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Report of ISSNP and IJNS activities between 2007
and 2018 for the future ISSNPC activities by HEU's
International Academic Association

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Part A : ISSNP

- The first ISSNP2007, Tsuruga, Japan
- The second ISSNP2008, Harbin
- History of ISSNP series from 2007 to 2018
- Its tendency and prospect for future activity

The first ISSNP2007, Tsuruga, Japan

- Social background around the world at the time of 2007

Momentum of restoration of nuclear power in US and Europe and active nuclear power development in East Asia (Japan, Korea and China)

- Objective of the conference

Initiatives for symbiotic nuclear power to raise harmony and symbiosis with human, society and the environment are required for the sustainable development of nuclear power generation in the 21st century

- The state of Tsuruga area at the time

Numerous nuclear power facilities had located with different types of facilities in Japan

12 PWRs and one BWR plant in operation

2 APWRs in preparation for construction

Monju Preparation of restart

Fugen decommissioning research

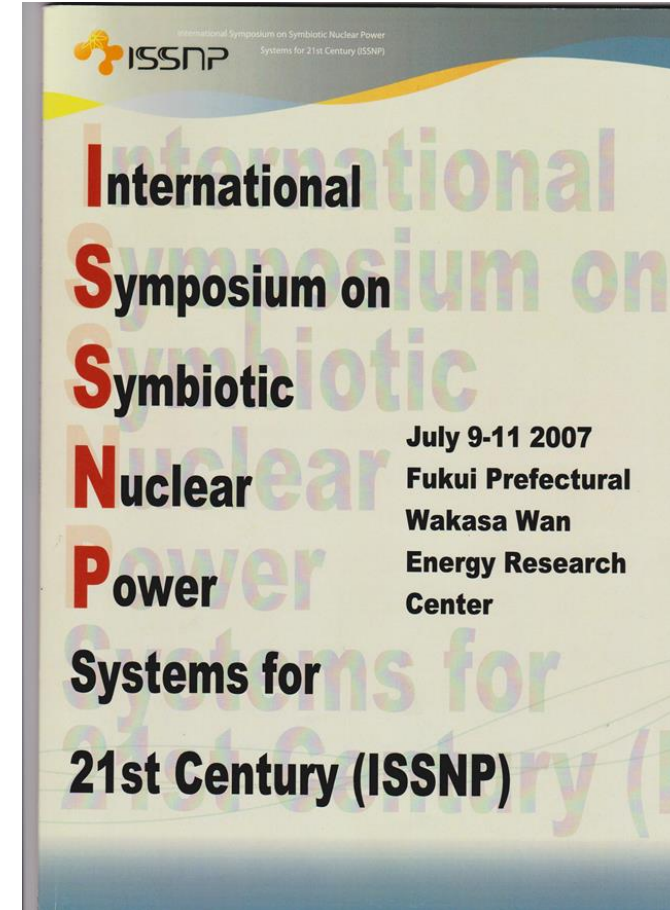
PWR operation and training center

Accelerator facility for the researches of cancer remedy and material degradation (See the photo on the right)



The first ISSNP2007 and its paper category

Category	Area
1	Method of sensing, monitoring and processing for control and communication
2	System simulation technology
3	Human interface technology
4	Symbiosis of human with society and environment



Why ISSNP2008 in Harbin

- There was a proposal to me from Dr. Zhang Zhijian of Harbin Engineering University (HEU), Dean of College of Nuclear Science and Technology(CNST), who participated in ISSNP 2007.
- He said that HEU would like to have the next ISSNP in Harbin in 2008 and to inherit ISSNP series conference by HEU, and hoped me to come to Harbin the next year from 2008 as a master professor of HEU and to support developing international scientific activities at HEU/CNST.
- So, in the middle of September 2007, Yoshikawa went to HEU to help their planning the ISSNP2008 to be held in Harbin in September 2008.



