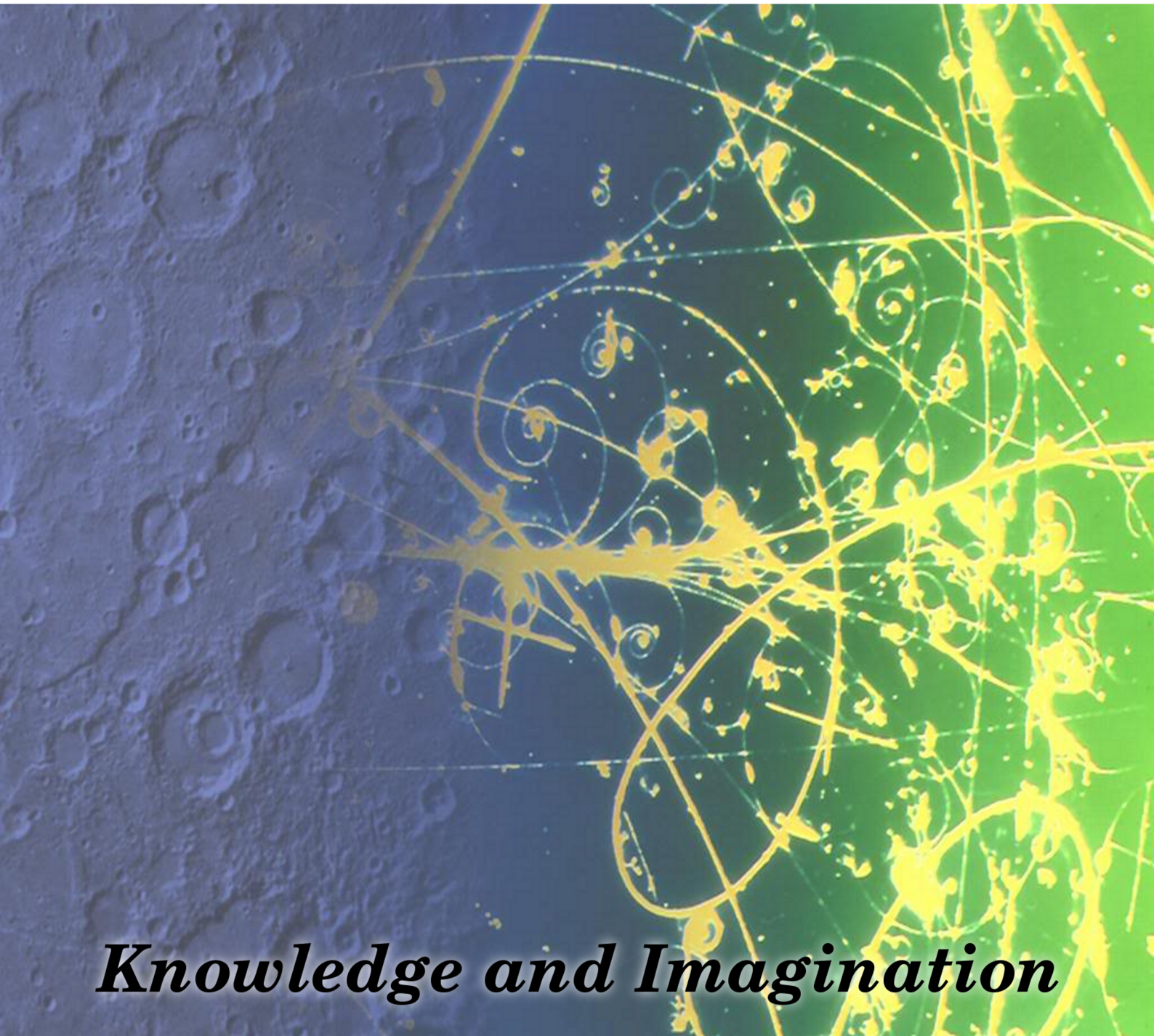


SOKENDAI
The Graduate University for Advanced Studies



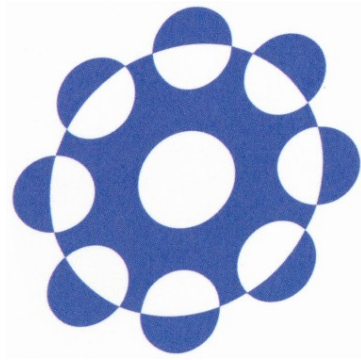
Knowledge and Imagination

***2010 Second Semester
Student Seminar
7-8 October 2010***



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President's Message

This 2010 autumn, we welcome 30 new Japanese and foreign students to the Graduate University for Advanced Studies, or Sokendai. It is a cause for great joy for all of us. I would like to extend to all of you a heartfelt welcome on behalf of the faculty and administrative members of Sokendai. Your decision to change your school or to enter Sokendai from another walk of life took tremendous resolve. We welcome each and every one of you with great respect and gratitude, because you have chosen Sokendai to develop new professional relationships, to advance your learning, and to take on new challenges. Sokendai was established in 1988 to utilize the excellent human talent and research environments of Inter-University Research Institutes directly in graduate education. Because of its affiliation with Inter-University Research Institutes, or our parent institutes, Sokendai has many unique features that distinguish it from other universities. In the entrance ceremony, I have mentioned two such features. They definitely offer advantages, but may also pose disadvantages. Because each feature exhibits both sides of the same coin, it is necessary for you to keep a positive attitude. I sincerely hope that, during this precious period, all of you will acquire knowledge and passion adequate for the needs of your future activities. Again let me extend my sincere congratulations for the start of your Sokendai careers.



Naoyuki Takahata, Dr.Sc.

President, SOKENDAI



Committee's Message

Welcome to The Graduate University of Advance Studies, SOKENDAI.

On the behalf of Student Committee, I congratulate you for your successful admission to SOKENDAI, where we hope you will be able to achieve all your goals as a researcher.

Sokendai is unique in concept in the world as a university affiliated with research institutes and museums administered by the Ministry of Education, Culture, Sports, Science and Technology (called Inter-University Research Institutes, or IURIs). You will have the privilege to be exposed to this unique academic environment while exploring the various research disciplines.

