



# Close Up YNU 2010 English

YOKOHAMA National University NEWS

A Community Magazine That Bonds the Alumni & the University Closer Together

## NEWS

### YNU University Identity

YNU Adopts Official Logo, Symbol Color, Slogan  
2010 to Catapult YNU to Global Brand.

**Y**NU turned 60 last year. In celebration of the anniversary, an official logo, symbol color and slogan were adopted as part of the "YNU University Identity System" with the aim of making YNU's identity more visible, i.e., its beliefs, values and mission. With a renewed awareness

that its birth in cosmopolitan Yokohama and its history and tradition of teaching and research make our school the "international hub of practical learning", YNU is poised to play a progressive role in the increasingly globalizing world of the 21<sup>st</sup> century.

#### YNU University Identity

##### YNU Logo



The moniker "YNU," which is more popular overseas than in Japan, was adopted as the official logo.

##### YNU Symbol



The seagull beating its wings against blue sky, carefree, represents a free spirit of learning that takes flight far into the future.

##### YNU University Identity System

##### YNU Slogan Initiative for Global Arts & Sciences

Expresses determination and resolve to gain ever more trust and support as an international academic hub.

##### YNU Color



##### YNU Blue

Process color: CMYK C:100 M:60

Web page color: RGB R:0 G:91 B:172

This is royal blue that conjures images of wide expanses of water stretching from Yokohama to the world as well as deep intellect.

#### Message from the President

It's my second year as president of YNU and I'm working hard to take our strengths and appeal to a higher level. It is timely that, as we find ourselves in the middle of rapid globalization, I'm mobilizing the whole school to step up our educational and research efforts to focus on developing individuals who can launch a career on global stage. To that end we have implemented the "YNU Initiative," a guidepost that is going to lead our undergraduate education to a more robust and substantial level. The goal of this initiative is to enable each student to develop dependable strength as a bachelor degree holder by setting educational targets.

Building upon past history and track record that the YNU alumni and former faculty members bequeathed to us in this great port city of Yokohama, we set our eyes on where YNU should be in the future, correctly assessing where we stand in education and research today and setting up such guiding slogan as "international hub of practical learning." Furthermore, in order to further grow as educational and research organizations, a large-scale reorganization will take place (including reorganizing the Faculty of Education and Human Sciences, newly opening a School of Engineering Science and a Graduate School of Urban Innovation) starting 2011. We are still halfway in our endeavor but our commitment is strong: we will become a leading university in Japan. We are counting on the help of students, alumni, faculty and staff, and all members concerned to realize that goal. Thank you for your continued help.

## TOPICS

### YNU WEBSITE IS RENEWED!

#### Ranked 4<sup>th</sup> in "Gomez College Website Ranking 2010"

YNU's website placed fourth in "Gomez College Website Ranking 2010" published on July 29. Some 740 university websites were ranked (excluding junior colleges and stand-alone graduate schools with no undergraduate programs) in terms of the richness of content by Gomez Consulting Co., Ltd. A complete revamping of our website in April, 2010 led to a favorable

review by the firm, up from the previous 170<sup>th</sup> in overall score.

Check Gomez's website, "Gomez University Ranking 2010" ([www.gomez.co.jp](http://www.gomez.co.jp)) for more detail (Japanese only).

"Gomez College Website Ranking 2010"  
[www.gomez.co.jp](http://www.gomez.co.jp)



Yokohama National University website [www.ynu.ac.jp](http://www.ynu.ac.jp)

# The 60<sup>th</sup> Anniversary Commemorative Project

## Fundraising Drive Update / We Still Need Your Help!

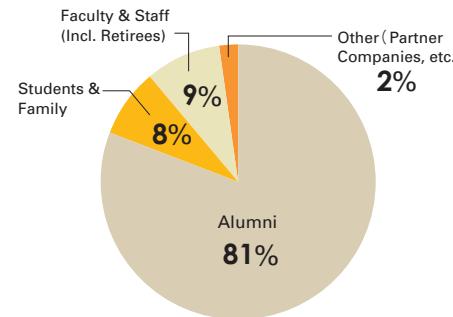
In a world that is rapidly globalizing, YNU has maintained its international activities. In recent years, however, the worsening economic conditions have made it difficult to keep funding international exchange programs and providing financial assistance to both students and researchers from abroad and Japanese students and researchers studying and working overseas. The 60<sup>th</sup> Anniversary Commemorative Fundraising Campaign primarily aims to buttress YNU's efforts toward further globalization. We seek your understanding and generous support of the campaign. The funds raised during the first six months of the campaign (Oct. 1, 2009 – March 31, 2010) are represented on the right.

