

CCATS

August
8
31

September
9
2

2015

Matsue, Japan

International Conference on Computer Application Technologies

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<http://www.e-activity.org/iccat2015/>



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Organization

CCATS 2015

August 31 - September 2, 2015

Kunibiki Messe, Matsue, Japan

CCATS 2015 Organizing Committees

Honorary Chair	Makio Fukuda, Osaka International University, Japan
General Chair	Kiyoshi Nagata, Daito Bunka University, Japan
General Vice-Chairs	Hidetsugu Kohzaki, Kyoto University, Japan Fidel Nemenzo, University of the Philippines Diliman, Philippines Kiyota Hashimoto, Asian University, Thailand
Conference Chair	Toshiyuki Tanaka, Keio University, Japan
Conference Vice-Chairs	Michinori Yamashita, Rissho University, Japan Tokuro Matsuo, Advanced Institute of Industrial Technology, Japan Pasi Luukka, Lappeenranta University of Technology, Finland
Program Chairs	Yohei Shiraki, Rissho University, Japan Antoine Bossard, Kanagawa University, Japan
Program Vice Chair	Toru Shirasaka, Daito Bunka University, Japan
Special Session Chair	Hidetsugu Kohzaki, Kyoto University, Japan
Finance Chair	Toshiyuki Ueyama, Chiba University of Commerce, Japan
Publication Chair	Satoshi Takahashi, University of Electro-Communications, Japan
Web Chair	Makoto Okada, Osaka Prefecture University, Japan

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Timetable

August 31 (Mon)

	Room 601	Room 401
9:30AM - 4:00PM	Registration (6th Floor)	
9:30AM - 10:30AM	Morning coffee (6th Floor)	
10:30AM - 10:40AM	Opening (Room 601)	
10:40AM - 11:30AM	CCATS Keynote 1 (Room 601)	
11:30AM - 12:20PM	CCATS Keynote 2 (Room 601)	
12:20PM - 1:20PM	Lunch (6th Floor)	
1:20PM - 2:20PM	CCATS Session 1	JPCATS
2:20PM - 2:30PM	Coffee break (6th Floor)	
2:30PM - 4:10PM	CCATS Session 2	JPCATS
5:00PM - 8:30PM	CCATS 2015 dinner banquet. The shuttle bus will depart from the main entrance of Kunibiki Messe at 5:00PM. Enjoy walking around the Yuushien Garden and joining the CCATS 2015 dinner banquet.	

September 1 (Tue)

	Room 601	Room 401
9:30AM - 3:30PM	Registration (6th Floor)	
9:50AM - 10:50AM	CCATS Session 3	Special Session 1
10:50AM - 11:00AM	Coffee break (6th Floor)	
11:00AM - 12:00PM	CCATS Session 4	Special Session 2
12:00PM - 1:00PM	Lunch (6th Floor)	
1:00PM - 2:20PM	CCATS Session 5	JPCATS
2:20PM - 2:30PM	Coffee break (6th Floor)	
2:30PM - 3:50PM	CCATS Session 6	JPCATS
4:00PM - 4:15PM	Poster setting	—
4:15PM - 5:30PM	CCATS 2015 Farewell Reception and Poster Session (Room 601)	

September 2 (Wed)

	Room 601	Room 401
9:30AM - 10:30AM	Registration (6th Floor)	
9:30AM - 10:00AM	Morning coffee (6th Floor)	
10:00AM - 11:00AM	CCATS Session 7	Special Session 3
11:00AM - 11:10AM	Closing (Room 601)	

Keynote 1

10:40AM - 11:30AM, August 31 (Mon), Room 601

Ubiquitous computing and healthcare in Jeju Island

Yungcheol Byun, Ph.D., Professor, Jeju National University, Jeju, Korea

Abstract

Health care is the diagnosis, treatment, and prevention of disease, illness, injury, and other physical and mental impairments in human beings. Ubiquitous computing is an advanced computing concept where computing is made to appear everywhere and anywhere. In contrast to desktop computing, ubiquitous computing can occur using any device, in any location, and in any format. Therefore, ubiquitous health care means the health care with ubiquitous computing technologies for more convenient health care services from the view point of patients. Meanwhile, Ubiquitous Healthcare Town is one Jeju's six core national projects, which is a global medical multi-purpose complex where premium medical services with leisure and entertainments are provided by using ubiquitous technologies. This presentation will cover the following topics: Jeju healthcare town, ALE-compliant middleware for ubiquitous healthcare, ubiquitous services using a wearable sensor device, sensor data code conversion in middleware, ontology design and knowledge representation for sensor data processing, the design and implementation of healthcare services, ubiquitous UI device and OSGi-based healthcare gateway, and etc.