For this year's seminar we have chosen "Knowledge and Imagination" as the theme that previews life's all existing and coming attractions.

The great scientist Albert Einstein inspired a famous debate on "Knowledge and Imagination", when he argued "Imagination is more important than Knowledge". According to him, knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand. But not everyone agrees to this viewpoint. The great spiritual scientist of the age Meher Baba believes that though the whole world is created and carried on by the force of imagination, but in spite of apparently being unlimited, imagination reaches the limit when checked by Knowledge itself. By the power of imagination no man can ever understand or explain the beginningless beginning or the endless end. In other words, Eternity is beyond the reach of all imagination, and Knowledge is Knowledge of Eternity.

Here at SOKENDAI, we believe there is an interconnected relationship between knowledge and imagination similar to space and time. If someone does not have enough knowledge, he/she would not be able to fuel his/her imagination to a whole new level.

And, Science which is a journey towards the unknown needs both knowledge and imagination for a perfect reasoning. And we hope that the intrinsic inquisitive nature of students of Sokendai fueled with Knowledge and Imagination will culminate in significant contribution to the society. You have taken a first step to this by becoming a SOKENDAI student.

With Best Wishes,

The Student Seminar Committee.

Committee Members

High Energy Accelerator Science

1. *Chouhan Vijay, Accelerator Science*
2. *Miao Ping, Materials Structure Science*
3. *Wu Yanlin, Materials Structure Science*
4. *Rosas Lopez Igmarr Cedrell, Particle and Nuclear Physics*

Life Science

5. *Keiji Takagi, Genetics*
6. *Rammohan Shukla, Basic Biology*
7. *Wei Fei, Physiological Sciences*

Multidisciplinary Sciences

8. *Eiji Motohashi, Statistical Science*
9. *Alam Md. Ashad, Statistical Science*
10. *Raghvendra Jain, Informatics*
11. *Kriangkrai Limthong, Informatics*
12. *Liu Zhi, Informatics*

Physical Sciences

13. *Wang Hao, Fusion Science*
14. *Zheng Pengfei, Fusion Science*

The Center for the Promotion of Integrated Sciences (CPIS)

15. *Prof. Yoko Satta, CPIS*
16. *Dr. Mineyo Iwase, Senior Assistant, CPIS*
17. *Dr. Motoko Okumoto, Assistant, CPIS*





