

AC21 Newsletter

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2nd AC21 International Graduate School 2017 to Be Held at Gadjah Mada

UGM Welcomes Participants for International Graduate School 2017

"Community and Indigenous-based Technology for Sustainable Development towards Resilience Society"

Mirwan Ushada

Associate Professor, Agroindustrial Technology / Manager, Task Force for Global Initiatives for Asia, Africa, and Middle East Regional Cooperation
Gadjah Mada University

Warmest greetings from Gadjah Mada University!

The AC21 International Graduate School 2017 (IGS 2017) is approaching. Gadjah Mada University, known as UGM ("Universitas Gadjah Mada") in Indonesia, is delighted to welcome graduate students and all participants of IGS 2017.

Growing to be the leading university in Indonesia, UGM brings the vision to be a pioneer of world-class university in Indonesia which is excellent, full of innovation, dignified, and dedicated to national interest and humanity. Along with the vision, UGM has general mission to promote excellence in educational activities, research, and community service which aim to nurture excellent and beneficial knowledge for Indonesian society and to participate in Indonesian socio-cultural building. In line with the national goals to be globally recognized and nationally resilient nation, UGM would



proudly host the prestigious event of IGS 2017 on July 10-15, 2017.

With the main theme of "Community and Indigenous-based Technology for Sustainable Development towards Resilience Society", this program involves more than 10 countries from different continents which

will be represented by expectedly 100 international students as participants. There are five learning components in this program, Lectures, Workshop, Community Service, Short Internship and Excursion.

The activities will be divided into five days. Before the program is officially begin, there will be a Steering Committee Meeting for AC21 Steering Committee members.

The following day starts with a luncheon and is followed by an Opening Ceremony, Rector of Gadjah Mada University and the Director of AC21 General Secretariat will deliver opening remarks.

Day Two is the first day of a Lecture session with the sub-theme of "Sustainable Agricultural Project Study". There will be a workshop afterwards to support the better understanding with the project study.

The Lecture Session on the third day will be discussing about "Technology for Sustainable Development and Community Resilience". There will be Community Service Program to gain understanding and to have the ability to manifest the knowledge into practical solutions of daily challenges.

Day Four Lecture Session is focusing on "Indigenous-based Health Product". This session will be supported by a short internship at the pharmaceutical institution to support better understanding of health product. At the end of the day, participants are expected to have a Student Group Discussion

to have a profound discussion from Day Two to Day Four. The three-day lectures will be conducted by international speakers from AC21 University members as well as prominent experts from UGM.

Lastly, on the fifth day of this program, not only academic activities, participants will be given the opportunity to learn about the exotic Indonesian culture especially Yogyakarta and its surrounding through excursion to the famous Borobudur Temple and Yogyakarta City Tour.

By participating in IGS 2017, students from all over the world are given opportunity to understand more about indigenous-based technology in local industries and to learn local wisdom through cultural visit.

Trans-disciplinary IGS 2017 will enable students to explore all aspects of community and Indigenous-based Technology such as agricultural study, community resilience and health products. Furthermore, we are convinced that the program would be worth-

while for participants in gaining more experiences and knowledge into practical solutions of daily challenges in a form of community services.



AC21 Special Project Fund 2016: Awardees' Reports

International Workshop on Biomedical Engineering Education: Designing Practical Program and Promoting Industry Involvement

International BME Conference and Seminar at Nagoya and Yokohama

Masakatsu Fukai

Academic Research & Industry-Academia-Government Collaboration, Nagoya University

International Bio-Medical Engineering (BME) Conference and BME Seminar, together with other related events, were held in Nagoya and Yokohama on October 11th and 14th respectively. During the week, four AC 21 leading universities, University of Minnesota, North Carolina State University, University of Strasbourg, and Nagoya University, had intensively shared and discussed about good practices in collaborations with industries in BME research and development and in BME education.

International BME conference, held at Nagoya University on October 11th, drew more than 160 participants, including distinguished industry speakers such as former Chairman of Terumo Corporation and General Manager of Partner Robot Division of Toyota Motor Corporation. The distinguished panelists also engaged in the panel discussion to discuss and share their view on BME industry, BME education, and BME ecosystem in Japan. BME Seminar, held at BIO Japan 2016 on October 14th, were filled with more than 60 industry representatives interested in the frontline of BME innovations. Targeting industry representatives from

BIO companies, the seminar titled as "The Global Frontline of Biomedical Engineering Innovation and Design" was held as a part of BIO Japan 2016 event.