Speaker Profile

Dr. Yungcheol Byun is a full professor at the Computer Engineering Department (CE) at Jeju National University. His research interests include the areas of Intelligent Computing, Semantic Web and Ontology, Home Network and Ubiquitous Computing, Healthcare, RFID Middleware, Artificial Intelligence, and Pattern Recognition. He directs the Internet Computing Laboratory at the CE department. Recently, he studied at University of Florida as a visiting professor from 2012 to 2014. He is currently serving as a director of Information Science Technology Laboratory, and other academic societies. Outside of his research activities, Dr. Byun has been hosting an international conference, CNSI (Computer, Network, Systems, and Industrial Engineering), and also serving as a program chair, workshop chair, and session chair in various kinds of international conferences and workshops. Dr. Byun was born in Jeju, Korea, and received his Ph.D. and MS from Yonsei University in 1995 and 2001 respectively, and BS from Jeju National University in 1993. Before joining Jeju National University, he worked as a special lecturer in SAMSUNG Electronics in 2000 and 2001. From 2001 to 2003, he was a senior researcher of Electronics and Telecommunications Research Institute (ETRI). He was promoted to join Jeju National University as an assistant professor in 2003.



An approach to dynamic reconfiguration of Web application using compatibility verification

Huaikou Miao, Professor, Shanghai University, China

Abstract

Implemented by dynamic services composition and integration, Web application has significantly influenced our daily life. However, the open and ever-changing environment makes Web users more vulnerable to the usability problem, i.e. unreachable pages and reduced responsiveness. Accordingly, there is a need to deliver reliable Web application. The compatibility verification of dynamic reconfiguration strategies can guarantee the robustness and high quality of Web-based software. In this talk, I present the approaches to the dynamic reconfiguration of Web application using compatibility verification. The finite state machine (FSM) is extended to formalize the behavior of Web application, namely the extended FSM for Web applications (EFSM4WA) model. Then, the approaches to compatibility verification of dynamic reconfiguration are introduced. The trace projection approach is used to check the compatibility against the synchronized product model in a qualitative way, which will select a set of candidate Web applications. And then, the quantitative verification is used to choose a high reliable Web application with high performance. Finally, a case study is demonstrated to show the applicability of our approaches.

Speaker Profile

Huaikou Miao is a Professor of Computer Science of the School of Computer Engineering and Science at Shanghai University. He received his Master's Degree from Shanghai University of Science and Technology in 1986. He was a Visiting Scholar at the University of York, UK, from October 1992 to January 1995. His interests include formal methods, software testing and verification, software development environments, and automatic reasoning. He has published numerous articles and 7 co-authored books about formal methods and data structures. He was the program chair of ICFEM 2002 held in Shanghai, China in 2002, the program chair of ICIS 2009 in Shanghai, China in 2009, and conference chair of ICIS 2012 in Shanghai, China.



Program: August 31

Monday, August 31, 2015

10:30AM - 10:40AM [Opening]

Room 601

Opening Ceremony

10:40AM - 11:30AM [Keynote 1]

Room 601

Session Chair Antoine Bossard, Kanagawa University, Japan

Keynote 1 Ubiquitous computing and healthcare in Jeju Island
Yungcheol Byun, Ph.D. (Professor, Jeju National University, Jeju, Korea)

11:30AM - 12:20PM [Keynote 2]

Room 601

Session Chair Yohei Shiraki, Rissho University, Japan

Keynote 2 An approach to dynamic reconfiguration of Web application using compatibility verification
Huaikou Miao, Prof. (Professor, Shanghai University, China)

1:20PM - 2:20PM [CCATS Session 1]