Schedule

7 October 2010

Entrance Ceremony		
Time	Agenda	Location
12:30-13:30	Registration 受付	Main Entrance, SOKENDAI Cloakroom: 103&104 Seminar Rooms, 1F 総研大正面玄関
13:50-14:00	Information for Entrance Ceremony 入学式についての説明	Lecture Room 2F, SOKENDAI 総研大2階レクチャールーム
14:00-14:30	Musical Performance 演奏会	
14:30-15:20	Entrance Ceremony 入学式	
Student Seminar		
15:30-15:40	Opening 開講式	Lecture Room 2F, SOKENDAI 総研大2階レクチャールーム
15:40-16:55	Lecture 1 by Prof. Friedrich Paul Cilliers, Department of Philosophy, University of Stellenbosch, South Africa 講演1	
<i>Break</i> 休憩		
17:10-18:30	Free Discussion フリーディスカッション	Lecture Room 2F, SOKENDAI 総研大2階レクチャールーム
18:30-19:00	Check-In チェックイン	Shonan Village Center 湘南国際村センター
19:00-20:15	Dinner Reception ディナーレセプション	Lumier 1F, Shonan Village Center 湘南国際村センター
20:15-22:00	Night Activities ナイトアクティビティ	Conference Room 6, Shonan Village Center 湘南国際村センター

8 October 2010

Student Seminar		
Time	Agenda	Location
7:30-8:30	<i>Breakfast</i> 朝食	<i>OAK, Shonan Village Center</i> 湘南国際村センター カフェテリア オーク
8:30-9:00	<i>Check-Out</i> チェックアウト	<i>Shonan Village Center</i> <i>Bring luggage to the</i> <i>Cloakroom: 101&102 Seminar</i> <i>Rooms, 1F SOKENDAI</i> 湘南国際村センター
9:00-10:15	<i>Lecture 2 by Prof. Genshiro Kitagawa,</i> <i>Institute of Statistical Mathematics,</i> <i>Japan</i> 講演 2	<i>Lecture Room 2F, SOKENDAI</i> 総研大 2階レクチャールーム
<i>Break 休憩</i>		
10:30-10:45	<i>Group Photos</i> 集合写真	<i>Main Entrance, SOKENDAI</i> 総研大正面玄関
10:45-11:50	<i>Interactive Activities</i> インタラクティブアクティビティ	<i>103&104 Seminar Room 1F,</i> <i>SOKENDAI</i> 総研大 1階セミナールーム
11:50-12:45	<i>Lunch and Recruit Session</i> 昼食	
12:45~	<i>Assemble and Depart for Tachikawa</i> チャーターバスで立川へ。	<i>Main Entrance, SOKENDAI</i> 総研大正面玄関前
15:15	<i>Arrival at National Institute of</i> <i>Japanese Literature</i> 国文学資料館に到着	<i>Tachikawa General Research</i> <i>Building</i> 立川
Japanese Culture Course		
Time	Agenda	
15:30-18:00	<i>Lecture on Japanese culture (1) (Department of Japanese Literature)</i> • <i>Museum Tour with guides : Special exhibit "Tesshinsai Bunko Tanzaku Yuuhin Ten" (Tesshinsai Collection: Tanzaku Poem Cards)</i> • <i>Activity : Receiving an explanation of Hyakunin-isshu (one hundred waka poems) and playing the bozu-mekuri game</i>	
18:30	<i>Arrival at Tachikawa Washington Hotel</i>	
19:00~	<i>Dinner (buy your own)</i>	



9 October 2010

Japanese Culture Course	
Time	Agenda
7:00~	<i>Breakfast</i>
9:20	<i>Assembly at the lobby of Hotel</i>
10:00-12:00	<i>Lecture on Japanese Culture (2) (Department of Japanese Literature)</i> <ul style="list-style-type: none"> • <i>Lecture & video: "Japanese Theater in a Worldwide Context" by Professor Kyozo Takei</i>
<i>Lunch (buy your own)</i>	
13:00-16:30	<i>Japanese Culture (3) National Institute of Polar Research (Department of Polar Science)</i> <ul style="list-style-type: none"> • <i>13:00 - 14:00: Lecture by Professor Yoichi Motoyoshi, leader of the 51st Japanese Antarctic Research Expedition</i> • <i>14:00 - 14:30: Lecture & video: "Japan's Antarctic Observation Activities"</i> • <i>14:40 - 15:00: Results of Antarctic observation introduced by the Graduates (1): Hidehiko Suzuki</i> • <i>15:00 - 15:20: Results of Antarctic observation introduced by the Graduates (2): Nobuo Kokubun</i> • <i>15:30 - 16:30: Tour of the low-temperature laboratory at the Polar Science Museum</i>
16:30	<i>The end of Japanese Culture course. Students not participating in the Japanese language classes depart for Tachikawa station and return to their respective departments.</i>
17:30	<i>The others arrive at Tachikawa Washington Hotel</i>
18:00~	<i>Dinner (buy your own)</i>

