22-23 JUNE 2016

BITEC • BANGKOK
THAILAND

AUTOMOTIVE SUMMIT 2016

A part of:

ME MANUFACTURING EXPO 2016

In collaboration with:

iEVTech 2016

Co-organized by:

THAILAND AUTOMOTIVE INSTITUTE
สถาบันยานยนต์

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Global EV Platform JEJU



Jeju

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Part 1 Carbon-Free Island JEJU

1. Fast Facts
2. Optimal Conditions to Pursue a Carbon-Free Future
3. Carbon Free Island Jeju by 2030
4. Roadmap for Carbon Free Island Jeju
5. Jeju, Perfect Test bed for EVs
6. EV & Charging Infrastructure in Jeju
7. Subsidized EVs in Jeju

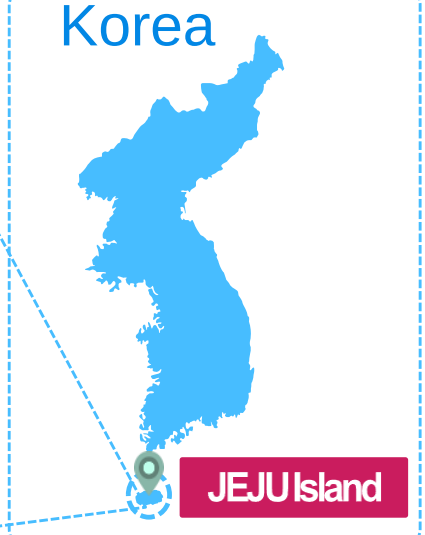
Fast Facts

- **Location**: to the south of the Korean Peninsula
- **Area**: 1,849 ㎢
- **Population**: 640,000 (As of Feb., 2016)
- **Visitors**: 13,000,000 (As of late December 2015)
- **Temperature**: Avg. 15.7 ℃ (Highest 34.9/Lowest 14.7)
- **Altitude**: 1,950m (Mt. Halla) / Road Altitude : Highest 1,100m



JEJU Island, South Korea





Optimal Conditions to Pursue a Carbon-Free Future

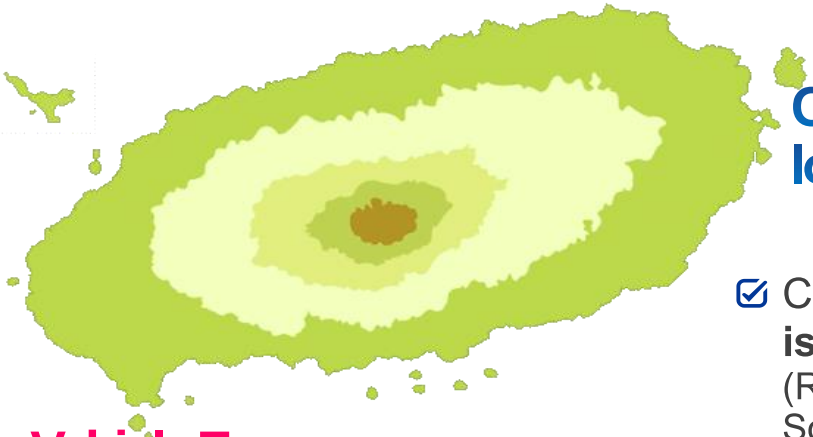


UNESCO designations in all 3 Natural Sciences

First place in the world to obtain **UNESCO designations in all 3 Natural Sciences**
- **Biosphere Reserve** in 2002
- **World Natural Heritage** in 2007
- **Global Geopark** in 2010







Optimal conditions for low-carbon green industry

- ☑ Capable of **driving around the island** on **a single charge** (Round: 176km, East to West: 73km, South to North: 41km)
- ☑ **Rich green energy sources** such as wind, solar power, etc.
- ☑ Completion of **smart grid test bed and infrastructure**

International Electric Vehicle Expo

- ☑ **The 4th International Electric Vehicle Expo**
  - March 17-23, 2017
  - Jeju, South Korea