Room 601

Theme E-learning and Computers in Education

Session Chair Antoine Bossard, Kanagawa University, Japan

The learning data management of the utterance learning system using lip movements recognition
Yuko Hoshino, Tomoki Yamamura, Mitsuho Yamada

Decision Support Method in Risk Communications Using Collaborative Learning
Hiroshi Yajima, Naohisa Tanabe

Implementation proposal for automatic processing of the algebra on J
Antoine Bossard

2:30PM - 4:10PM

[CCATS Session 2]

Room 601

Theme	E-learning and Web Applications
Session Chair	Teruhisa Hochin, Kyoto Institute of Technology, Japan
	The Research of Teaching Materials for System Development by International Cooperation Makio Fukuda, Michinori Yamashita, Toshiyuki Ueyama
	E-Learning System based on User's Consciousness and Characteristic Tomoko Aoki, Yutaka Kigawa, Fidel Nemenzo, Kiyoshi Nagata
	Practice and Evaluation of Video Production Project by Collaborative Learning of Japanese Students and Foreign Students for the Purpose of Forming Career Consciousness Ryo Sugawara, Makoto Watanabe, Ryoza Sasaki
	Cross-browser compatibility testing based on model comparison Heng Shi, Hongwei Zeng
	Mutual Retrieval of Pictures and Sounds on the Web Based on Impression Yamato Takahashi, Teruhisa Hochin, Hiroki Nomiya

5:00PM - 8:30PM

[CCATS 2015 Dinner Banquet]

Yuushien

Garden Walking and CCATS 2015 Dinner Banquet

5:00PM-5:30PM Shuttle buses from Kunibiki Messe's main entrance to Yuushien

5:30PM-6:30PM Excursion in Yuushien Garden

6:30PM-8:00PM CCATS 2015 Dinner Banquet (Yuushien)

Award Presentation

8:00PM-8:30PM Buses from Yuushien to Matsue (Matsue Excel Hotel Tokyu and Matsue New Urban Hotel)

Yuushien Official Site

<http://www.yuushien.com/yuushien/language/english.html>



*"Daikonshima", Shimane, Japan
Japanese peony and Korean ginseng village*

由志園

YUUSHIEN Garden

*Japanese Peony house with seasonally blooming flowers
Tasty nutritious local dishes*

Artist Chinami Nakajima's "The White Peonies Picture."

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Program: September 1

Tuesday, September 1, 2015

9:50AM - 10:50AM [CCATS Session 3] Room 601

Theme	Programming Techniques
Session Chair	Hisashi Sato, Kanagawa Institute of Technology, Japan
	Rule Induction by STRIM from the Decision Table with Missing and Contaminated Attribute Values Shotaro Mizuno, Tetsuro Saeki, Kato Yuichi
	Development of the framework for students who programming is not good Yumu Hori, Hisashi Sato
	Examination of transformation technique from real world to ANIME world Satoshi Cho, Hisashi Sato

9:50AM - 10:50AM [Special Session 1] Room 401

Theme	Advancement and education in medical ICT
Session Chair	Hidetsugu Kohzaki, Kyoto University, Japan
Opening remark	Dr. Hidetsugu Kohzaki A Proposal for ICT Education for the Training of Paramedics and Medical Technologists in Japan. Hidetsugu Kohzaki
	World Social Welfare Circumstances-Social Welfare and Elderly Care System in the World, and Civic Technology Chisako Yamashita
	A Study on New Business Models of Utilize ICT - Current Situation and Challenge on Crowd Funding - Tetsuro Saisho

11:00AM - 12:00PM [CCATS Session 4] Room 601

Theme	Image Processing and Programming Languages
Session Chair	Motoi Iwashita, Chiba Institute of Technology, Japan
	Surface roughness measurement application using multi-frame techniques Tanaporn Leelawattananon, Warawoot Thowladda, Suphamit Chittayasothorn
	Measurement of a driver's mental state using a 4K driving simulator Gaku Iizuka, Yuta Saito, Mitsuho Yamada
	Array Bounds Model Checking in C Code Based on Predicate Abstraction Yunwei Bai, Qingguo Xu