In addition to the above events, other several events were held, such as researchers' exchange meeting, in which five faculties from Nagoya University whose research topic is in BME field presented their promising technology seeds to BME professionals from other AC 21 universities. Participants exchanged the view and information actively to identify the potential areas of BME research collaboration.

In this way, all the events are huge success, by not only achieving the original goals to

contribute in AC 21 by enhancing educational exchange and international collaboration among AC21 members, but also by bringing more Japan's attention to BME R&D and education via the collaboration with industry and academia. University of Strasbourg showed an interest to host the next event on BME in 2017. Not being satisfied with one-time success, the four AC 21 leading universities have confirmed to keep this BME initiative going toward further stage via active and hard-working collaboration.

Along with leading researchers from AC21 member universities, more than 50 faculties, staff members and students of Nagoya University had joined in this series of international events, from October 11th to 14th, 2016.



Interdisciplinary Joint Urban Design Studio (IJUD studio): INNER HARBOURS, SHARING ECONOMY, URBAN MOBILITY

Elisa Palazzo

School of Architecture and Built Environment, The University of Adelaide

The Interdisciplinary Joint Urban Design studio (IJUD studio) is a partnership between the University of Adelaide, the University of Strasbourg and Tongji University, Shanghai.

The workshop has involved a group of 18 Master students in Landscape Architecture (SABE), Architecture (SABE), Urban Design (ENSAS and CAUP) and Project Management (FSEG), from the University of Adelaide, University of Strasbourg and Tongji University; two PhD candidates from ENSAS and CAUP Tongji and researchers from the university involved, which have worked together on a common Urban Design proposal.

The studio was coordinated by Dr Elisa Palazzo and Prof Anne Jaureguiberry with Prof Jean Alain Héraud, Prof Cristiana Mazzoni, and Prof Jian Zhou. The scope of the studio was to bring together a group of students and researchers with different nationalities and backgrounds to work on the urban and architectural space of "Inner Harbours, Sharing Economy, Urban Mobility".

The city of Strasbourg is promoting several large sustainability projects beyond its national urban boundaries. The new urban intercommunal plan will include the region of the "Euro-metropolis", a new Franco-German geographical entity that will incorporate the two embankments of the Rhine River. Aiming at innovating the urban, social and energy domains, the plan is framed on a projection of demographic growth corresponding to about fifty thousand new inhabitants in a 20 to 25 years term.

In this context the area of the Port du Rhin represents a strategic location for the development of the future city and it will be the study area of the IJUD studio.

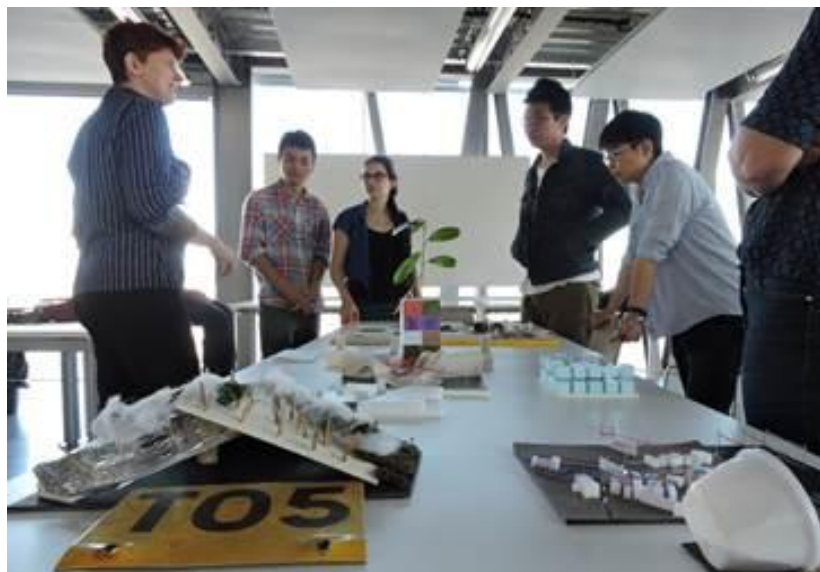
Four French-Australian-Chinese interdisciplinary teams of students have worked collaboratively and proposed projects on the area of the Port du Rhin in Strasbourg, coordinated by PhD students and researchers.