10 October 2010

Japanese Language Classes	
Time	Agenda
7:00~	<i>Breakfast</i>
8:20~	<i>Assembly at the lobby of the Hotel, leave for the venue of the class</i>
9:00-12:00	<i>Japanese language classes</i>
<i>Lunch (buy your own)</i>	
13:00-17:00	<i>Japanese language classes</i>
18:00	<i>Arrival at Hotel</i>
18:00~	<i>Dinner (buy your own)</i>

11 October 2010

Japanese Language Classes	
Time	Agenda
7:00~	Breakfast
8:20~	Assembly at the lobby of the Hotel, leave for the venue of the class
9:00-12:00	Japanese language classes
	Lunch (buy your own)
13:00-15:00	Japanese language classes
15:00~	The End – return to own department

 **Entrance ceremony**

 **Student Seminar**

 **Japanese Culture Course**

 **Japanese Language Classes**



Lecture 1: Knowledge, Imagination and Ethics: Dealing with a Complex Future

by Paul Cilliers

Biography

- 1980 B Ing (Electronic Engineering), Univ. of Stellenbosch
- 1987 BA Hons in Political Philosophy (cum laude), Univ. of Stellenbosch
- 1989 MA in Philosophy (cum laude), Univ. of Stellenbosch
- 1994 D Phil in Philosophy, Univ. of Stellenbosch and Cambridge Univ.

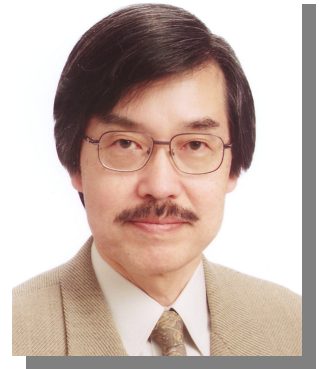


Abstract

If we acknowledge that we live in a complex world, this has important implications for how we understand that world and act within it. Complex systems are constituted through a vast amount of non-linear relationships. In order to comprehend such systems, we cannot take all these relationships into account, we have to simplify. This process, however, reduces the complexity of that which we want to understand. There is no objective way of doing this reduction since that would assume a position from where we have access to all the complexity. This has two implications. In the first place, this means that our knowledge of complex things is always limited and incomplete. Since the reduction is not objective, but based on choice, we have, in the second place, to acknowledge that normative issues are always involved when we deal with complex things. This normativity can be described by what one can call an “ethics of complexity”.

In my presentation I will develop the idea of an ethics of complexity. Since our engagement with complex things cannot be reduced to simple calculation, such an ethics is fundamentally provisional and emphasises the responsibility we have to assume for our decisions, despite not being able to predict their outcomes completely. Since our predictions cannot be formal extrapolations, they will contain an element of creativity (as opposed to calculation). We have to imagine aspects of the possible outcomes of our acts. The imagination thereby acquires a central position in our engagement with the world, also when we do science. We have to attempt to imagine better futures in order to create the conditions in which they may perhaps be realised.

Lecture 2: Scientific research in the information era: from quest for truth to creation of knowledge



by Genshiro KITAGAWA, D.Sc.

Biography

- *Executive Director of Research Organization of Information and Systems*
- *Director-General of the Institute of Statistical Mathematics*
- *Professor, Department of Statistical Science, School of Multidisciplinary Science, The Graduate University for Advanced Study*
- *1974-1985 Researcher, Fifth Division, The Institute of Statistical Mathematics*
- *1985-1991 Associate Professor, Department of Prediction and Control, The Institute of Statistical Mathematics*
- *1991-2002 Professor, Department of Prediction and Control, The Institute of Statistical Mathematics*
- *2002- present Director-General, The Institute of Statistical Mathematics*
- *2004- present Executive Director, Research Organization of Information and Systems*

Abstract

Knowledge, imagination, intuition and idea are indispensable to researchers. However, it does not mean that the more knowledge the researchers have, the more originality they can get and the better research they can perform. Actually, we may notice many researchers who had read plenty of books and acquired abundant knowledge and ability of quick understanding, and yet could not reach an innovative outcome.

What are the problems then? The amount of knowledge obtained by book-reading is very limited compared with the total knowledge of the human being. It is far more important to face to real-world problems squarely and find out an essential problem without being caught by an established theory and common sense. It is much more efficient and easier to absorb necessary knowledge during the process of problem solving. But, we should also notice that due to rapid development of information and communication technologies (ICT), now the so-called ubiquitous society is approaching, where everybody can access to entire information anytime and anywhere. Then, the researchers who only depend on the rich store of knowledge could not survive any longer.

A scientist used to be required to have a high ability of induction, namely, the ability of extracting essential knowledge from finite number of observations.