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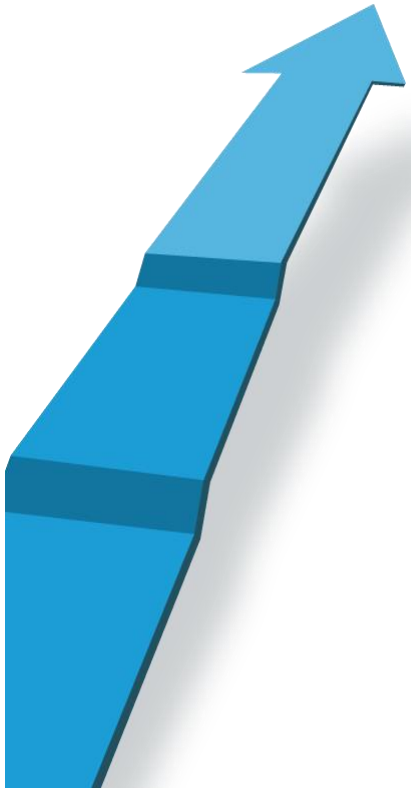
Carbon-Free Island Jeju by 2030

Goal

Transform Jeju
into an island with low carbon and green growth



3rd Phase — Carbon-Free Island (2030)

Realize Carbon-Free Island consuming no fossil fuel
100% of cars to EVs (377,000 EVs by 2030)
100% electricity or 2GW from wind by 2030

2nd Phase — Carbon-Free Island Infrastructure (2020)

Build infrastructure to turn Jeju into a Carbon-Free Island
40% of cars to EVs (135,000 EVs by 2020)
50% electricity or 1GW from wind by 2019

1st Phase — Carbon-Free Island Test Bed (2017)

Complete smart grid testing on Gapa Island
10% of cars to EVs (29,000 EVs by 2017)

Roadmap for Carbon-Free Island Jeju

Renewable Energy

100% Renewable Energy, Achieve Energy Independence

- ☑ Generate 1,000MW from wind by 2020 (50% renewable energy)
- ☑ Generate 2,350MW from wind by 2030 (100% renewable energy)
  ※ 450MW onshore wind farm, 1,900MW offshore wind farm, 300MW solar farm, etc.

Electric Vehicles

Convert 100% of the Local Vehicle Population to EVs Build a Top EV City

- ☑ Public transport ⇒ 10% of cars to EVs (29,000 cars) by '17
- ☑ Public transport and rental cars ⇒ 40% of cars to EVs (135,000 cars) by '20
- ☑ Commercial vehicles ⇒ 100% of cars to EVs (377,000 cars) by '30

Smart Grid

Construct a Smart Green City

- ☑ Complete smart grid testing by 2013
- ☑ Build smart grid infrastructure by 2017
- ☑ Turn Jeju into a smart grid city by 2020

Jeju, Perfect Test-bed for EVs

The highest density of EV chargers per unit area
(one charger per 3.5 km as of 2014)



Abundant green energy sources



South Korea's first EV Call Center



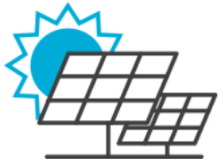
Paid EV charging business and battery lease business



Daily driving range limited by the island's size
(about 100 km across the island)



