



INTERNATIONAL EXCHANGE WORKSHOP

associated with the golden anniversary of Kinki Chapter of SHASE
on 31st Oct. and 1st Nov. 2013 in Osaka

Kinki Chapter of The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan
<http://www.kinki-shasej.org/>

CALL FOR ABSTRACTS

In commemoration of the golden anniversary of Kinki Chapter of SHASE, we proudly hold an international exchange workshop based on our bilateral affiliate agreement with CNSSR and the BUG branch of SAREK, entitled "Sustainable HVAC&R technologies for the monsoon zone against climate change: how to deal with the simultaneous increases of the cooling and dehumidification loads and the heating load."

We hope that the workshop would associate research and development seeds for the sustainable and robust bilateral collaborations and encourage the friendship between the next generations of us. Contributions to the above subject are highly welcomed. Tangible subject areas are:

- high performance HVAC&R systems,
- heat recovery or energy recovery ventilation systems,
- innovative technology integration combining higher performance building envelopes and utility systems,
- practical attempts for qualifying a higher green building performance certificate, and
- tools (models, measurements and so on).

EXPECTED WORKSHOP PARTICIPANTS

A scholar under ages of 40 years who is investigating HVAC&R technologies is suitable for the workshop. We would also welcome engineers of HVAC&R industries and the building energy section of construction companies. Needless to say, a graduate student is a potential contributor.

IMPORTANT DATES

● **July 15, 2013**

Deadline for abstracts of 200 - 300 words for both poster and invited oral presentations

Submit the abstract in any format to hideki.shibaika@dad.kit.ac.jp and/or abuku@arch.kindai.ac.jp.

● **October 15, 2013**

Deadline for extended abstracts of up to 4 pages for poster presentations and for full papers of up to 10 pages for invited oral presentations

Ask for the template to hideki.shibaika@dad.kit.ac.jp and/or abuku@arch.kindai.ac.jp.

● **October 31, 2013**

Workshop

● **November 1, 2013, 9:00 – 15:00 (tentative)**

Free excursion to Maruito Namba Bldg. and NEXT 21, Phase 4.

WORKSHOP PROGRAM (tentative)

12:30	Open
12:50 - 13:00	Welcome address
13:00 - 14:30	Oral presentations by three invited keynote speakers (30 min. per person)
15:00 - 16:00	Short oral presentations by authors of poster presentations (5 min. per person)
16:00 - 16:15	Coffee break
16:15 - 17:15	Poster session (1 x A1 size poster per person)
17:15 - 19:45	Banquet with the poster session continued
19:45 - 20:00	Closing address
20:30	Close

For any enquiry, please contact hideki.shibaika@dad.kit.ac.jp and/or abuku@arch.kindai.ac.jp.

Workshop organizing committee: Committee of International Exchanges, Kinki Chapter of SHASE

PRACTICAL INFORMATION

WORKSHOP VENUE: RAMADA OSAKA



- **Address:** 3-16-19 Toyosaki, Kita-ku, Osaka, 531-0072 Japan
- <http://www.ramada.com/hotels/japan/osaka/ramada-osaka/hotel-overview>

EXCURSION

We believe the professional excursion will be a good follow-up opportunity to the workshop that can associate research and development seeds for the sustainable and robust bilateral collaborations and encourage the friendships between the next generations of us. In order to show the most recent and sophisticated building technologies, two awarded projects are selected to come and look at the cutting edged practices on building utility systems and architecture as well. Both projects are located in the center of Osaka city. One is an office complex and the other is a medium-rise condominium.

- **Maruito Namba Building**

(Winner of the 26th SHASE Award of Technology in 2012, Category in Technological Development)

This complex contains commercial, office and hotel facilities, as well as underground commercial facilities directly linked to two stations via an underground walkway. The facility forms a new underground mall network that contributes to the revitalization of the local area. The exterior has a delicate grid pattern in harmony with its surroundings, while the 144-meter silhouette is a prominent marker on the city's north-south thoroughfare and for the adjacent district's skyline.