ISSNP2008, 2008年9月 ハルビン工程大学にて開催



ISSNP2018, 2018年7月 哈爾濱工程大学にて開催



Quick look on ISSNP series from 2007 to 2018

No	Conference name	Year, month	Country	City	Organizer
1	ISSNP2007	2007, July	Japan	Tsuruga	Symbio Community Forum
2	ISSNP2008/CSEPC2008/ISOFIG 2008	2008, September	China	Harbin	Harbin Engineering University (HEU)
3	ISSNP2010	2010, August	China	Harbin	HEU
4	ICI2011(ISOFIG/CSEPC/ISSNP)	2011, August	Korea	Taejong	Korean Nuclear Society (KNS)
5	STSS2012	2012, August	Japan	Okayama	Okayama University
6	ISSNP2013	2013, November	China	Beijing	Tsinghua University
7	ISOFIG/ISSNP2014	2014, August	Korea	Cheju	KNS
8	STSS/ISSNP2015	2015, August	Japan	Kyoto	Kyoto University
9	ISSNP2016	2016, September	China	Chengdu	NPIC
10	ISSNP2018	2018, July	China	Harbin	HEU

Paper categories of ISSNP series conferences (Cat. 4 is added in ISSNP2018)

Cat.	Area
Category 1	Safety and risk studies from social, environmental and economic aspects of nuclear energy
Category 2	Sensors, instrumentation and control, operation, testing and maintenance, operator support, human-machine interface of nuclear power systems.
Category 3	Integrated aspects of energy systems (i.e., multipurpose utilization of nuclear energy, nuclear fuel cycle, plant decommissioning, comparative study of nuclear energy, etc.)
Category 4	Modeling and simulation for digital numerical reactors and nuclear fuel reprocessing technologies.
Category 5	Other general nuclear engineering (i.e., reactor physics, thermal-hydraulics, reactor core and plant behavior, nuclear fuel behavior, etc.)

ISSNP- Its tendency and prospect for future activity

1. Five times in China, three times in Japan, and twice in Korea. HEU's leadership is big in China.
2. In China, this conference is recognized as including all aspects of nuclear engineering, while in Japan it is recognized as an international conference of human interface including nuclear power, and in Korea as nuclear I & C + HMIT series conference.
3. In Japan, since the Fukushima accident in March 2011, nuclear power industry has been in trouble, so that holding international conferences of nuclear power generation is becoming difficult. Especially expecting to hold at a Japanese academic society related to I & C + HMIT will make the color of nuclear power thin and the number of participants in the host country will be small.

ISSNP- Its tendency and prospect for future activity

4 In future it is necessary for both ISSNP and IJNS to have unique sales points from other international conferences + journals so that the both can attract many papers presentation around the world.

6 . In this respect it is necessary to consider on what is the symbiotic nuclear power system of the 21st century and how it links with nuclear safety and simulation.

7 . It is necessary to decide the order of countries for the future conference series.

Part B: IJNS

- Why it had started?
- Quick overview of the IJNS history from 2010-2018
- IJNS statistics for 9 years of 2010-2018
- Trends seen in IJNS statistics for 9 years of 2010-2018

Why it had started?

After ISSNP 2008 in Harbin, when Yoshikawa went to Harbin at the beginning of 2009, Prof.. Zhang Zhijian of the Dean of HEU / CNST newly proposed the publication of international academic journal on the topics of ISSNP conference and asked me to help them by saying:

- 1. There is no academic journal in English about nuclear energy in China, and they have no experience of publishing English journals.
- 2. The publication of academic journals in China is severely restricted by the government.
- 3. He hoped to launch publishing international academic journal first in Japan. He said he will take it over in China when the journal publication get on track.

Policies determined as a result of consultation at the time

- Co-Editors-in-Chief : Yoshikawa and Zhang Zhijian who is assisted by Prof. Yang Ming of the simulation center, CNST/HEU.
- Name of the journal: International Journal of Nuclear Safety and Simulation (IJNS)
- It was named by the vice president Mr. Xia of HEU at that time, because Prof. Zhang Zhijian is the director of nuclear safety simulation center of HEU/CNST.
- Number of articles and number of articles (page) 4 times a year (March, June, September and December) Each issue 10 papers 100 pages (Invited paper and Original paper half expected)
- Issue form both WEB version and print version
- ISSN numbers both for WEB and printed version taken in Japan

