

The New Programs for the Strategical International Students Exchange of Tohoku University

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Globalization is accelerating recently and students are inevitably moving and learning across borders. It enhances international exchange of students and therefore establishing a clear strategy for international student exchange is an urgent issue. Such a strategy can be considered at two levels, namely the national and university levels. They do not necessarily coincide with each other. However, the strategy of the national level is sometimes consistent with that of the university level. For example, in Japan, the birth rate is on the decrease while the ratio of elderly people to the population is increasing at the fastest speed in the world. This leads to the fear of insufficient labor force, especially, insufficient skilled labor force in IT engineering. The lack of superior researchers in the field of advanced technology, e.g. nano-, robot- and bio technologies is also an acute problem. Recently, the economy of BRICs is expected to grow rapidly. Among these, China and India are geographically close to Japan. They are therefore important as a source of skilled labor as well as big markets. On the other hand, we need to send students abroad for them to learn advanced science or technology. To cope with these issues, we started the following new three projects last year.

ASIST (Cooperative Support Program for Asian IT Student Career Route in Japan): To compensate the potential lack of IT engineers, we recruit superior students with exceptional talent in IT from the Asian countries and grant them a scholarship. They are expected to work for Japanese companies through internships in the IT enterprise.

TUSP2007 (Tohoku University Summer Program 2007): To recruit outstanding students from top universities in China, we ran a 11-day summer school in August. The course covered a variety of technology and science and the participants had to learn all the courses to acquire the integrated knowledge. Through the lectures and laboratory visits, we found several students who want to come and study in our university.

SILICON VALLY INTERNSHIP: To let the Tohoku University students experience the R &D of the high technology enterprises in Silicon Valley, we took 18 students to venture companies in computer, information and biotechnology. The students learned what they have to do to approach the most advanced technology and were also encouraged to start up venture businesses.

In this presentation, we discuss the strategy that we employed in carrying out these programs for international student exchange at both the university and national levels.

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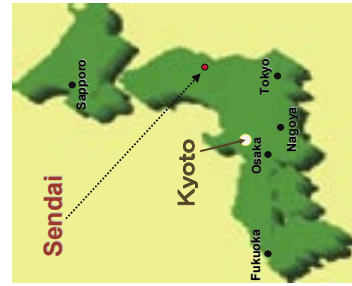
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- Background
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Location of the City of Sendai

- In North-East Japan
- Distance from Tokyo **350 km**
- Travel time from Tokyo
(by bullet train) **1hr 35m**

Population of Sendai City
1,027,909



Citations

National Ranking	International Ranking	Field	Citations	Papers
1	3	Materials Science	27,139	4,782
2	9	Physics	101,289	10,390
4	18	Chemistry	59,753	5,935
2	36	Engineering	11,448	3,173
6	66	All Fields	337,898	98,371

Resource: ISI Essential Science IndicatorsSM, January 1, 1997 – February 28, 2007