11:00AM - 12:00PM [Special Session 2] Room 401

Theme	Advancement and education in medical ICT
Session Chair	Hidetsugu Kohzaki, Kyoto University, Japan
	Prescription Prediction towards Computer-Assisted Diagnosis for Kampo Medicince Xiaoyu Mi, Hiroshi Ikeda, Fumihiko Nakazawa, Hidetoshi Matsuoka, Erika Kataoka, Satoshi Hamaya, Hiroshi Odaguchi, Tatsuya Ishige, Yuichi Ito, Akino Wakasugi, Tadaaki Kawanabe, Mariko Sekine, Toshihiko Hanawa, Shinichi Yamaguchi
	Mobile learning for an equal access to knowledge and sustainable learning-The case of Goocus Satoshi Yamawaki
	Augmented tangibility surgical navigation using spatial interactive 3-D hologram zSpace with OsiriX and Bio-Texture 3-D organ modeling Maki Sugimoto
Closing remark	Dr. Maki Sugimoto

1:00PM - 2:00PM [CCATS Session 5] Room 601

Theme	Bio-Medical Engineering and Safety Considerations
Session Chair	Toshiyuki Tanaka, Keio University, Japan
	New materials for spoofing touch-based fingerprint scanners Jan Spurny, Michal Dolezel, Ondrej Kanich, Martin Drahansky, Koichi Shinoda
	Comparison of Near and Far Infrared Vision for Biometric Applications Elnaz Mazandarani, Ulrike Lucke, Kaori Yoshida, Mario Köppen
	Cell extraction method from time-series image of phase contrast microscope Masaki Tamura, Toshiyuki Tanaka

2:30PM - 3:50PM [CCATS Session 6] Room 601

Theme	Data Mining, Big Data and Data Analysis
Session Chair	Makoto Okada, Osaka Prefecture University, Japan
	A Consideration of Evaluating Customer Satisfaction for ICT services Motoi Iwashita
	Class-based Generalization and Specialization Teruhisa Hochin, Hiroki Nomiya
	An Investigation of Effectiveness using Topic Information Order to Classify Tourists Reviews Shogo Nakamura, Makoto Okada, Kiyota Hashimoto
	An Investigation of Effectiveness of "Opinion" and "Fact" sentences for Sentiment Analysis of Customer reviews Yuya Sawakoshi, Makoto Okada, Kiyota Hashimoto

4:15PM - 5:30PM [Poster Session] Room 601

	Development of a speech training system by lip movements Tomoki Yamamura, Miyuki Suganuma, Eiki Wakamatsu, Yuko Hoshino, Mitsuho Yamada
	Development of an Empathy Measuring System While Watching Images Hideaki Takahira, Shinya Mochiduki, Mitsuho Yamada
	Analysis of Gazing Points While Viewing Super-High-Definition Images at Various Viewing Positions Shinya Mochiduki, Hideaki Takahira, Mitsuho Yamada
	Development of Measurement System of Changes in Accommodation and Convergence at the Same Time and Measurement of its Accuracy Yuki Yokoyama, Hideaki Takahira, Shinya Mochiduki, Mitsuho Yamada
	Storage and Reuse of Each Student's Personalized Documents Using a Non-structured Database Sanggyu Shin, Hiroshi Hashimoto
	Prototype of Kanban Tool and Preliminary Evaluation of Visualizing Method for Task Assignment Shun Nakazawa, Tetsuo Tanaka
	Astronomical image data analysis in the cloud Francisco Javier De la Mora Garcia, Teruhisa Hochin, Hiroki Nomiya
	Procurement Service of Japanese Product between Japan and China Yanting Xu, Sachio Hirokawa, Hitoshi Inoue
	Estimating the location of individual stem using LiDAR imagery Keisuke Kimura, Shintaro Goto
	An optimal routing problem for attraction with a fast pass constraint Kyohei Sakayori, Satoshi Takahashi
	An optimal ordering problem for juggling Yusuke Sato, Satoshi Takahashi
	Mobile-based Luminance Measurement for Night Scenes Junggyeol Jin, Sangjoon Lee, Yungcheol Byun
	Production of Spinal Cord Injury Model using a Cartesian Robot Chulung Kang, Kibum Sim, Yungcheol Byun
	Effects of Digital Textbook-based Nursing Education in Professional School Masaaki Tanaka, Aya Uchida, Azusa Kanda, Tokuro Matsuo