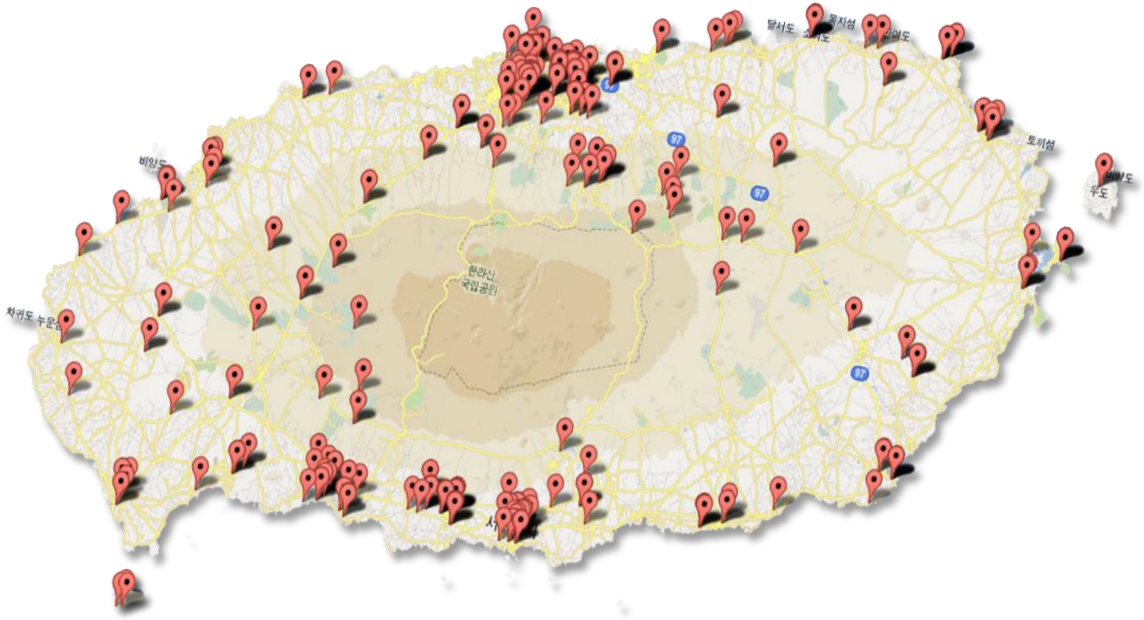
Smart Grid Test Bed installed and operated



EV & Charging Infrastructure in Jeju

100% of Vehicles to EVs by 2030

	2013	2014	2015	2016	2017	2020	2030
EV	360	660	2,930	9,300	29,300	134,900	377,000
Charger	497	524	2,641	8,198	21,380	73,150	138,000



Subsidized EVs in Jeju

		Kia	GM Korea	Kia	Nissan	Power Plaza
Model		**RAY**	**SPARK**	**SOUL**	**LEAF**	**Labo PEACE**
No. of seats		4-seat sedan	4-seat sedan	5-seat sedan	5-seat sedan	2-seat pickup
Max speed		130 km/h	145 km/h	145 km/h	140 km/h	95 km/h
Driving range	**Warm**	91 km	128 km	148 km	132 km	67.5 km
	Cold/Hot	69.3 km	83 km	123.7 km	85.5 km	71.9 km
Charging time	**Slow**	6 hrs	6-8 hrs	4-5 hrs	4-5 hrs	5-6 hrs
	Fast	25 mins	20 mins	25 mins	30 mins	-
Battery		16.4 kWh	18.3 kWh	27 kWh	24 kWh	17.8 kWh
Price (thousand won)		35,000	39,900	42,500	54,800 (‘15)	36,900
Discount (thousand won)		-	-	1,000	-	3,000
Subsidy (thousand won)		19,000				
Launched		‘12.3	‘13.10	‘14.5	‘14.12	‘15.10







Subsidized EVs in Jeju

		Renault	BMW	Hyundai	Tesla	BYD
Model		**SM3**	**I3**	**IONIQ**	**Model 3**	**e6**
No. of seats		5-seat sedan	4-seat sedan	5-seat sedan	5-seat sedan	5-seat MPV
Max speed		135 km/h	150 km/h	165 km/h	-	-
Driving range	**Warm**	135 km	132 km	169 km	346 km	400 km
	Cold/Hot	83.5 km	75.5 km	-	-	-
Charging time	**Slow**	3-4 hrs	3-5 hrs	4-5 hrs	-	-
	Fast	30 mins	30 mins	25 mins	-	-
Battery		26.6 kWh	21.3 kWh	28 kWh	-	-
Price (thousand won)		SE 40,900 RE 41,900	LUX 57,100 SOL+ 64,200	40,000	$ 35,000	$ 48,000
Discount (thousand won)			-	-	-	-
Subsidy (thousand won)			**19,000**			
Launched					Late ‘17	‘16









Part 2

The 4th International Electric Vehicle Expo

1. Overview
2. Focuses of the 4th IEVE
3. Program Highlights

The world's only exposition dedicated solely to electric vehicles

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The 4th IEVE Overview

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Overview

- **Period**: March 17(Fri)~23(Thu), 2017
- **Place**: Jeju, South Korea
- **Hosted by**
  - Ministry of Trade, Industry and Energy
  - Ministry of Environment
  - The Renewable Energy Policy Research Forum of the Korean National Assembly
  - Jeju Special Self-Governing Province
- **Organized by**
  - International Electric Vehicle Expo





