

PROCEEDINGS

ICACCSIS 2014

*2014 International Conference on
Advanced Computer Science and
Information Systems*

October 18th and 19th 2014

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Welcome Message from General Chairs



On behalf of the Organizing Committee of this International Conference on Advanced Computer Science and Information Systems 2014 (ICAC SIS 2014), we would like to extend our warm welcome to all of the presenter and participants, and in particular, we would like to express our sincere gratitude to our

plenary and invited speakers.

This international conference is organized by the Faculty of Computer Science, Universitas Indonesia, and is intended to be the first step towards a top class conference on Computer Science and Information Systems. We believe that this international conference will give opportunities for sharing and exchanging original research ideas and opinions, gaining inspiration for future research, and broadening knowledge about various fields in advanced computer science and information systems, amongst members of Indonesian research communities, together with researchers from Germany, Singapore, Thailand, France, Algeria, Japan, Malaysia, Philippines, United Kingdom, Sweden, United States and other countries.

This conference focuses on the development of computer science and information systems. Along with 4 plenary and 2 invited speeches, the proceedings of this conference contains 71 papers which have been selected from a total of 132 papers from twelve different countries. These selected papers will be presented during the conference.

We also want to express our sincere appreciation to the members of the Program Committee for their critical review of the submitted papers, as well as the Organizing Committee for the time and energy they have devoted to editing the proceedings and arranging the logistics of holding this conference. We would also like to give appreciation to the authors who have submitted their excellent works to this conference. Last but not least, we would like to extend our gratitude to the Ministry of Education of the Republic of Indonesia, the Rector of Universitas Indonesia, Universitas Tarumanagara, Bogor Agricultural Institute, and the Dean of the Faculty of Computer Science for their continued support towards the ICAC SIS 2014 conference.

Sincerely yours,
General Chairs

Welcome Message from The Dean of Faculty of Computer Science, Universitas Indonesia



On behalf of all the academic staff and students of the Faculty of Computer Science, Universitas Indonesia, I would like to extend our warmest welcome to all the participants to the Ambhara Hotel, Jakarta on the occasion of the 2014 International Conference on Advanced Computer Science and Information Systems (ICAC SIS).

Just like the previous five events in this series (ICAC SIS 2009, 2010, 2011, 2012, and 2013), I am confident that ICAC SIS 2014 will play an important role in encouraging activities in research and development of computer science and information technology in Indonesia, and give an excellent opportunity to forge collaborations between research institutions both within the country and with international partners. The broad scope of this event, which includes both theoretical aspects of computer science and practical, applied experience of developing information systems, provides a unique meeting ground for researchers spanning the whole spectrum of our discipline. I hope that over the next two days, some fruitful collaborations can be established.

I also hope that the special attention devoted this year to the field of pervasive computing, including the very exciting area of wireless sensor networks, will ignite the development of applications in this area to address the various needs of Indonesia's development.

I would like to express my sincere gratitude to the distinguished invited speakers for their presence and contributions to the conference. I also thank all the program committee members for their efforts in ensuring a rigorous review process to select high quality papers.

Finally, I sincerely hope that all the participants will benefit from the technical contents of this conference, and wish you a very successful conference and an enjoyable stay in Jakarta.

Sincerely,
Mirna Adriani, Dra, Ph.D.
Dean of the Faculty of Computer Science
Universitas Indonesia

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CONFERENCE INFORMATION

Dates	October 18 th (Saturday) – October 19 th (Sunday) 2014
Organizer	Faculty of Computer Science, Universitas Indonesia Department of Computer Science, Institut Pertanian Bogor Faculty of Information Technology, Universitas Tarumanegara
Venue	Ambhara Hotel Jalan Iskandarsyah Raya No. 1, Jakarta Selatan, DKI Jakarta, 12160, Indonesia Phone : +62-21-2700 888 Fax : +62-21-2700 215 Website : http://www.ambharahotel.com/
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Conference Website	http://icacsis.cs.ui.ac.id

PROGRAM SCHEDULE

Saturday, October 18 th , 2014-CONFERENCE			
Time	Event	Event Details	Rooms
08.00-09.00		Registration	Dirgantara Room, 2 nd Floor
09.00-09.30	Opening	Opening from the Dean of Faculty of Computer Science Universitas Indonesia/General Chair of ICAC SIS 2014	
09.30-10.15	Plenary Speech I	Dr. Ir. Basuki Yusuf Iskandar, MA from Ministry of Communication and Information	
10.15-10.30		Coffee Break	
10.30-11.15	Plenary Speech II	Prof. Dame Wendy Hall from Southampton University, UK	
11.15-12.30		Lunch	
12.30-14.00	Parallel Session I : Four Parallel Sessions	See Technical (Parallel Session I Schedule)	Elang, Kasuari, Merak, Cendrawasih Room, Lobby Level
14.00-15.30	Parallel Session II: Four Parallel Sessions	See Technical (Parallel Session II Schedule)	Elang, Kasuari, Merak, Cendrawasih Room, Lobby Level
15.30-16.00		Coffee Break	
16.00-17.30	Parallel Session III : Four Parallel Sessions	See Technical (Parallel Session III Schedule)	Elang, Kasuari, Merak, Cendrawasih Room, Lobby Level
17.30-19.00		Break	
19.00-22.00	Gala Dinner	Dinner, accompanied by music performance and traditional dances	Dirgantara Room, 2 nd Floor

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Sunday, October 19th, 2014-CONFERENCE			
Time	Event	Event Details	Rooms
08.00-09.00		Registration	Dirgantara Room, 2 nd Floor
09.00-10.00	Plenary Speech III	Drs. Harry Waluyo, M.Hum from Directorate General of Media, Design, Science & Technology Based Creative Economy	
10.00-10.15		Coffee Break	
10.15-11.30	Plenary Speech IV	Prof. Masatoshi Ishikawa from University of Tokyo, JP	
11.30-12.30		Lunch	
12.30-14.00	Parallel Session IV : Four Parallel Sessions	See Technical (Parallel Session IV Schedule)	Elang, Kasuari, Merak, Cendrawasih Room, Lobby Level
14.00-15.30	Parallel Session V : Four Parallel Sessions	See Technical (Parallel Session V Schedule)	Elang, Kasuari, Merak, Cendrawasih Room, Lobby Level
15.30-16.00		Coffee Break	
16.00-16.30	Closing Ceremony	Awards Announcement and Photo Session	Dirgantara Room, 2 nd Floor

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