Preparatory works in 2009 for the start of IJNS Vol.1, No.1, March 2010

- Develop software for web based journal (submitting / reviewing / editing / publishing IJNS with printed version editing function in 2009- Yoshikawa will decide the design specifications, develop the system in China (Redasen Co. in Dalian) and install the web-based system on the server in Japan.
- Have the cooperative overseas colleagues who cooperated with ISSNP 2008 to enter the International Editorial Committee to promote paper submission and review,
- In order to publish the first issue of 2010, papers are gathered on a paper basis, peer review is done in Yoshikawa, data is transferred to the WEB system created during 2009 and the March issue of 2010 is issued
- Resources for paper submission are mainly from ISSNP international conference held each year and announcement of international WS to be held in Harbin

Categories of IJNS papers

(Invited papers and free submission papers included research reviews, technical reviews, lecture notes, international trends, research papers of original nature, and short notes, etc.)

Category	Explanation
Category 1	Integrated aspect of energy system (ex. Multipurpose utilization of nuclear energy, nuclear fuel cycle, plant decommissioning, comparative study of nuclear energy with other energy technologies, etc.)
Category 2	Reactor physics, thermal-hydraulics, nuclear fuel behavior, reactor core and plant behavior
Category 3	Sensors, instrumentation and control, testing and maintenance, human-machine interface
Category 4	Methodologies of safety evaluation such as reliability, risk and the related human factors studies from social, environmental and economic aspects.

Major course of IJNS publication 2009-2012

Develop IJNS-WEB system while assembling papers by mail base in 2009.

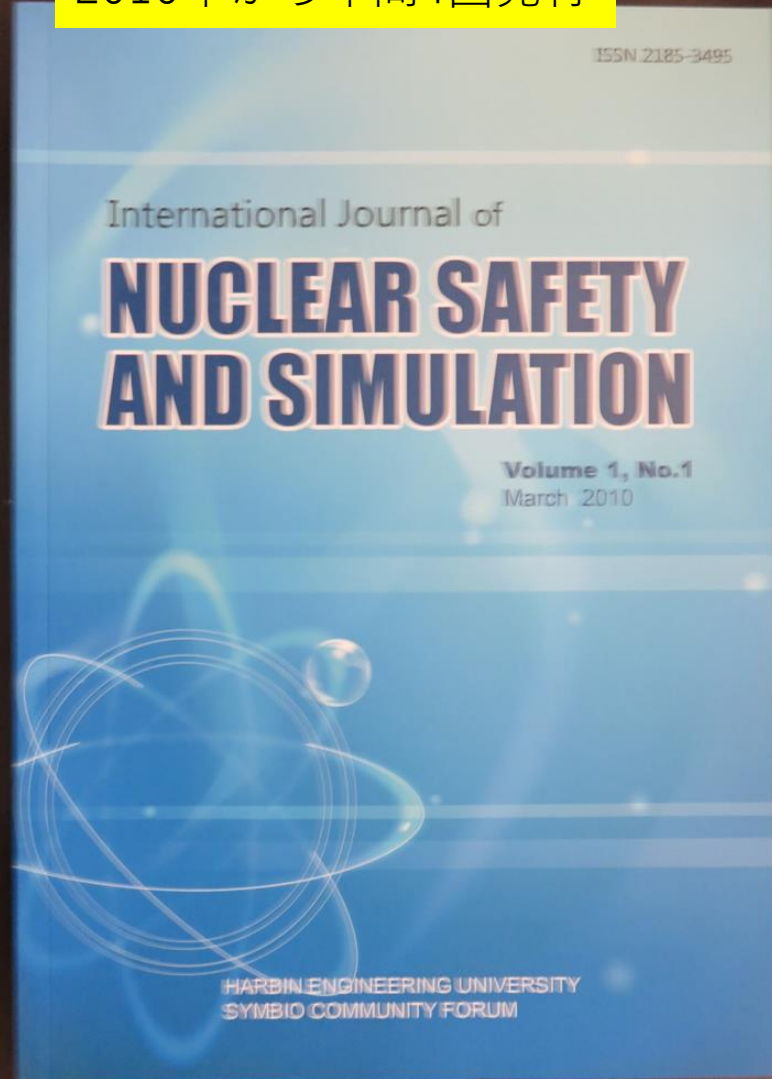
Initiate IJNS publication (both WEB and print versions)

Care by Yoshikawa should be finished in 2012 originally but due to reason that the preparation system is not set up in Harbin, and as the result Yoshikawa eventually had to taken care until 2017.