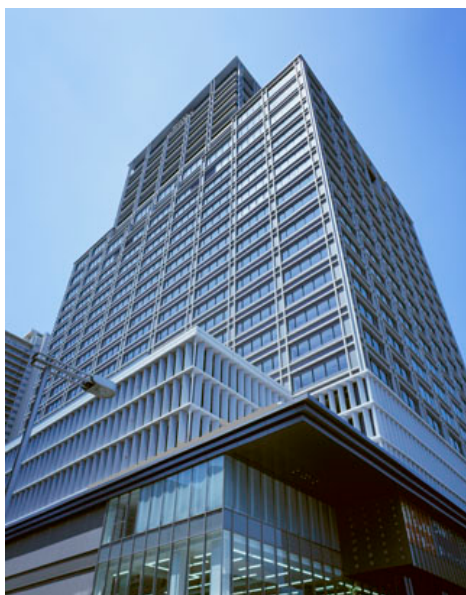
One of the attractive hotel facilities is a charming thatched-roof chapel—standing in a large atrium—inspired by Brockhampton All Saints' Church in Herefordshire, England.

Features of the utility system

The system design aimed to balance the secure energy supply and higher performance for energy conservation with the following features.

- 1) Taking advantage of the large building complex characteristics, the Business Community Plan has been accommodated and the balanced energy sources has been incorporated, that is, a combined heat and power with spot network power supply and medium pressure gas supply.
- 2) Pervading instruments have been customized on their energy saving performances and capability improvements, such as, the high efficiency condensing water heater with energy recovery, the modular-type multi air conditioning system for the simultaneous cooling and heating operation, the energy recovery ventilator with direct expansion coil unit, etc.
- 3) The HVAC system for kitchen zones has been improved by applying the best zoning and the low-radiation cooking equipment.
- 4) Introduction of the business on energy services has created benefits by applying the operational knowledge database such as the optimum operation pattern, etc.

Total Floor Area	123,194 m ²
Floors	B1F - 31F
Completion	June, 2009



- **Osaka Gas Experimental Residential Complex NEXT21, Outline of the Phase 4 Experiments for a five-year period from April 2013 to March 2018**

General concern toward conserving energy and preserving the environment has been growing rapidly. Residences in the 21st century must provide solutions to these problems while maintaining comfortable living environments. It was constructed as a model case so that specialists of various fields could examine and discuss the technologies necessary for achieving these goals.

It contains 18 residential dwellings. With the aim of creating environment-friendly, energy-efficient urban housing for the 21st century, it was initiated in October 1993. For a five-year period, from April 1994 to March 1999, it became the home for the families of 16 Osaka Gas employees. During this period, various experiments took place.

It was adopted as a project for the pilot program reducing carbon dioxide on commercial and residential buildings promoted by MLIT of the Japanese government in FY2012.

Features of the Phase 4 experiments

To realize a spiritually rich and environment-friendly living as the ultimate goal, the following three requirements should be achieved:

- establishing the rich relationship between individuals,
- reconstructing the relationship between people and nature, and
- promoting the smart life style for energy conservation.

More concrete objectives are as follows.

1. Examining the proposed life in the housing system that corresponds to the diverse lifestyles in the future. It implies the development the habitation that can establish the rich relationship between individuals, shows symbiosis with the nature and is friendly to the environment as well.
2. Demonstrating the next-generation energy system that realizes the smart condominium. It consists of the following subsystems.
 - The energy circulation network for utilizing distributed installation of solid oxide fuel cell (SOFC) system to individual units of the condominium.
 - Supporting the demand response and operation of reverse power flow.
 - Establishing the autonomous power system corresponding to power failures.
 - Introducing home energy management systems (HEMS).

Total Floor Area	4,577.2 m ²
Floors	B1F - 6F
Completion	October, 1993

