

# **GISUP 2013**

## **International**

The 15<sup>th</sup> International Symposium of  
Geospatial Information Science and Urban Planning



Mt. Sambang, Jeju

February 20-22, 2013  
Jeju National University(Unipark),  
Jeju Special Self-Governing Province, Korea

Organizing Committee of GISUP 2013, International

The logo for GISUP 2013 International is a blue rounded rectangle with a gradient. Inside, the text "GISUP 2013" is in a bold, white, sans-serif font, and "International" is in a smaller, white, sans-serif font below it.

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(GISUP 2013, International)

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Organized by :  
Organizing Committee of GISUP 2013, International

Sponsored by :  
The Korean Society for GeoSpatial Information System  
Faculty of Civil Eng, Kangwon National University  
Faculty of Civil Eng, Kwandong University  
Dept. of Geoinformatics, Inha Technical College  
Dept. of GIS Eng, Namseoul University  
Hanyang Survey System Co., Ltd  
Hyochang Engineering Co., Ltd

# Welcome to GISUP2013 in Jeju Island !!

It has been fifteen years since the GISUP was started in 1990. It seems just like yesterday that we celebrated the 10th anniversary in Incheon.



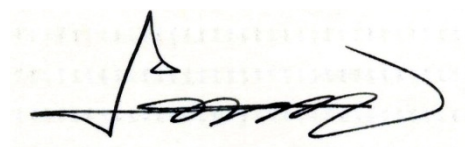
Countries from all over the world, including South Korea and Japan, are gearing up for the expansion and remodeling of urban areas. In addition, mitigating disasters due to the climate change in Earth's environment has also been a matter to surge for the changing era.

Meanwhile, the research from the GISUP and its members help solve these problems.

I am proud to say that, the Jeju Island is the first place in the world to obtain UNESCO designations in all 3 natural sciences. Jeju Island is an oval-shaped volcanic island with 1,950 meter Halla Mountain in the middle. The island is 73 km from west to east and 31 km from north to south.

I wish you to have an informative and enjoyable GISUP 2013 in Jeju.

Intae Yang

A handwritten signature in black ink, appearing to be 'Intae Yang', written on a light-colored background.

General Chair, GISUP 2013

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## **GISUP2013 Detailed Program**

The 15<sup>th</sup> International Symposium of  
Geospatial Information Science and Urban Planning  
(GISUP2013, International)

February 20-22, 2013

Jeju National University (Unipark)

Bomockdong 1397-1, Seogwipo, Jeju Special Self-Governing Province, KOREA

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Hanyang Survey System Co., Ltd

Hyochang Engineering Co., Ltd

### **Schedule**

February 20, 2013 Registration, Unipark Jeju

February 20-21, 2013 GISUP2013, Oral Presentation, Unipark, Jeju

Session-1, 2, 3, 4, 5

February 22, 2013 Technical tour in Jeju city (9:00-13:00)

### **Registration Fee**

General: 60,000 Won

Student: 30,000 Won

### **Conference Program Contents**

The conference consists of information symposium for Geospatial Information Science and Urban Planning (GISUP2013), for scientific sessions on various GIS and urban planning method and system.

## Oral Presentation Schedule

Place: Jeju National University (Unipark), Jeju

### Registration

### OPENING ADDRESS (14:00-14:10)

Chairman: Prof. In-Tae Yang(Kangwon National University, Korea)

### SCIENTIFIC SESSIONS

#### SESSION -I(14:10-15:22)

(Session Chair: Prof. Byungdug Jun, Nagasaki University, Japan)

1. Construction of Database for Regional Information in Sasebo City by Using WebGIS 3  
*Yukiko MORI, Yoshihumi SAKAI, Kazuichi SUGIYAMA, Motohiro KINOSHITA*
2. Construction of Database for Tourist Information in Nagasaki City by Using WebGIS 7  
*Miwa MATSUMOTO, Yoshifumi SAKAI, Kazuichi SUGIYAMA, Motohiro KINOSHITA*
3. Vulnerable Region Analysis of Emergency Medical Services Using Spatial Analysis 11  
*Jin-Yi PARK, Su-jee LEE, Eui-Myoung KIM*
4. Topographic Lowlands Analysis Technique Using Digital Elevation Model 17  
*Hyun-Mi PARK, Eui- Myoung KIM, Wan-Young Song, Young-Jin Park*
5. Effective Location Selection of Police Station Using GIS 27  
*Hyun-ha LIM, Eui-Myoung KIM, Gi-Hong KIM*
6. A Study on the Selection of Factors for Application of GIS to CPTED 35  
*So-Rang PARK, Jae-Kook PARK*

