radiation and demanded that I return to Italy. My wife is Japanese as are many of our friends. We all talked it over at length and I became determined to stay here. Of course I researched the data and news reports about radiation levels around the Kyoto area on

my own, before making this decision. My parents respect my decision now. And I eat spinach grown in Japan, you know.

Thi Tu Anh: Radiation levels in water and beef have been widely reported but I felt they were being overly sensitive.



Vice President MASAO FURUYAMA



KIT presently has an international student enrollment of 170 students from 30 countries. (as of May 1, 2011) studying and pursuing research at one of Kyoto's most verdant campuses.

#### Friends Told Kyoto Safe, Over Facebook

**Furuyama:** We have accepted international students who are now considering canceling their prospective enrollment. Some foreign media have exaggerated the situation and even reported wrong or misleading information. It seems they are being sensational at the expense of Kyoto and of Japan. What is your impression?

**Teng:** In China the earthquake wasn't reported as "northeastern Japan" but just as the "Japanese earthquake". With that being reported repeatedly, even people with some knowledge of Japan began to wonder if all of Japan had been effected.

**Daryl:** You can say the same thing about the reporting on radiation. The coverage has been exaggerated by the foreign media. When I told my friends about how things are in Kyoto, they were surprised. "Are things really OK there?" "Sure, no problem," I told them. That caused a big stir.

**Furuyama:** Sharing that kind of information at the personal level is certainly appreciated. The nuclear plant accident has lead to anxiety over the electricity supply and there is now a nationwide movement to use less electricity. What do you think of that?

Thi Tu Anh: I think it has resulted in people reexamining their lifestyles. We are more conscientious about turning off the lights at home and in the lab. We have raised the setting on the air conditioners and everyone's awareness of energy use is more acute than before.

Daryl: I'm trying to keep my electric bills down. (laughter)



#### Kyoto: A Peaceful Place for a Study Abroad Experience

**Furuyama:** Listening to you all, I get the impression that you feel completely safe in Kyoto. What would you say to students considering coming to KIT to pursue their degree?

**Teng:** After the earthquake I went to enjoy the cherry blossoms with Japanese students, and went hiking on nearby Mt. Hiei. I think Kyoto is safe. There are lots of fun things to do at KIT.

**Mauro:** Kyoto is a beautiful city. As you would expect from a city with a 1000 year history, there are many cultural heritage sites. And the food is delicious. Don't miss the chance to come to Kyoto. Everyone tells me autumn is the most beautiful season in Kyoto. I can't wait.

**Daryl:** I've made a lot of Japanese friends at KIT. The experience has been well worth my time. Kyoto has festivals and events in every season. It's a great place.

**Thi Tu Anh:** Kyoto is a quiet, easy place to live. There's no reason students from abroad shouldn't come here to study. Come make some great memories with us at KIT.

**Furuyama:** I feel you speak from your experience with integrity and that today's comments have given our readers an accurate portrayal of the situation here. Thank you for taking the time to attend this gathering today. I look forward to seeing you at the president's annual party for international students and their supporters. I hope you continue to enjoy your time in Kyoto.

Everyone: Thank you.



SOH SEE MIN, DARYL Partner institution exchange student in Mechanical and System Engineering From: Singapore Enrolled: April 2011



DING XIAO TENG Master's degree student in Mechanical and System Engineering From China Enrolled: April 2007



NGUYEN THI TU ANH Ph. D. candidate in Materials and Life Science From Viet Nam Enrolled: October 2008



ARRIGHI MAURO Ph.D. candidate in Design Science From Italy Enrolled: April 2011

#### 🧧 9th Japan – Vietnam Joint Seminar

Established to promote exchange between our researchers, the Japan – Vietnam Joint Seminar has been alternatively held in Japan and Vietnam since 2003 and is sponsored by KIT. The 9th seminar was held at Hanoi Medical University on March 1st and 2nd, 2011 when 15 researchers from KIT and prestigious Vietnamese universities presented their latest research findings in fields ranging from Applied Biology to Macromolecular Science and Engineering. In this 9th Japan – Vietnam Joint Seminar, over 20 researchers from 4 universities and research organizations in Vietnam joined the 8 professors from KIT. Refreshments were served after the seminar, providing participants with an opportunity to converse under more relaxed circumstances and go into further depth on topics of interest.

At the time of the initial seminar in 2003, KIT had few students from Vietnam. As of May of 2011, however, 15 Vietnamese students attend KIT and this year the Short Stay and Short Visit programs have begun, promising to increase the number of both Japanese and Vietnamese students traveling between KIT and Vietnam. The 10th Japan – Vietnam Joint Seminar will be held at KIT in November 2011, and is certain to further the cooperative relationship between researchers and students at KIT and Vietnamese institutions of higher learning.





#### VIED (Vietnam International Education Development Scholarships) Memorandum of Understanding

The Mekong 1000 Project is currently enabling Mekong Delta region scholars to come to KIT to pursue their master's and doctoral degrees.

Now, as of June 20, 2011 KIT has concluded an agreement with VIED (The Vietnam International Education Development Section of the Ministry of Education and Training) to participate in Project 322. This program will provide Vietnamese university professors and government ministers with an opportunity to enroll in master's and doctoral programs in universities abroad through 2020.

#### Study in Japan! KIT's Booth at NAFSA 2011

KIT participated in an international conference held in Vancouver, Canada to promote exchange among worldwide institutions of higher learning. This fair provided an opportunity for 9000 international exchange representatives and other participants from 600 institutions in 46 countries to exchange information, establish ties, participate in meaningful discussions and pose questions. KIT was represented by Professor Yumi Hato and Advisor Tsutomu Yoshii at this event.

Representatives from all over the world visited the KIT booth to discuss the content of our international programs. By the close of NAFSA 2011, representatives had established networks and furthered relationships so that everyone became more determined than before, to work to solicit international exchange.





Thank you for reading KIT International Journal. We welcome your comments, questions and suggestions. Please email us at:  $\Rightarrow$  **e-mail:** ab7129a@jim.kit.ac.jp

#### ■ Join the KIT International Academic Exchange Club!

This club provides a global network for international academic exchange. Its members include current and alumni international students, researchers, and members of partner institutions involved in academic exchange with KIT. The club was founded to enable KIT to contribute to academic development and promote science and technology internationally. For detailed membership information, please visit the KIT website: http://www.kit.ac.jp/english/01/01\_080000.html

#### We Are Here for You !

The staff of the International Affairs Office and the Student Exchange Advisor provide assistance, a listening ear and a safety net for international students and researchers. All the administrative tasks of the International Exchange Center are processed through International Affairs which serves as the liaison for all incoming international students and researchers in conjunction with the Student Exchange Advisor. We have caught wind of concerns that the effects of the disaster in northeastern Japan might have reached Kyoto. We can assure you that Kyoto suffered no direct casualties and is as safe as ever. International students, who arrived this past April, report living a carefree life and tell us KIT professors are helpful and enthusiastic in their efforts to aid international students. Kyoto is a fascinating mix of historical and modern architecture interspersed with verdant areas. The city's significant student population is proof this is an ideal location for research and academic pursuits. We look forward to welcoming you to a fascinating overseas academic adventure at KIT.



Cover Photo: Kovac Aleksandar, KIT Design Science PhD Candidate from Croatia