Therefore, in order to become an outstanding researcher, imagination, intuition, and an idea have been considered to be indispensable. However, with the advent of ICT, even this is not necessarily obvious any longer. In some area, scientific discovery may be performed automatically. “Transformation from quantity to quality” may be realizing.

Cyber-enabled scientific methodologies are emerging and becoming important. The conventional researches were driven by two scientific methodologies, i.e., the theoretical science and experimental science. But, in the latter half of the 20th century, to treat highly nonlinear model and complex systems, the computing science has been established. Now, based on the accumulation of huge amount of large-scale data, the cyber-enabled inductive method, the data-centric science, is emerging. It is also important to realize that the object of scientific research is expanding to complex systems and human society for which the true model cannot be assumed. Then instead of the original purpose of the science, i.e., the quest for the truth, the viewpoint of the creation of the knowledge is becoming important.

Free Discussion

During this session the group members have to discuss the topic “Knowledge and imagination” among themselves and finally one member of the group has to present the summary of the groups ideas. As the individuals from the group are from different country and disciplines we expect to hear a summary with an interdisciplinary perspective.

Besides this, all the participants have been provided with some questions in a colored card which you have to answer while introducing yourself. The idea behind these questions are to know your imagination not as a group but as an individual.



Night & Interactive Activities

Hurray! It’s time to have some fun. In this session the groups will be given the task which will give them knowledge of Japanese cultural and traditional games. We will be learning the Japanese folk arts namely Origami and Shodo** and perform it as well.*

As all the activity will be revolving around the theme “Knowledge and imagination” the other tasks in this session namely “Guess the name of Celebrity” will test the group’s knowledge about the world around. The other task “Draw the person’s face” will once again test your knowledge but this time the knowledge about the other members / participants.

Finally, the task which tests the group’s creativity and imagination, “collage”. Given some scraps, you have to organize them in a creative way with a theme of your choice.

Perform well, All the Best!

**Origami: From ori meaning “folding” and kami meaning traditional Japanese folk art of paper folding.*

***Shodo: Japanese calligraphy, or artistic writing of Japanese language.*



Participants

<i>School</i>	<i>Department</i>	<i>Name</i>
<i>Cultural and Social Studies</i>	<i>Comparative Studies</i>	<i>Farhana Yeasmin</i>
<i>Physical Sciences</i>	<i>Structural Molecular Science</i>	<i>Fei Wang</i>
		<i>Shangbin Jin</i>
		<i>Xiogn Chen</i>
	<i>Functional Molecular Science</i>	<i>Binod Babu, Shrestha</i>
		<i>Mahesh Shantilalji Chandak</i>
		<i>Sangita Karanjit</i>
	<i>Astronomical Science</i>	<i>Cheul Hong, Min</i>
	<i>Fusion Science</i>	<i>Xiaodi Du</i>
		<i>Wang Erhui</i>
		<i>Wang Hao</i>
		<i>Zheng Pengfei</i>
	<i>Space and Astronautical Science</i>	<i>Guillaume Jean Gerard Chamboredon</i>
		<i>Halil Ersin Soken</i>
<i>Yuichiro Ide</i>		
<i>High Energy Accelerator Science</i>	<i>Accelerator Science</i>	<i>Arpit Ashok Rawankar</i>
		<i>Cenni Enrico</i>
	<i>Materials Structure Science</i>	<i>Miao Ping</i>
<i>Multidisciplinary Sciences</i>	<i>Informatics</i>	<i>Ho Bao Khanh, Vo</i>
		<i>Lihua Zhao</i>
		<i>Marconi Emanuel, Madrauga Filho</i>
		<i>Ruijian An</i>
		<i>Vanessa Rocio, Bracamonte Lesma</i>
		<i>Naoki Oguchi</i>
		<i>Mayumi Toshima</i>
		<i>Raghvendra Jain</i>
		<i>Kriangkrai Limthong</i>
<i>Liu Zhi</i>		
<i>Life Science</i>	<i>Genetics</i>	<i>Han Pin, Pui</i>
		<i>Masakazu Ishikawa</i>
		<i>Keiji Takagi</i>

<i>School</i>	<i>Department</i>	<i>Name</i>
<i>Life Science</i>	<i>Basic Biology</i>	<i>Yuko Shinozuka</i>
		<i>Ryohei Yatsu</i>
		<i>Li Chen</i>
		<i>Rammohan Shukla</i>
		<i>Eri Sumiya</i>
	<i>Physiological Sciences</i>	<i>Eulalia Annette, Coutinho</i>
		<i>Wei Fei</i>

