#### Report

# The Sixth Asian Symposium on Visualization

Chang, T. H.\*1, Chang, K. S.\*2, Kim, K. C.\*3, Doh, D. H.\*4 and Lee, Y. W.\*5

- \*1 Division of Mechanical and Automation Engineering, Kyungnam University, 449 Wolyoung Dong, Masan, Kyungnam 631-701 Korea
- \*2 Department of Aerospace Engineering, Korea Advanced Institute of Science and Technology, 373-1, Kusung-Dong, Yousong-Gu, Taejon 305-701, Korea.
- \*3 School of Mechanical Engineering, Pusan National University, Kumjung-Ku, Pusan 609-735, Korea.
- \*4 Department of Mechanical System Engineering, Korea Maritime University, Youngdo-Ku, Pusan 606-791, Korea.
- \*5 School of Mechanical Engineering, Pukyong National University, Pusan 680-739, Korea.

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**Abstract:** The sixth Asian Symposium on Visualization (ASV6) was successfully held from May 28th to 31st, 2001 in Busan, Korea. The activities of the organizing committee and ASV6 programs are outlined here in retrospect and the philosophy of ASV6 is described.

### 1. Introduction

The sixth ASV was held in May 28-31, 2001. It was actually delayed by one year from 2000 to 2001 because the previous ASV5 had been held in 1999 in Indonesia, not in the scheduled year 1998. At the time Korea was offered to host ASV6 by the Steering Committee during the symposium of ASV4 in Beijing, China, there were only five researchers who participated from Korea in the symposium. This would imply that the number of Korean researchers in the field of flow visualization was not sufficient. However, there was a clear trend that the number of researchers in the field was increasing rapidly. It indicates that the number of domestic papers could be significant in four years. With this understanding, Korean delegate accepted the offer of the Steering Committee.

Preliminary preparation was initiated soon by Prof. T. H. Chang (Kyungnam University) and Prof. D. H. Doh (Korea Maritime University). Organizing committee was strengthened by participation of three other members: Co-chairman (Prof. K. S. Chang: KAIST), General Editor (Prof. K. C. Kim: Pusan National University), and General Administrator (Prof. Y. W. Lee: Pukyung National University). Technical committee members were also appointed about one year later.

Voice of worry came out by some local committee members stating that the number of participants could be less than that of the previous symposia because there were many imminent and even competitive big international conferences concerning flow visualization, near the date of the ASV6 (May 28-31, 2001). Examples were the 9th International Symposium on Flow Visualization (August 22-25, 2001), the 3rd Pacific Symposium on Flow Visualization and Image Processing (March 18-21, 2001), and the 4th International Symposium on Particle Image Velocimetry (September 17-19, 2001). To overcome this difficulty the organizing committee decided to hook many attraction points to the ASV6. First, the organizing committee will make the participants feel comfortable budgetwise as they stay in Korea. Second, the committee will prepare many side programs that would inscribe an unforgettable memory on the mind of all participants. Third, the committee will set up a special forum concerning visualization. It became the Cultural Forum, 'Drifting Cups on a Meandering Stream in the Three Countries, China, Korea and Japan.'

# 2. ASV6 at Busan, Korea

The first symposium venue the organizing committee thought was Masan and Changwon twin cities. In summer 1999, Prof. T. H. Chang and Prof. D. H. Doh looked around the city to check the local facilities. They visited several big hotels and some independent conference halls but none of them were found satisfactory.

A political arrangement had been made at that time between South and North Korea that the Diamond Mountain in the North Korea should be open to South Koreans and foreigners. A few boats were operated by Hyundai Maritime Company for the tourism. Prof. D. H. Doh visited North Korea by one boat to investigate if it would be possible to hold ASV6 on the ship during the cruise or berthing. The boat has three big rooms each of which can accommodate more than 70 persons. Planning of the organizing committee had been well in progress when Hyundai Maritime Company suddenly announced that the number of disembarkation should be cut down due to its deteriorating revenue. Consequently, the organizing committee had to withdraw the idea of holding the symposium on a boat.

In the spring of 2000, Prof. K. S. Chang brought an exciting information that a new international convention center called BEXCO was under construction in Busan. To our delight, it was to be well completed by March of 2001, two months before the symposium date. The organizing committee visited the building planners to find that the facility had indeed a surprisingly modern design, enough number of conference rooms and spacious exhibition halls. Furthermore, BEXCO was located in the famous beach area of Hae-wun-dae that was full of large and small hotels, restaurants and shops, bustling with people. The organizing committee unanimously decided that BEXCO should be the ASV6 venue.

# 3. Participants of ASV6

The number of participants in ASV6 from each country is listed below.

Country	Registration	Accompanying persons
America	1	1
China	11	2
France	1	
Germany	1	
Hong Kong	1	1
Indonesia	1	3
Italy	1	1
Japan	50	8
Korea	45	25
Malaysia	1	1
New Zealand	1	
Russia	12	3
Singapore	7	2
Thailand	2	1
Total	135	48

# 4. Activities of the ASV6

# 4.1 Reception Party and Registrations on May 27, 2001

In the morning of May 27, the organizing committee members reviewed the check list at the last-minute. Two students were dispatched to Kimhae International Airport to guide the arriving participants. Some participants arrived by train and some arrived one day earlier. The reception party (Fig. 1) began at 19:00 and registration desk was kept open from 15:30. There was an informal musical performance by two young students from Korea Maritime University.



Fig. 1. People greeting in the Reception Party.