Program

Exhibition (Press Day, B2B)
Conference (Standardization)
Event (Job Creation, New Business)



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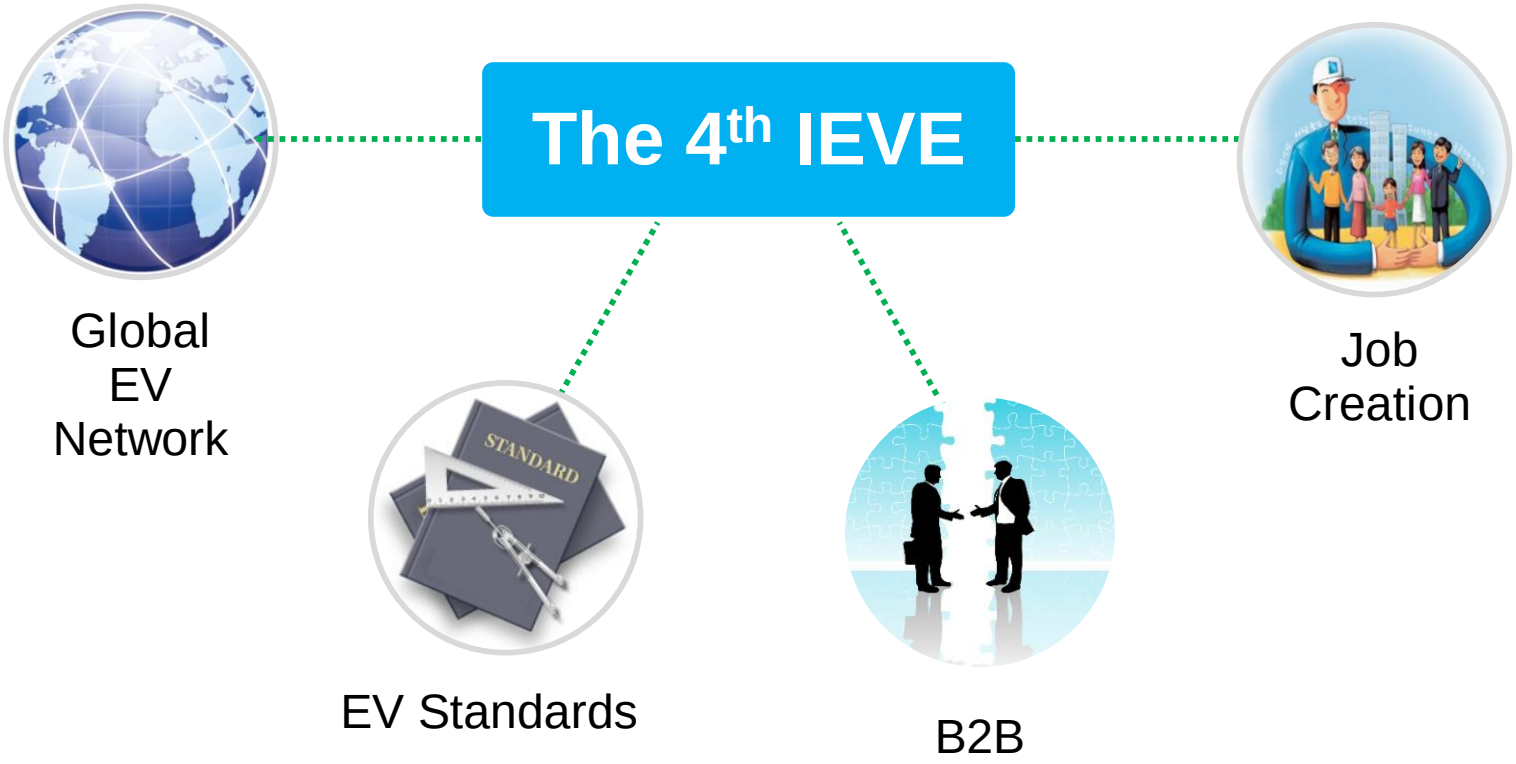
Focuses of the 4th IEVE





International Electric Vehicle IEVE Expo

The 4th International Electric Vehicle Expo

EV Leaders' Round Table

The world is now pushing for a mass adoption of electric vehicles as a primary strategy in response to climate change. EV Leaders' Round Table is a discussion where heads of leading EV-friendly cities come together to affirm their policy commitment to fulfilling greenhouse gas reduction goals; to discuss different EV deployment strategies; and to come up with solutions to challenges and obstacles involved in achieving EV deployment goals. The discussion may result in collective response measures, including the adoption of a declaration.