4:15PM - 5:30PM [Farewell reception] Room 601

CCATS 2015 Farewell reception

Program: September 2

Wednesday, September 2, 2015

10:00AM - 11:00AM [Special Session 3] Room 401

Theme The mathematics of information

Session Chair Fidel Nemenzo, University of the Philippines, Philippines

Consideration about the preservation method in the log files
Takashi Sakuma

On the *abc* conjecture for a derived logarithmic function of the Euler function
Michinori Yamashita, Daisuke Miyata

Some Properties of Binary Gray Code
Kiyoshi Nagata, Fidel Nemenzo

10:00AM - 11:00AM [CCATS Session 7] Room 601

Theme Modeling and Networks

Session Chair Tomoko Aoki, Heisei International University, Japan

Time Series Prediction using DBN and ARIMA

Takaomi Hirata, Takashi Kuremoto, Masanao Obayashi, Shingo Mabu, Kunikazu Kobayashi

Integration of Wifi Services Based on the IEEE802.11u Standard

Hirofumi Yamaki, Yuki Yamada, Yuichi Kato, Eiko Kobayashi, Yu Saotome, Daisuke Matsumoto

Implementation of A User Account Provisioning System Based on NFC for Public Wi-Fi Services
Yusuke Nobu, Keiji Takeda, Hirofumi Yamaki

11:00AM - 11:10AM [Closing] Room 601

Closing remark and conference ajournement

Social Events

August 31 5:00PM - 8:30PM

CCATS 2015 Dinner Banquet

The shuttle bus will depart from the main entrance of Kunibiki Messe at 5:00PM.