Total Number and Amount of Contributions (Oct. 1, 2009 - Aug. 31, 2010)

Number ··· 958 / Amount ··· ¥28,862,000

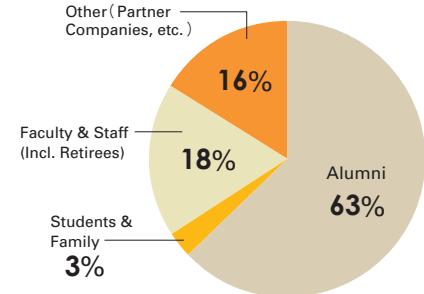
### 1. Number of Contributions

GROUP	TOTAL(#)
1. Alumni	773
2. Students & Family	75
3. Faculty & Staff (Incl. Retirees)	89
4. Other (Partner Companies, etc.)	21
<b>TOTAL</b>	<b>958</b>



### 2. Amount of Contributions

GROUP	TOTAL(¥)
1. Alumni	18,032,000
2. Students & Family	920,000
3. Faculty & Staff (Incl. Retirees)	5,325,000
4. Other (Partner Companies, etc.)	4,585,000
<b>TOTAL</b>	<b>28,862,000</b>



## Using Proceeds from the 60<sup>th</sup> Anniversary Commemorative Fundraising Projects International Exchange Programs / Campus Development Projects

### International Exchange Programs

Yokohama National University International Exchange Foundation has supported students for many years through activities as below. More support will be needed going forward.

#### 1. Support for Students Studying and Traveling Abroad

YNU provides a financial incentive of approximately 100,000 yen per student for going on a study abroad program at one of overseas partner universities. Under the banner of "Developing individuals who can launch a career on global stage," YNU is aiming to boost the number of outbound students and a greater funding of the incentives is needed. There are also incentives for graduate students to give papers at international conferences, conduct research and undergo trainings as well as unique travel-abroad programs run by each Faculty and School.

#### 2. Support for Foreign Students

YNU is home to some 800 foreign students from around the globe, over 70% of whom are self-funded and need some kind of financial support to pursue their study in Yokohama, a city that's expensive to live in. Out of those students the university provides a scholarship of 300,000 yen to ten students with demonstrated academic excellence.

Attracting top-notch foreign students is an important task since they can contribute to boosting Japanese students' morale, but we need more scholarships for that.



YNU students at Asia Development Bank in Philippines.

### Tokiwadai Campus Development Project

A concept-design competition was held to improve the "curb appeal" of YNU Bridge, which is the main entrance to Tokiwadai Campus, and its surrounding areas. Development is underway incorporating ideas from two first-prize winners.

Your additional contribution to the 60<sup>th</sup> Anniversary Fundraising Campaign is greatly appreciated!

Campaign Goal: ¥150 million

Campaign Period: October 1, 2009 – March 31, 2012

Contribution Unit: Individuals ¥5,000/unit  
Corporations ¥100,000/unit



#### [For Questions / Contact:]

Yokohama National University  
Public Relations Office General Affairs Department  
79-1 Tokiwadai, Hodogaya-ku, Yokohama 240-8501 JAPAN  
TEL 045-339-3027 / FAX 045-339-3179 / E-mail 60y-fund@ynu.ac.jp

# Professor Nishizawa Receives Pritzker Architecture Prize!

**P**rofessor Ryue Nishizawa of the Faculty of Engineering became the laureate of the 2010 Pritzker Architecture Prize and the award ceremony took place on May 17, 2010. The Prize, also referred to as "architecture's Nobel Prize," is the profession's highest honor and commands prestige throughout the world.

The honor went to Professor Nishizawa and his colleague Kazuyo Seijima for their joint projects in Japan, Germany, England, Spain, France, Netherland and the United States, which they designed under their firm's name SANAA.