Six lectures were delivered by researchers of the partner universities and local stakeholders, during the week in Strasbourg. The workshop was the occasion for researchers of the partner institutions to get together and discuss the prosecution of activities for 2017 and 2018.



The next edition of the IJUD studio will be held in April 2017 in Adelaide, South Australia

SABE: School of Architecture and Built Environment, The University of Adelaide
ENSAS: Ecole Nationale Supérieure d'Architecture / FSEG: Faculty of Economics and Management, University of Strasbourg
CAUP: College of Architecture and Urban Planning, Tongji University, Shanghai



Intelligent Transport Systems (ITS): Development of Collaborative Research Areas as Bridge between Developed and Developing Countries to Ensure Sustainable and Innovative Deployment

Johann Andersen

Department of Civil Engineering, Stellenbosch University.

The use of technology in support of transport solutions (often referred to as Intelligent Transportation Systems) with resultant extensive data generation and its widespread deployment is common place in the developed world. Many developing nations are following suit in an attempt to address the ever growing transportation needs and increased congestion in major cities. However, the appropriateness of these solutions is under scrutiny. Furthermore, affordability of extensive infrastructure provision and the corresponding sustainability from an operations and maintenance perspective is seriously being questioned in many developing countries, especially against the background of extreme poverty and associated social needs.

This project brought together leading researchers in this field, both from a developed and developing country environment, to consider appropriate areas of collaborative research to ensure sustainable implementation for ITS in the developing country environment. Innovation and cost effectiveness were crucial considerations.



Most of the activities centred around two workshops, hosted by Institute for Transportation, Research and Education (ITRE) at NC State and the Stellenbosch Smart Mobility Laboratory (SSML) at Stellenbosch University respectively. Workshop attendees included the various

academic staff working in this field of interest, research staff, post-graduate students (with nationalities representing developing countries in South-East Asia as well as Southern Africa) as well as representatives of the respective international offices (part attendance). The workshops explored *inter alia* the following: (i) exploring the areas of expertise from the partner universities as it relates to the project objectives, (ii) consider the relevant trends in ITS internationally, (iii) develop a common understanding of the developing country application environment, (iv) develop a joint vision for ITS development in the developing country environment, and (v) identify research areas and specific research projects for further and future collaboration.

Rapid urbanisation, coupled with increasing economic development results in higher congestion in cities, and particularly prevalent in developing countries. In previous years, a lower economic base resulted in limited mobility needs, however the economic base in Africa and other developing countries is now much higher, and so even a small increase in development

and GDP growth has a profound effect on the transport needs of developing countries. An opportunity exists in developing countries to leapfrog the legacy technologies that are installed and used in ITS projects in developed countries. This allows developing countries to use the latest

technologies and provides practitioners an opportunity to implement minimal infrastructure, low cost, efficient ITS projects that will be particularly suited to rural environments, smaller cities and the developing world context. Developing ITS technologies can then be scaled and adapted to suit developed country needs, resulting in smarter and more efficient ITS applications globally.



A number of specific research projects were identified. These include (i) the need to investigate less resource intensive data sources to initiate transport models, (ii) enhancement of traditional approaches to traffic detection by considering Floating Car Data (FCD), and (iii) consideration of the adverse environmental impact of mobility in the developing country context due to particular extreme conditions observed.

This project has laid the foundation for the development of a White Paper for deployment of ITS in developing country environment. The emphasis will be on sustainable deployment of transport technologies, unlike what is believed, is currently the case. It is envisaged that this White Paper will be a major contribution in ensuring a more responsible, cost-effective but also practical approach toward technology applications in transport within the developing country environment. This White Paper will be presented at the South African Transport Conference (SATC) in July 2017 (hosted annually in Pretoria, South Africa). It is also envisaged that this paper will form the basis of discussion with stakeholders in the foreseeable future to debate policy and funding directives for ITS in the developing county environment.

AC21 International Forum 2018 to Be Held at Jilin

The 9th AC21 International Forum @ Jilin University, Changchun, China

Zhang Guangcui
Director, Office of Global Engagement, Jilin University



The 9th AC21 International Forum will be hosted by Jilin University in Changchun, China from July 4 to 7, 2018. Presidents, scholars and administrative staff from the AC21 member universities, representatives from non-AC21 member universities, enterprisers, policy-makers and government officials from local society are expected to meet at Jilin University.