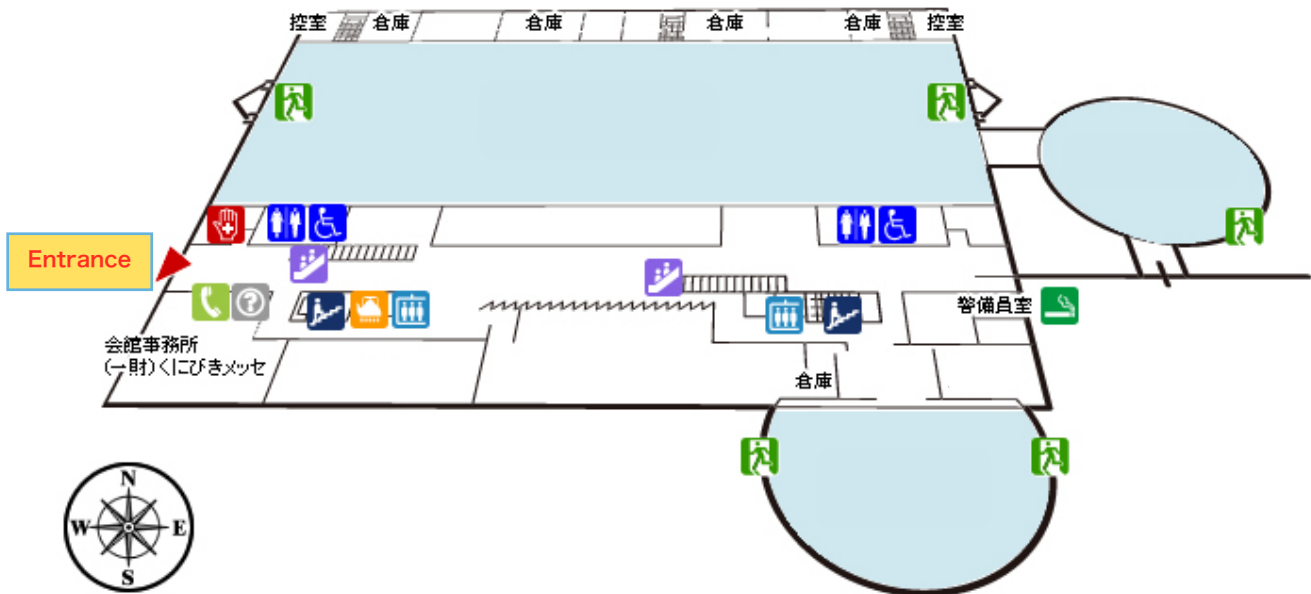
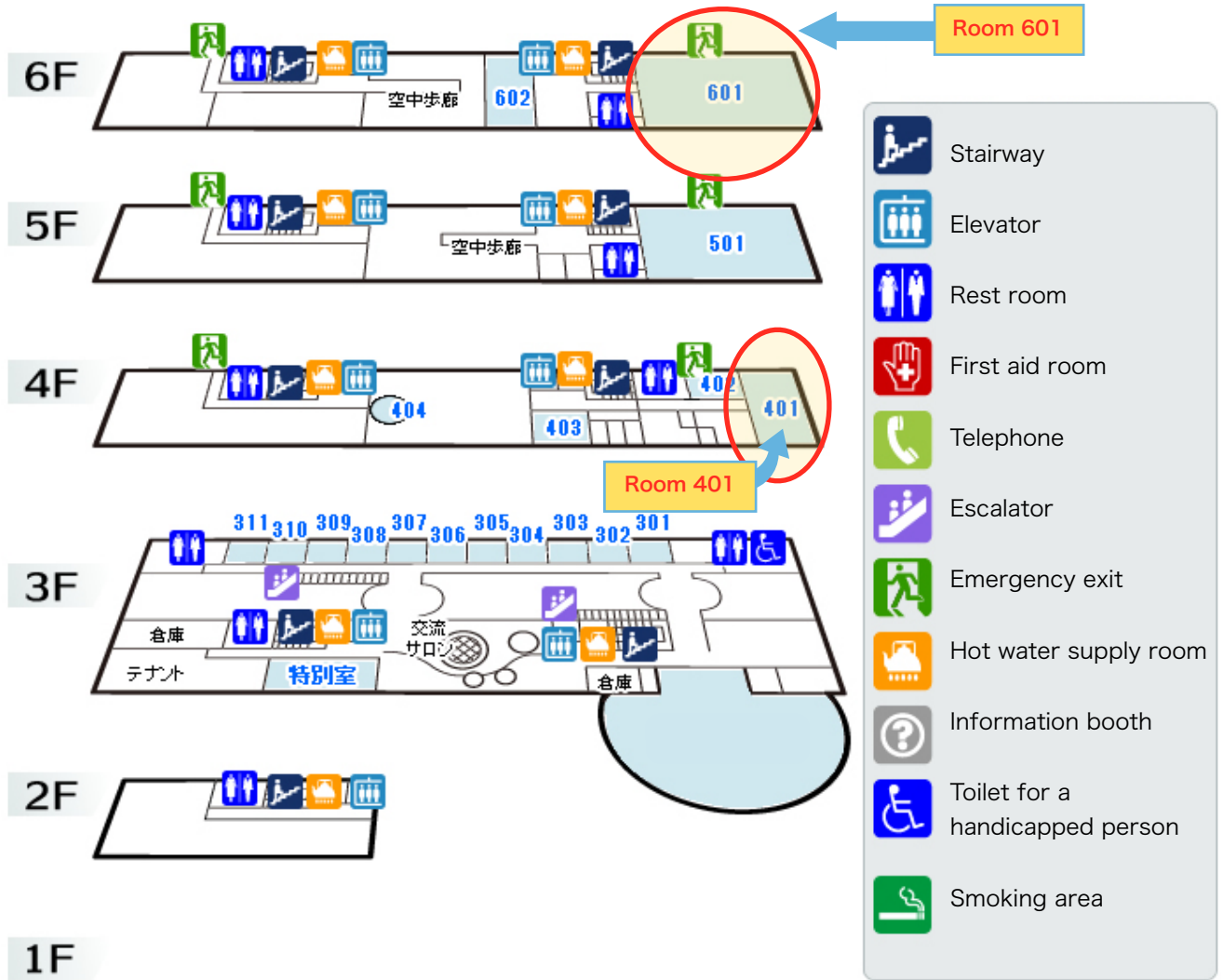
September 1 4:15PM - 5:30PM

CCATS 2015 Reception

Premium red & white wine will be served.

Room 601, Kunibiki Messe

Floor Map



Free Wi-Fi

SSID: kunibiki

About Matsue

<http://www.visit-matsue.com>