

Newsletter



University of Malaya-Kyoto University
Secretariat



Kyoto University
Graduate School of Engineering
JSPS Asian Core Program (IWM)

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The 3rd Comprehensive Symposium (CS3) was held successfully at Obaku Plaza, Uji Campus of Kyoto University from 28-29 October 2013. Forty five participants from Malaysia and 85 participants from Japan attended the symposium.

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Malaysian researchers from Group 2 (Water Quality) attended a workshop on GIS modelling and water quality at Research Center for Environmental Quality Management in Otsu, Japan from 23-27 September 2013.

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SUSTAINABILITY SCIENCE
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Asian Core Program

Research and Education Center for the Risk Based Asian Oriented Integrated Watershed Management

JSPS Asian Core Program 3rd Comprehensive Symposium (CS3)

28-29 October 2013

Uji Campus, Kyoto University, JAPAN

On 28-29th October 2013, the Kyoto University hosted the 3rd Japanese Society for the Promotion of Science Asian Core Program Comprehensive Symposium (JSPS-ACP CS3). The JSPS Asian Core Program is an international collaboration between Japanese and Malaysian universities under the research theme of “Research and Education Centre for the Risk Based Asian Oriented Integrated Watershed Management.” The JSPS-ACP Comprehensive Symposium is an annual event, with Kyoto University taking turns to host the meeting. The 3rd symposium was held at Obaku Plaza, Uji Campus of Kyoto University. A total of 130 participants (85 Japanese and 45 Malaysian delegates) comprising the coordinators and group leaders as well as academicians, researchers and students attended the event. On 28th October 2013, Prof. Masao Kitano, Dean of Graduate School of Engineering delivered his welcome remark and followed by Asian Core Program Coordinators Prof. Yoshihisa Shimizu and Prof. Nik Meriam Nik Sulaiman with their opening address summarizing past activities until end of October 2013. Gift exchange ceremony and photo session were took place after the opening address.

The event was then continued with an invited lecture by Dr. Yuichi Sato from Lake Biwa Environmental Research Institute with title; The History of Environment in Lake Biwa and Recent Conservation Efforts - Focusing on Mother Lake 21 Plan and Modelling Approach. On the same day, two keynote presentations were delivered by Prof. Masahisa Nakamura from Shiga University on Transboundary Water Assessment Program (TWAP) and Integrated Lake Basin Management (ILBM): Global Challenge and Asian Prospect and Prof. Eiichi Nakakita, Kyoto University on Observation and Prediction of Heavy Rainfall due to Severe Storms and related Disaster Prediction in Urban Areas using the Latest Weather Radars in Japan. The keynote presentations were made after the poster presentation session during the lunch break. All participants attended symposium dinner held at Uji Campus as the final event for day one.

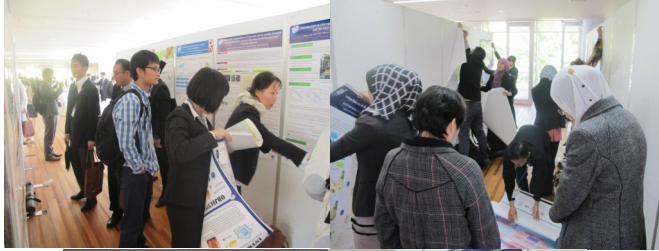


A) Prof. Masao Kitano was delivering his welcome remark. B) Opening address by Prof. Yoshihisa Shimizu. C) Opening address by Prof. Nik Meriam. D) Gift exchange ceremony between the two coordinators. E) The participants of CS3 in the Kihada Hall, Uji Campus of Kyoto University.



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On the 29th October 2013, the participants gathered in their respective group for discussion. The leader from each country for group discussion were as below:

Group 1 (Hydrology)
Prof. Eiichi Nakakita (KU),
Prof. Zulkifli bin Yusop (UTM)

Group 2 (Water Quality)
Prof. Yoshihisa Shimizu (KU),
Dr. Fathiah binti Mohamed Zuki (UM) - represent Prof. Ghazaly;
G2 Leader (Malaysia)

Group 3 (Environment Risk)
Prof. Minoru Yoneda (KU),
Prof. Mazlin bin Mokhtar (UKM)

Group 4 (Governance)
Prof. Masahisa Nakamura (Shiga University),
Prof. Datin Azizan binti Baharuddin (UM)



The pictures above shown the CS3 participants, Japanese and Malaysian were busy posting their poster on the boards allocated for them.

Following the group discussion, representative from each group presented their resolution to all participants and the symposium officially ends after closing remark by Prof. Nik Meriam Nik Sulaiman and Prof. Yoshihisa Shimizu.



During the dinner on 28th October 2013 the participants were entertained by a band performance who are Kyoto University's undergraduate students.