The theme chosen for this forum is University Innovation and Social Development. The participants from all parts of the world will address several issues related to this theme, including: Innovation and Entrepreneurship; Interdisciplinary Research & International Collaboration; MOOCs and Reform in Higher Education; Innovative Networks for Higher Institutions.

Participants will stay at The Abritz Hotel



Changchun and a field tour to Mount Changbai after the forum will be organized. The Mount Changbai, is located in southern Jilin Province, one of China's nature preservation zones. It's the most beautiful place in Jilin Province and also China's typical comprehensive nature existence of world importance.

Jilin University is a key comprehensive university under the direct jurisdiction of China Ministry of Education, and strongly supported by China's "Project 211" and "Project 985". Jilin University has set up cooperation and exchange relations with 270 universities, research institutions or international academic organizations in 39 countries and regions. In recent years, JLU has set up 29 joint research centers and labs with foreign institutions.

Located in Northeast China, Changchun is

the capital and largest city of Jilin Province. Known locally as China's "City of Automobiles", Changchun is an important industrial base with a particular focus on the automotive sector and sometimes referred to as the "Detroit of China." Changchun is also one of four "National Garden Cities" awarded by the Ministry of Construction of P.R. China in 2001 due to its high urban greening rate. Changchun is just 1.5 hours flight from Beijing and 2.5 hours flight from

Shanghai.

We look forward to meeting you in Changchun in July 2018! Let the AC21 International Forum 2018 bring us a productive and effective event for all the participants! Welcome to Jilin University!



Upcoming AC21 Activities and Events

YEAR	DATES	EVENT/ACTIVITY	LOCATION
2017	July 11 - 15	2nd AC21 International Graduate School	Gadjah Mada University, Indonesia
	July 10	15th AC21 Steering Committee Meeting	Gadjah Mada University, Indonesia
2018	TBA	9th AC21 International Forum	Jilin University, China
		16th AC21 Steering Committee Meeting	Jilin University, China
		9th AC21 General Assembly	Jilin University, China
2019	TBA	3rd AC21 International Graduate School	Chemnitz University of Technology, Germany
		17th AC21 Steering Committee Meeting	Chemnitz University of Technology, Germany
2020	TBA	10th AC21 International Forum	Kasetsart University, Thailand
		18th AC21 Steering Committee Meeting	Kasetsart University, Thailand
		10th AC21 General Assembly	Kasetsart University, Thailand

AC21 General Secretariat Activities (Oct 2016 – Apr 2017)

YEAR	DATES	EVENT/ACTIVITY	LOCATION
2016	October 26	151st AC21 General Secretariat Meeting	Nagoya University, Japan
	November 17	152nd AC21 General Secretariat Meeting	Nagoya University, Japan
	December 15	153rd AC21 General Secretariat Meeting	Nagoya University, Japan
2017	January 18	154th AC21 General Secretariat Meeting	Nagoya University, Japan
	February 9	155th AC21 General Secretariat Meeting	Nagoya University, Japan
	March 14	156th AC21 General Secretariat Meeting	Nagoya University, Japan
	March 20 - 23	Attendance at APAIE 2017	Kaohsiung, Taiwan
	April 19	157th AC21 General Secretariat Meeting	Nagoya University, Japan

AC21 Members

Australia The University of Adelaide

China Jilin University
Nanjing University
Northeastern University
Shanghai Jiao Tong University
Tongji University

France University of Strasbourg

Germany Chemnitz University of Technology
University of Freiburg

Indonesia Gadjah Mada University

Japan Nagoya University

Laos National University of Laos

New Zealand University of Canterbury

South Africa Stellenbosch University

Thailand Chulalongkorn University

Kasetsart University

USA North Carolina State University

University of Minnesota

What is AC21?

AC21 is an international academic consortium comprised of higher education institutions from around the world. It was established in 2002 at the initiative of Nagoya University, with the aim of creating an academic network that transcends borders to address global issues by sharing

AC21 Website: <http://www.ac21.org/english/index>

knowledge and expertise. The network is managed by the AC21 General Secretariat located at Nagoya University.

Visit our website
for the latest information!
www.ac21.org

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