#### Break Time (15:22-15:30)

#### SESSION -II (15:30-16:42)

(Session Chair: Prof. Eunnam Kim, Inha Technical College, Korea)

7. A Proposal of Remote Sensing Method for Illuminance Bias of Tea Plant 41  
*Mitsuru AMANO, Byungdug JUN, Kenji TORAO, Kazuichi SUGIYAMA*
8. Derivation of Bathymetry using Hyperspectral Measurements 51  
*Intae Yang, Young-Heon Jo, Tri Dev Acharya, Keon Park*
9. Development of Technique for Automated Filtering of Terrestrial LiDAR Data on Sloped terrain 63  
*Byeong-Woon PARK, Seung-Pil CHOI, Jun-Seong KIM, Ik-Jae KIM*
- 10.Extraction of Spatial Information from LIDAR and Its Applications 73  
*Hyoung-Jin YOO, Jin-Yi PARK, Eui-Myoung KIM*

11. Comparison of Slope Analysis Algorithms Using LIDAR Data	83
<i>Su-Jee LEE, Hyun-Mi PARK, Eui-Myoung KIM</i>	
12. Evaluations of Thermal Environment and Air Conditioning Energy Loads in Kumamoto City Urban Districts	89
<i>Takahito UENO, Hiroki FUKUSHIMA, Tomoya HONDA, Daichi MASAKI</i>	

### **SESSION - III (09:00-10:00)**

*(Session Chair: Assoc. Prof. Kazuichi Sugiyama, Nagasaki University, Japan)*

13. A Teacher's Words in the Class of the Expression Movement and Dance	99
<i>Hitomi SANE, Byungdug JUN</i>	
14. Research on Mobile Phone Dependence of College Students	105
<i>Ayumi KASHIWADA, Byungdug JUN</i>	
15. Survey of Weak Consciousness and Teaching Practice to Elementary Student for Art	111
<i>Mizuki KOGA, Byungdug JUN</i>	
16. A Study of Poetic Expression and Teaching Methods	117
<i>Yoko KOBUCHI, Byungdug JUN</i>	
17. Suggestion of the Peace Education for Nagasaki Atomic Bomb	123
~ For realization of the atomic bomb education the nuclear weapons disarmament ~	
<i>Kiwako IWAMOTO, Byungdug JUN</i>	

### **Break Time (10:00-10:10)**

### **SESSION - IV (10:10-11:10)**

*(Session Chair: Prof. Wondae Kim, Inha Technical College, Korea)*

18. Community Activities of Socially Isolated Residents in Sotome a District in Nagasaki, Japan	
<i>Rieko NAKAO, Akiko NITTA, Ryoko KAWASAKI, Kazuichi SUGIYAMA</i>	
19. Survey of Number of Users of Inclined Elevator in Ohura Area of Nagasaki City	131
<i>Rie MATSUO, Kazuichi SUGIYAMA</i>	
20. Investigation on Revitalization Project for Hilly Districts in Minami-Ohura Area of Nagasaki city	
<i>Satoru IWAMOTO, Kazuichi SUGIYAMA</i>	
21. Development of Technological Method for Image Evaluation on Landscape and Soundscape	143
<i>Ryohei HARADA, Kazuichi SUGIYAMA</i>	
22. Quantitative Estimation of Landscape and Soundscape in Urban Areas of Tamsui Ward, New Taipei City, Taiwan	147
<i>Ping CHEN, Kazuichi SUGIYAMA, Ryohei HARADA</i>	
	153

### **Break Time (11:10-11:20)**



## **SESSION - V (11:20-12:20)**

*(Session Chair: Prof. Chang-Hahk HAHM, Inha Technical College, Korea)*

- |   |     |
|---|-----|
| 23. GIS Measurement Scheme for Pedestrian-Friendly Environment                  | 161 |
| <i>YongJin Joo, ChangHahk Hahm, Eung-Nam Kim</i>                                |     |
| 24. A Study on the Walking Speed and Time for Analysis of Shelter Service Areas | 165 |
| <i>Mi-Mo KIM, Jae-Kook PARK</i>   |     |
| 25. 3D Building Modeling using Digital Camera and Terrestrial LiDAR             | 171 |
| <i>Dong-Moon Kim</i>  |     |
| 26. Dynamic Behavior Analysis of Coastal Structure using Bathymetry Data        | 177 |
| <i>Dong-Moon Kim</i>  |     |
| 27. A Study on the Determining Priorities of Snow Removal Operation Using GIS   | 183 |
| <i>Jae-Kook Park</i>  |     |

## **CLOSING ADDRESS (12:20-12:30)**

*Vice Chairman: Prof. Takakazu Ishimatsu(Nagasaki University, Japan)*



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Kangwon National University  
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