The presenters from each group after the discussion session. A) Dr. Shariffah Suhaila Syed Jamaludin (Representative from Group 1) B) Dr. Norhayati Abdullah (Representative from Group 2) C) Mr. Mohd Redzuan Ramli (Representative from Group 3) and D) Ir. Dr. Mohd Fadhil Md Din (Representative from Group 4).



Water Quality Group (Group 2) Workshop on GIS Modelling and Water Quality

23-27 September 2013

Otsu, JAPAN



Prof. Dr. Md. Ghazaly Shaaban
Department of Civil Engineering,
Faculty of Engineering
University of Malaya

Introduction

All activities within watershed and its influencing “physical/chemical” parameters (landuse, weather, topography, pollution, water use, legislation & others) that can have impact will be taken into consideration for modelling water quality for beneficial purposes. Outputs from modelling will be used as information tools to advise local authority, state & federal governments on various issues of planning such as siting of industries & housing and other infrastructures and capacities for pollution reduction including location of WTP & WWTP. Governance issues (socio-economics-governmental) can also be important and ILEC model from G4 would be applicable.

Objective of the Workshop

To carry out modelling of water quality on watershed basis management using ArcGIS map based software together with water quality simulation software of SWAT and BASINS. Pollutant loading and spatial distribution can be predicted for certain conditions of interest. The simulations are carried for Malaysian river basins. In this case Johor River Basin was studied.

Malaysian Delegates & Trainers

Ten Malaysian delegates from 3 universities were selected, namely UM, UKM and UTM. Their names and affiliations are listed below.

Universiti Malaya

- (1) Md. Ghazaly Shaaban (Prof)
- (2) Faridah binti Othman (AProf)
- (3) Ghufran bin Redzwan (Dr)
- (4) Nurnadriah Nadhirah Che Abas (Ms)

Universiti Kebangsaan Malaysia

- (5) Jasni bin Yaakub (Mr)
- (6) Rd Puteri Khairani binti Khirotdin (Mrs)
- (7) Nazren leman (Mr)

Universiti Teknologi Malaysia

- (8) Muhamad Ali bin Muhammad Yuzir (Dr)
- (9) Jafariah Jaafar (Assoc. Prof)
- (10) Azmi Aris (Assoc. Prof)



The G2 Workshop participants from UM, UKM & UTM with the Japanese trainers Dr. Keisuke Sato and Kyoto University's students.

There were about 5 – 6 trainers led by Dr. Sato from Ritsumeikan University and Prof. Shimizu from Kyoto University Lake Biwa Research Centre. Majority of the names are listed below.

Japanese Trainers

Dr. Keisuke SATO - Ritsumeikan University
Prof. Yoshihisa SHIMIZU – Kyoto University
Ms Yu KAWATA - Kyoto University
Mr Takashi KONDO - Kyoto University
Ms Chiemi OSADA - Kyoto University



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Outcomes & Recommendations

Adoption of GIS Modelling and Water Quality Simulation Software, Database for sharing:

- ArcGis 10.1 with Spatial Analyst Tool & other attachments (Commercial/Educ. Pricing) by ESRI
- SWAT 2012.10.11 (USDA Public domain)
- BASINS 4.1 (USEPA Public domain, integrated with free MapWindows)
- Types & resolution of free data available in internet (DEM Elevation, Landuse, WaterBody, Political/Geographical Boundaries, Temperature, Precipitation, Climatic, PS & NPS pollution) and web location addresses for accessing & downloading data
- Google Earth is used to determine country boundaries (no. tiles) by its long-lat values hence various river basins of interest for delineation of watershed
- Data conversion and integration (ArcGis+SWAT) for map making of watershed water quality
- Consider a dedicated desktop PC and at least 1 Terabyte storage to prepare database. Costing to consider comprising these hardware and above ArcGis educational priced software. Located somewhere central (UM). To decide format for database sharing DBMS using proprietary software, Excel, Access.

Work collaborative research on data for the 3 Malaysian River Basins (R.Selangor, R.Langat, R.Johor)

Four graduates or bachelor students under Chair Prof. Shimizu will come in November 2013 and March 2014 to collect basic water quality data (Solids, N, P, E.Coli) to work on 4 river basins (R.Selangor, R.Klang, R.Langat and R.Johor Basins). Use UM laboratory facilities when measuring water quality data. River flow data will be estimated NOT measured on field due to safety precaution for Japanese students. Collected data will be calibrated, verified for inputs into ArcGis and SWAT and use for prediction.

Final Observations

Very informative and practical tool GIS modelling of water quality at deriving critical decision advisory tools at pollution mitigation on watershed basis. Applicable for current research and teaching.



A) Dr. Keisuke Sato from Ritsumeikan University as one of the “sensei” during the workshop. B & C) Sharing of the knowledge on GIS Modelling session with assistance from Kyoto University facilitators. D) Participants of the workshop held at Otsu, Japan.