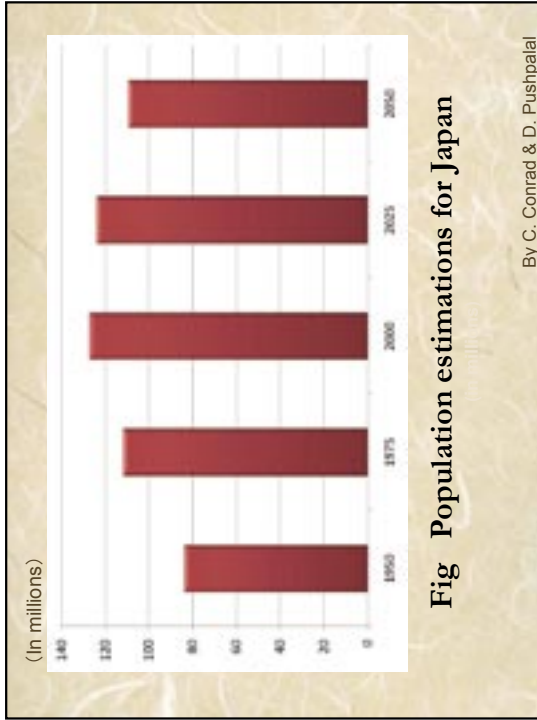


Fig Population estimations for Japan

By C. Conrad & D. Pushpalal

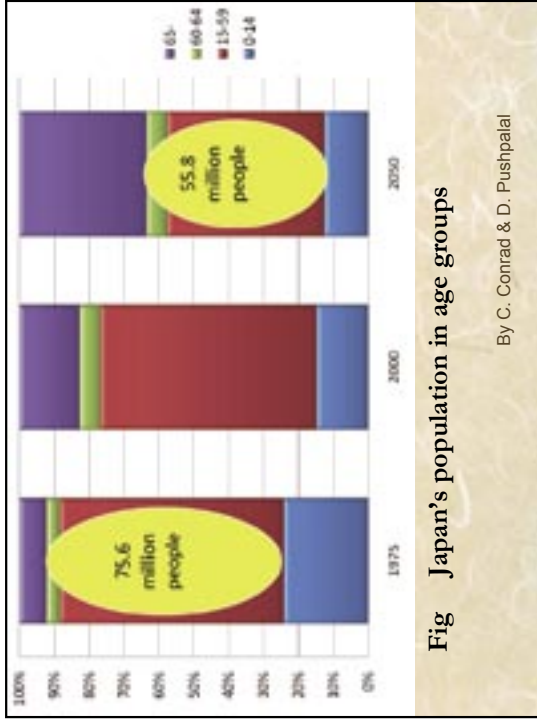


Fig Japan's population in age groups

By C. Conrad & D. Pushpalal

Replacement Migration

United Nations Populations Division 2001

- Keep the population of 127.5 million people
 - 17 million net immigrants from 2005-2050
 - = 381,000 net immigrants/year
- Keep the working-age population at 87.2 million people (1995)
 - 33.5 million net immigrants from 2005-2050
 - = 609,000 net immigrants/year

By C. Conrad & D. Pushpalal



TOHOKU UNIVERSITY
SUMMER PROGRAM 2007

PERIOD : AUGUST 1 - 11
LOCATION : TOHOKU UNIVERSITY, ARAKI
APPLICATION DEADLINE : JUNE 30
TUTOR, FEE, ACCOMMODATION, & MEAL : FREE

ELIGIBILITY
The Undergraduate and Graduate Students who are enrolled at the following institutions are eligible for TSP 2007.

- Saitama University
- Fukuoka University
- Tohoku University
- Beijing University
- Tsinghua University

LECTURE TOPICS :

- Advanced Materials for the Hydrogen Society
- Spintronics
- Environmental Friendly High Speed Vehicle "Aero-Train"
- Humanoid Robot
- ZnO Light Emitting Diodes
- Gene Therapy for X-linked Severe Combined Immunodeficiency
- The Economics of Emissions Trading, and Kyoto Mechanisms

FACTORY VISIT :

- Sony Corporation Sendai Technology Center
- Kirin Beer

Scene of lecture



Photo in front of the statue of Lu Xun



Experience of Zen



Visit of laboratories



ASIST
The Asist Program is a unique opportunity for international students to study in Japan.

Developing Asian IT human resources who are adaptable working potentials in Japanese companies
Cooperation Support Program for Asian Students' Career Study in Japan

- To compensate the potential lack of IT engineers, the superior students with exceptional talent in IT are recruited from the Asian countries
- They are granted with a scholarship.

- They are expected to work for Japanese companies through internships in the IT enterprise.

- This program is a cooperated work by the Ministry of Economy, Trade and Industry and the Ministry of Education, Culture, Sports, Science and Technology

SILICON VALLY INTERNSHIP:

- Let the Tohoku University students experience the R &D of the high technology enterprises in Silicon Valley
- 18 students visited venture companies in computer, information and biotechnology.
- They learned what they have to do to approach the most advanced technology and were also encouraged to start up venture businesses.