The Pritzker Prize was founded in 1979 by The Hyatt Foundation, whose current president is the oldest son of the founder of

the Hyatt Hotel chain in the United States.

It's the first time since 1995 when Tadao Ando received the Prize that another Japanese was laurelled with the Prize. Kenzo Tange and Fumihiko Maki, the pride of Japan, have also received the same Prize in the past.



## Joint Programs with Overseas YNU Alumni / Supporting the University

**Y**NU has been home to a large number of international students for many years and many of them are active in political, financial and educational sectors in many parts of the world as alumni. There are quite a few Japanese alumni pursuing their career overseas as well. We are highlighting programs and events that those YNU alumni have helped make possible in our series.

### Part 1) 2010 Pukyong Cultural Exchange Program for Sister University

In late August, a Sister University Summer Program was held at Pukyong University in Pusan (YNU has a student/faculty exchange agreement with the university). The Program is geared for YNU students, of which five participated. In carrying out the Program YNU alumnus Professor Nam Ki-Woo took the helm, assisted through the entire program by president of YNU Korean Alumni Association Lee Gil-Won (Professor of Japanese, Don-A University Department of International Studies) and other Korean YNU alumni who were active in various different fields. A number of alumni members reportedly donated a large sum of money to make the Program a reality. We would like to express our heartfelt thanks again to the alumni members for their care of their alma mater and those following in their footsteps.



Clad in traditional Korean wedding gowns

### 2) Signing Exchange Agreement with Universidade de São Paulo; Commemorative Joint Seminar

A signing ceremony for Exchange

Agreement with YNU was held at Universidade de São Paulo on September 16, where Rector João Grandino Rodas and President Kunio Suzuki signed their names. Since the Agreement was first signed in 1983, exchange activities have steadily grown from sending faculty and students to opening a liaison office, and a decision was made this time around to sign a new agreement in order to deepen our relationship. Osamu Ishihara, Dean of Faculty of Engineering, and Takayuki Kurabayashi, Chief of International Section, were also present at the ceremony.

In commemoration of this event a joint USP-YNU seminar was held the following day (Sept. 17), where, after each university was introduced, Professor Makoto Arai and Associate Professor Yoshiaki Nishi of Faculty of Engineering each gave a special lecture to an intrigued audience of some 100 people comprising USP members, YNU alumni and members of the Association of People from Kanagawa Prefecture.

The seminar concluded with Professor Toshi-ichi Tachibana's commemorative speech covering his experience as a foreign student at USP through exchange between two universities and two countries. Professor Tachibana played an active role in promoting the exchange between USP and YNU for a number of years.

### 3) A social gathering was held for YNU students, alumni members and East China Normal University students majoring in Japanese on September 24 in Shanghai.

A huge crowd comprising 57 YNU

students, 6 YNU faculty and board members, 18 alumni (Japanese and non-Japanese), some 20 students and staff from East China Normal University – all told more than 100 persons – gathered at the Hua Shen Academic Exchange Center of East China Normal University.



Following the opening remarks by Kazuhisa Matsuoka, Executive Director for International Affairs, and an overview of YNU by Professor Yuichi Hasebe, each of the following individuals gave a brief talk on their school days, hardships in China and other topics: Mr. Tetsuro Nose, Senior manager, China Investment Administration Department, Mitsui & Co., Ltd., Shanghai Office; Mr. Katsunori Kurihara, General Manager, Supply Chain Management Department, Suntory (China) Holding Co., Ltd., who provided assistance during our visits to Japanese companies in China; Ms. Yuka Koseki, Vice-Consul, Consulate General of Japan in Shanghai.

On the following day, September 25, the group broke out into three subgroups and toured the facilities of Japanese companies Suntory, Yakult and Shiseido. Witnessing how Japanese corporations were toughing it out in China, the students that went on the tour received inspiration.

Professor Tsutomu Matsumoto and Associate Professor Junji Shikata of Research Institute of Environment and Information Sciences received Commendation for Science and Technology from the Minister of Education, Culture, Sports, Science and Technology on April 13, 2010.



**Award coverage:** <http://www.ynu.ac.jp/hus/koho/88/detail.html> (in Japanese)

The awardees' research topics are explained below.