'Hydrology for Non-Hydrologist' Workshop

22-23 August 2013

University of Malaya, Kuala Lumpur, MALAYSIA



Dr. Amalina Muhammad Afifi
Department of Mechanical Engineering
Faculty of Engineering
University of Malaya

Hydrology for Non-Hydrologist Workshop has been successfully held at Faculty of Engineering, University of Malaya, Kuala Lumpur, Malaysia on 22 and 23 August 2013. This workshop was organized by Dr. Amalina Muhammad Afifi (Group 1 member) in cooperation with Asian Core Program. It was attended by 30 participants registered under JSPS-ACP Program. The aim of the two-days workshop is to provide an intensive course on the introduction to hydrology-related topics to non-hydrologists. The invited speakers were Prof. Dr. Zulkifli Yusop from University of Technology Malaysia (UTM), Prof. Dr. Ekhwan Toriman (UniSZA) and Assoc. Prof. Dr. Faridah Othman (UM).



The hydrology expert Prof. Zulkifli presenting his lecture at Lecture Hall 6.

The Hydrology to Non-Hydrologist Workshop (22-23 August 2013) kicked off with the welcoming address by the organizer, Dr. Amalina Muhammad Afifi held at Lecture Hall 6, Level 4, Engineering Tower, Faculty of Engineering, University of Malaya. Prof. Dr. Zulkifli then delivered his lecture entitled 'Introduction to Hydrology and its Application'. After break, a session on 'Geographic Information Systems (GIS) Application in Hydrology' was presented by Dr. Sharif Moniruzzaman Shirazi (Prof. Dr. Ekhwan Toriman's representative). He also presented an example of his case study; application of GIS in Malacca state. The first day of the workshop ended at 5pm.



Dr. Shirazi explaining the GIS applications in Hydrology on day one of the Hydrology for Non-hydrologist workshop



Participants listened attentively to Assoc. Prof. Faridah's presentation during day two of the workshop on 23 August 2013.



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The second day of the workshop started at 9am held at The Cube, Level 2, Engineering Tower, Faculty of Engineering, UM. Assoc. Prof. Dr. Faridah Othman's presentation focused on the 'Introduction to River Water Quality and Modelling'. The first part was a brief introduction to river water quality in Malaysia particularly Selangor River. Meanwhile in the second part, Assoc. Prof. Dr. Faridah showed an example of modelling software being used by her students in their research work.

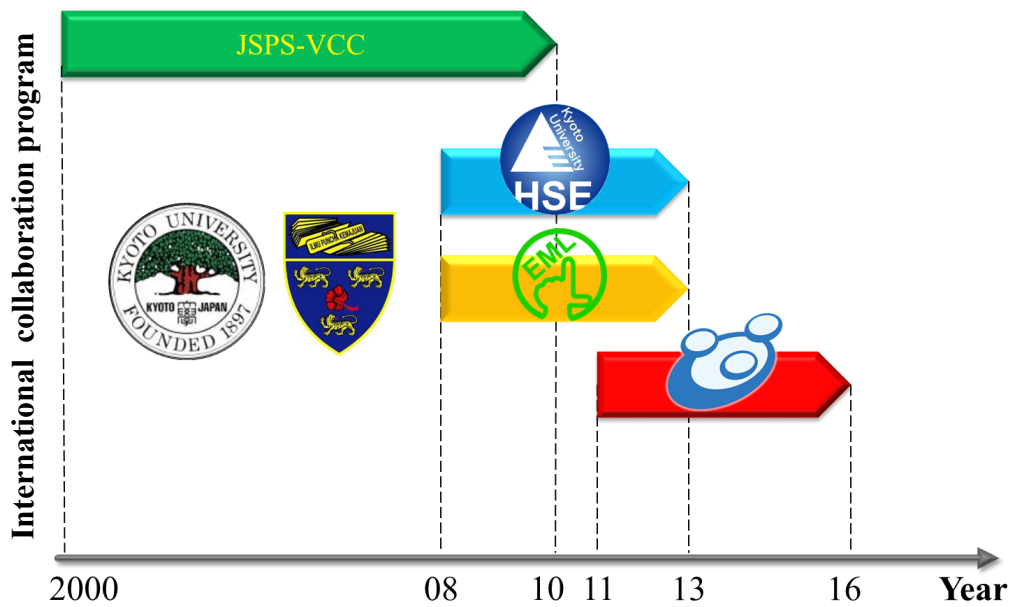


Joyful moments during the certificate giveaways to the participants. From left to right: Dr. Shirazi, Assoc. Prof. Jafariah, Ms. Raden Puteri and Ms. Hanun Fatini

The Hydrology Workshop ended with a closing remarks from Assoc. Prof. Dr. Faridah Othman and certificate presentation to participants. A group photo session was taken at the end of Hydrology for Non-Hydrologist Workshop. The participants benefitted much from the workshop and hopefully there will be more such events.



It's a wrap for the Non-Hydrologist! Group photo taken at the end of the workshop in The Cube.



Programs and its duration under international collaboration between Kyoto University and University of Malaya

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