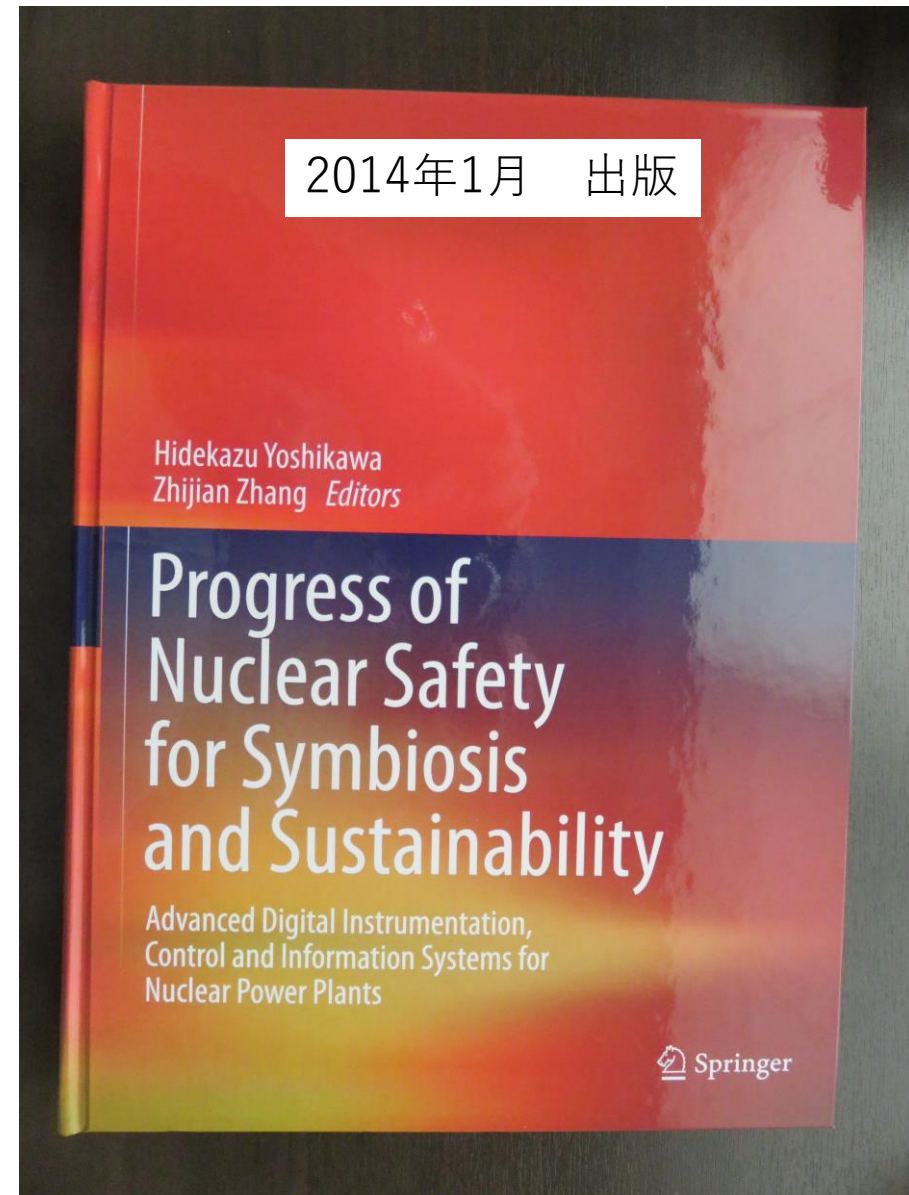
Issue a hard cover book from Springer Japan (issued in January 2014) by selecting representative 32 papers published in IJNS by 2012 .

Print version by HEU Printing Company had ended by December issue of 2013.