## Evaluating Methods for Biometric Authentication Techniques

**Tsutomu Matsumoto (Professor, Research Institute of Environment and Information Sciences)**

The challenge with biometric authentication systems that use physical properties unique to an individual – finger prints, irises, veins in hands and fingers, etc. – to identify him/her has been how to measure the level of security that is required to protect against unlawful acts such as presenting a fake body part to pass one off as authentic. In our research, we are proposing a breakthrough method for measuring security where a series of test pieces - from objects with properties close to a human body part (such as a finger) to objects that are not - are presented to the biometric authentication system and their acceptance rates are measured. We have also developed a system of fabricating a full range of fingerprints, irises, digital veins and palm veins for test pieces.

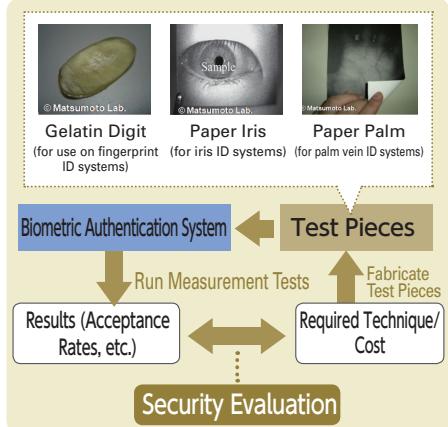
Through this study we have demonstrated the

need and methodology to fully evaluate biometric authentication techniques that were traditionally only tested in terms of pattern recognition and image processing capabilities, from a security standpoint. This has resulted in greatly affecting the way the academia, international standards organizations, national governments and corporations make policy-related and strategic decisions.

It is expected that these research results will prompt corporations to start developing biometric authentication techniques and products with higher security levels and, moreover, change the way adopters and users of the technology/products look at biometric authentication systems, thereby contributing to the improvement of society's overall security level.

[http://er-web.jmk.ynu.ac.jp/html/MATSUMOTO\\_Tsutomu/](http://er-web.jmk.ynu.ac.jp/html/MATSUMOTO_Tsutomu/)

Evaluating the security level of biometric authentication systems



**Tsutomu Matsumoto,**  
Professor, Research Institute of Environment and Information Sciences  
Area of specialization:  
biometrics, communication/network engineering, etc.

## Encryption and Authentication Theories with Information Theoretic Security

**Junji Shikata, Associate Professor, Research Institute of Environment and Information Sciences**

In today's information society, encryption and authentication techniques support the integrity of various services using the Internet (e.g., e-commerce) and form the core technology that is needed to allow many people to communicate and negotiate agreements securely. Our lab focuses on cryptography, theoretical computer science, computational mathematics and so on, and we're particularly interested in cryptography. As a scientific discipline, modern cryptography encompasses a wide range of encryption and related scientific theories and has become a multi-disciplinary area of research consisting mostly of information science, theoretical computer science and mathematics.

Security in modern cryptography can be grouped broadly into *computational security* and *information theoretic security*. The first is security that requires a hypothesis such as "Factorization into prime numbers is computationally difficult" (i.e., a hypothesis

that "No algorithm exists that can factorize into prime numbers fast"). In the second, a different kind of approach is taken where no such hypothesis about computational difficulty is required and security is guaranteed by objectively estimating the degree of information leakage (amount of information) to the attacker from the standpoint of information science. In building today's cryptographic and authentication techniques the first approach (computational security) is popular, but given the possibility of future advancements in computational algorithm and advent of new computer technologies (e.g., quantum computer), it is more desirable to realize a theoretically secure cryptographic/authentication techniques efficiently without depending on the computer technology of the times.

We have been publishing trailblazing research findings on cryptographic/authentication techniques including digital signature and steganography by using the

second approach (information theoretic security), made huge strides in advancing mathematical modeling and formulation of various concepts pertaining to security, and completed building a system architecture theory with strong security. It is a great honor that our achievements have been recognized by the British Computer Society with The Wilkes Award and by Japan's Minister of Education, Culture, Sports, Science and Technology with the Young Scientist Award, among others. Spurred on by such encouraging recognition we're back at our lab plugging away at constructing new theories in relevant fields.



**Junji Shikata, Associate Professor, Research Institute of Environment and Information Sciences**  
Area of specialization: Basic Information Science & Mathematics in general (including probability theory & statistical mathematics)