AUTOMOTIVE SUMMIT 2016

Program Highlights

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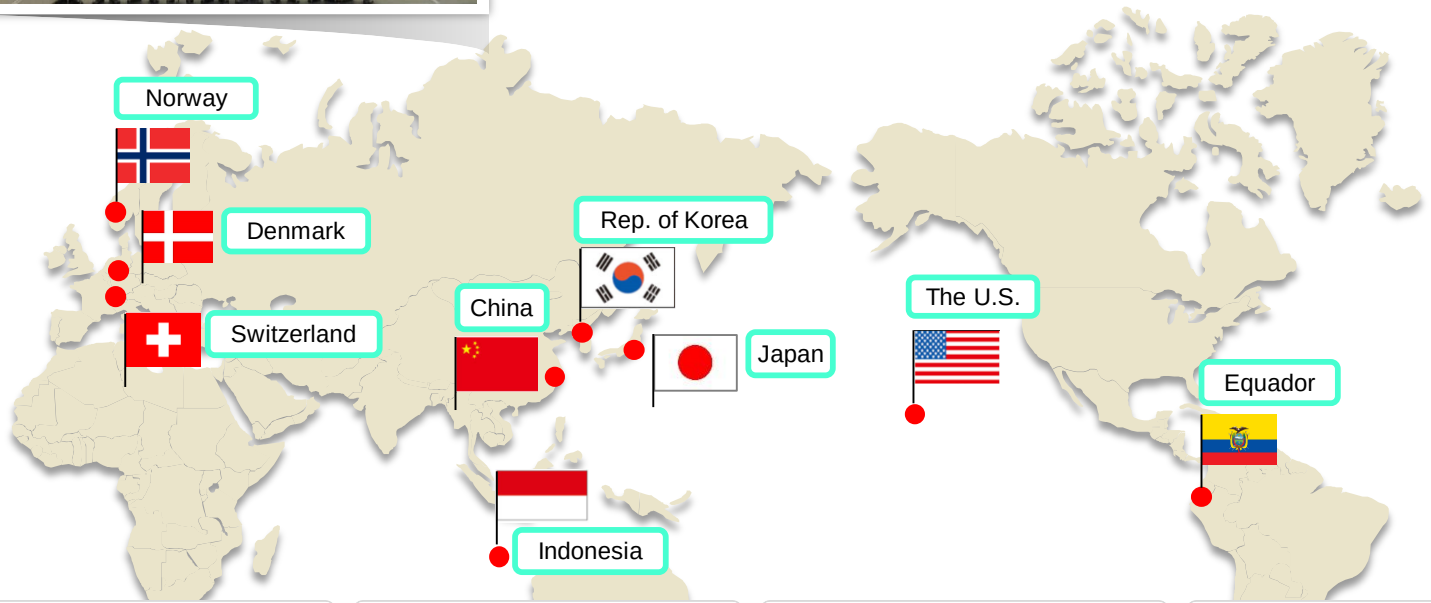
EV Leaders' Round Table

- **Date & Time**: March 17(Fri)
- **Place**: The 4th IEVE venue
- **Attendees:** 10 Cities from 8 countries



Europe

- Mayor of Zermatt, Switzerland
- Mayor of Bornholm, Denmark
- Mayor of Oslo, Norway

The Americas

- Governor of Hawaii, U.S.
- Mayor of Cuenca, Equador

Asia

- Governor of Guangdong *or* Mayor of Shenzhen, China
- Mayor of Yokohama, Japan
- Governor of Nusa Tenggara Barat, Indonesia

Republic of Korea

- Governor of Jeju
- Mayor of Seoul
- Governor of Gyeonggi

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The 4th International Electric Vehicle Expo

Global EV Association Network

The Global EV Association Network is a non-profit body consisting of associations, institutions, and business entities from twelve countries in the fields of EVs, smart grid, renewable energy, and environment. Its objectives are to share information and execute collaborative actions in pursuit of EV deployment and to share best practices in the areas of government policies, business models, and public relations.