2010年から年間4回発行



2014年1月 出版



Gradual transfer of IJNS management from Symbio to HEU

- From 2014 the main office of IJNS publication was moved to HEU, China. As Professor Yang Ming of HEU/CNST the main secretariat of IECNSS international editorial committee which is organized by the cooperation of overseas colleagues who take care of the international offices in Japan, the United States and Canada, and Europe.
- The ISSN number of the WEB version was moved from the Japan Center to the ISSN International Center in Brussels (the ISSN number of the printed version has been abolished)
- According to promotion of Professor Zhang Zhijian 's Vice President of HEU in 2016, the IJNS - WEB system operated by Symbio on a commercial rental server in Japan has been transferred to a server operated by HEU' s Information Center.

Transition of IJNS charge in HEU / CNST

- With Prof. Yang Ming 's move to South China University of Technology (SCUT) in 2016 in Guangzhou, the caretaker on HEU / CNST side of this IJNS including ISSNP was moved to Professor Zhang Zhigang.
- After that, Professor Wang Jianjun and Professor Cong Tenglong, and Professor Hao Chen in CNST cooperated with Professor Zhang Zhigang, for the IJNS publication in 2016 and 2018, IJNS 's peer review editing was taken care by Redasen Co. in Dalian by contract-based support)
- Management of IJNS has shifted to CNST/HEU.

IJNS statistics for 9 years of 2010-2018

- To see IJNS-Web at its present state please visit the URL (<http://www.ijnsweb.com/?type=common&action=home>)
- IJNS issued record 2010- 2018 please see the separate reference material
- The number of papers in each issue with number of papers invited, breakdown of papers for free submission, authors' country-specific statistics (Japan, China, Korea, the US and Europe), paper genres (reactor physics, fuel materials, IC + HMIT, international trends Social problem, heat flow, safety analysis · risk analysis · reliability analysis) statistics are summarized in the reference material.

Trends seen in IJNS statistics for 9 years of 2010-2018

- For paper numbers by country, Japan and China competed with each other, followed by Europe, Korea and the United States. Initially it mainly depended on contributions from Japan, while from 2014 the contribution from China reversed Japan. Very few contributions from the United States
- Reflecting Yoshikawa 's specialized field, there are many papers in the category of IC + HMIT, safety, risk, reliability analysis, heat flow, international trends and social problems, while fuel and materials and reactor physics are small.

Part C: Expectations for ISSNPC activities by HEU

- In HEU, I heard that a new center was established that is responsible on the academic activities of nuclear power, with Prof. Zhang Zhijian as head and Prof. Zhao Qian as the center director.
- As a part of that activity, the international academic organization of ISSNPC which will be responsible for a future ISSNP international conference series and the publication of the international scientific journal such as IJNS in the past, would be established by Prof. Zhang Zhijian and Prof. Zhao Qian.
- I heard that the ISSNPC will also be supported by China Atomic Energy Society (CNS).

Issues to be addressed in the future

- It will be highly recommended to invite several people with specialized fields from the whole China as the co-editors-in-chief of IJNS. Then they will invite many cooperative editors from China and outside of China.
- Why should one of the two co-editors-in-chiefs plan invited paper as the responsible editor-in-chief for each issue and let the rest co-editor-in-chief be responsible for the review process of free-posted papers corresponding to his specialty.
- As HEU / CNST is responsible to run the editorial office, it should be responsible for edition and publication of each issue. In other words, it should establish responsible institution of editing / issuing each issue, English proofreading of papers included in each issue, by taking care of the communication to the author, reviewer, and all members of editorial committee.

Expected ISSNPC activities by HEU

1. Invite many institutions from many countries and many members to participate in ISSNPC
2. Establish management rules for future ISSNP international conference series. Will it always be holding in Harbin? Holding at member organizations in China? Thinking about hosting in participating countries outside China.
3. Establish the international editorial committee of IJNS in the next stage. It will be preferable that the IJNS publication will be within the framework of CNS publication authorization.

Thank you very much for your kind
supporting ISSNP+ IJNS activities for
12 years between 2007 and 2018.

Wishing to meet you again at the time of STSS/ISOFIG/ISSNP2020,
November 24-26, 2020, Okayama, Japan!