Talk with Prof. **Shuji Nakamura** *
 * Professor of University of California, Santa Barbara
 The inventor of the blue laser diode



Scene of presentation

TUSP 2007 (Tohoku University summer program)

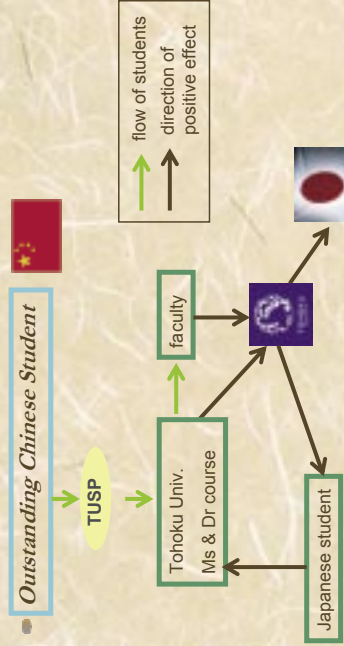


Fig Schematic concept of TUSP

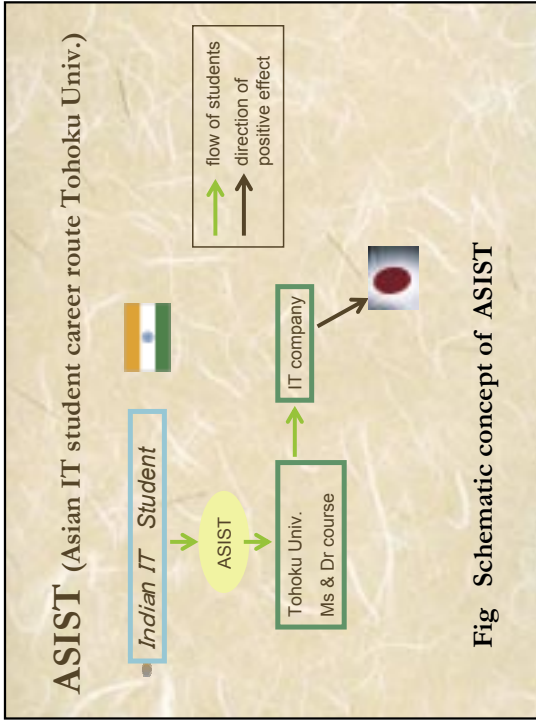


Fig Schematic concept of ASIST

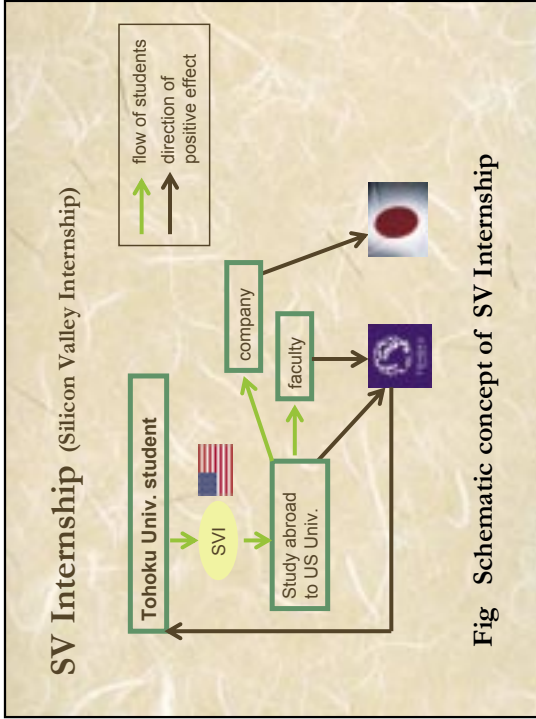


Fig Schematic concept of SV Internship

Conclusion

- We showed three new programs based on the international exchange strategy of Tohoku Univ..
- TUSP2007: 1/3 of participants want to study in Tohoku Univ..
- ASIST: Currently, 5 Asian students are studying IT and business Japanese.
- SV Internship: More than half participants had the strong motivation to study abroad.