Program Highlights

EV Preview | EV PR Show

The 4th International Electric Vehicle Expo



EV Preview and EV PR Show are an effective PR platform for IEVE exhibitors to raise profile. EV manufacturers—both established and emerging, battery companies, and EV-related service providers can submit an application which will go through a review and selection process. When selected, CEOs and CTOs of those lucky exhibitors will be presenting, one by one, their cutting-edge EV technologies and products as well as their philosophy and future vision to a targeted audience consisting of leaders from industry, government, academia, and the media.

EV Preview

- **Date & Time**: March 18~19
- **Place**: The 4th IEVE venue
- **Attendees:** 10 exhibitors
- **Operation:** 30 min Presentation+10 min Q&A

EV PR Show

- **Date & Time**: March 18~19
- **Place**: The 4th IEVE venue
- **Attendees:** 10 exhibitors
- **Operation:** 15 min Presentation+5 min Q&A

Program Highlights



The 4th International Electric Vehicle Expo

EV CEO Summit with WEF

EV CEO Summit is an opportunity to meet with CEOs of global EV manufacturers in a World Economic Forum format. You will be discussing global EV trends and issues and sharing your future visions to shape industry agendas.

When
March 17, 2017

Where
The 4th IEVE venue

Who (8 CEOs)

- Hyundai
- Renault
- BYD
- Google X
- BMW
- GM
- Tesla
- Local Motors

How

- Co-organized by the IEVE Organizing Committee and World Economic Forum
- Held during the 4th International Electric Vehicle Expo
- BBC or CNN will serve as the host broadcaster to produce and transmit live television coverage of the summit.
- The Summit will be webcast through the World Economic Forum website



The 1st IEVCDC Grand Prize Winner

The 2nd International EV Concept Design Challenge

The 2nd International EV Concept Design Challenge

Theme: Design Our Shared Future with e-Mobility

Submission Due: February, 2017

Organized by: Ministry of Trade, Industry and Energy, Jeju Special Self-Governing Province

Hosted by: International Electric Vehicle Expo, The Korea Contents Association

AUTOMOTIVE SUMMIT 2016

Program Highlights

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The 2nd International Conference on Electric Vehicle, Smart Grid, and IT (ICESI 2017)

Important Dates

Short paper submission: January , 2017
Acceptance notification: February 19, 2017
Camera-ready papers & registration: March 1, 2017

Research Topics

Electric Vehicles

- EV Standards and Specifications
- Batteries and Materials for EV
- EV Charging Infra and Technologies
- Policies and Culture on EV
- EV Component and Architecture
- EV Business Models
- Autonomous Navigation
- Vehicular Networks
- Mechanical Systems and Components for EV
- IT Technologies for EV
- Heating and Cooling Systems for EV
- V2G(Vehicle to Grid)
- EV Testing and Repair
- Education and Training for EV

Smart Grid & Green Energy

- Demand and Response
- Green and Eco Technologies
- Climate Change and Environment
- Grid Platform and Services
- Networks and Security for Smart Grid
- Energy Generation and Transmission
- Energy Distribution
- Power and Resource Monitoring
- Battery Management System & Optimal Charging
- Testing and Assessment for Smart Grid
- Renewable Energy and Applications
- Energy Storage
- Smart Appliances
- Education and Training for Smart Grid

Information Technology

- Ubiquitous & Cloud Computing
- Wireless Communication
- Sensors and Wearable Computing
- Parallel and Distributed Computing
- Human Computer Interface
- Algorithms and Applications
- Artificial Intelligence, Neural Networks
- Data Mining & Data Engineering
- Computer Vision Image Processing
- Software Engineering
- RFID and Applications
- Visual and Multimedia Computing
- Security and Privacy
- IT Convergence and Applications

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