Many acquaintances and new scholars appeared on time, with full of smile in their faces. The reception continued until 9 o'clock in the evening. When the party was over, shuttle buses waited in front of the symposium venue. About 65% of the total participants reported at the reception party.

#### 4.2 Hotels for ASV6 Participants

Seven hotels, namely, Paradise Hotel, Marriott Hotel, Chosun Beach Hotel, Grand Hotel, Business and Beach (B&B) Hotel, Royal Kingdom Hotel and Glory Condominium were selected as the official hotels. The organizing committee successfully negotiated the hotels to lower the prices up to 50% so that the participants feel comfortable. Paradise Hotel was chosen as the main hotel to prepare social events such as banquet and several catering services. Hotel reservation was made through the committee but the payment was made directly to the hotel by the participants. More than 60% of the participants stayed in Paradise Hotel and B&B Hotel. Breakfast was offered free at the B&B Hotel. Shuttle buses were run regularly every day between the hotel and the symposium venue.

#### 4.3 Opening Ceremony

The Opening Ceremony of ASV6 was held at the second floor of the symposium venue. The opening remarks were made by Prof. K. S. Chang (KAIST, Korea), the co-chairman of the ASV6, by Prof. Y. Nakayama (Future Technology Research Institute, Japan), the founder of the ASV symposia, and by Prof. F. Yamamoto (Fukui University, Japan) as one of the previous chairmen of ASV. Soon after the opening ceremony, the plenary lecture of the first session by Prof. R. J. Adrian followed.

# 4.4 Social Parties and Some Events

One social event per one night was the basic principle of symposium organization. On the first night, Welcome Party (Fig. 2) was held at the symposium venue from 19:00 to 21:00. Prof. T. H. Chang (Kyungnam University), the chairman of the ASV6, gave a welcome address. Prof. T. Kobayashi (The University of Tokyo), the president of Japanese Society of Mechanical Engineers, gave a congratulatory speech. Prof. G. M. Carlomagno (University of Naples) gave a consecutive speech. Prof. Q. D. Wei (Peking University) and Prof. S. H. Winoto (National University of Singapore) also gave congratulatory remarks. After dinner, special musical and dance performances were made by a few well-known art masters.



Fig. 2. A moment of Welcome Party.



Fig. 3. Joy was all around in the Visit-Korea Night Party.



Fig. 4. Samulnori Performance in the Visit-Korea Night.

In the evening of the second night, Visit-Korea Night Party (Fig. 3) was held in the garden of Paradise Hotel. Delegates of each country participated in pounding Korean rice-cake and tasted the rice cake. Kalbi (beef rib) was roasted on charcoal flames here and there. Local traditional alcohol in the brand name of 'Andong Soju' was served. The mood of the party was escalated to the climax when a group of young junior students appeared dancing and playing the traditional musical instruments called 'Samulnori' (Fig. 4). Many participants joined in the dancing. Especially, Prof. Y. Nakayama's performance was outstanding.

In the evening of the third day, a banquet (Fig. 5) was held in the ballroom of the Paradise Hotel. Report on the activity of organizing committee was made by Prof. K. S. Chang. Congratulatory remarks were given by Prof. Y. Nakayama, Prof. R. J. Adrian (University of Illinois at Urbana-Champaign) and Prof. W. Merzkirch (University of Essen). Several performances were presented first by a group of local amateur artists. Traditional music was played by the professional artists, which includes a woman who sang a song while playing the instrument. The host nation of next ASV symposium was announced and Prof. Winoto from Singapore took the podium as the next chairman of ASV.



Fig. 5. Participants listening carefully to the speakers in the banquet.

### 4.5 Technical Sessions

Three parallel sessions were run in the technical program. The Plenary Lectures were held in the main hall. Distinguished keynote speakers such as Prof. R. J. Adrain, Prof. W. Merzkirch, Prof. T. Kobayashi, Prof. G. M. Carlomagno, and Prof. F. Yamamoto (Fukui University) were invited.

Special talks were also made in the Cultural Forum called 'Drifting Cups on a Meandering Stream in the Three Countries, China, Korea, and Japan.' Prof. Q. D. Wei, Prof. K. S. Chang, Prof. Y. Nakayama presented their scientific research results intermingled with the cultural aspects and historical anecdotes. Prof. K. S. Chang and Prof. Y. Nakayama displayed their experimental models on the floor of BEXCO symposium hall with the water circulating all the time. Prof. Y. Nakayama brought the knocked-down parts of his experimental setup by airplane, which was assembled skillfully in a short time later. It was thankfully given to Prof. K. S. Chang as a token of friendship at the end of the symposium.

The technical sessions drew large audience everyday. Majority of the participants agreed that papers presented in the sessions had high quality, not only in the scientific view point but also in the technical applications. It is noteworthy, for example, that the paper "Characteristics of Water Veil and Verification of Its Healing Effect by Visualization of Mind" given by Prof. Y. Nakayama attempted visualization of even human mind. Every session was seen with full of questions and lots of interests.

#### 4.6 International Steering Committee Meeting

On the night of May 29, 2001, the International Steering Committee Meeting was held in a conference room of the Paradise Hotel. The committee decided that Singapore would host the ASV7 in May, 2003. Chairman was to be assumed by Prof. S. H. Winoto. The committee also voted that the ASV8 should go to Thailand in the year 2005.

The committee agreed to take a look at the activity of the incumbent committee members. If any inactive member was found, then the representative member of each country should have all the right to replace him by a new, more active delegate. The result was to be posted on the website.

The committee discussed in an amiable environment how the participants evaluated the ASV6. The review items were keynote lectures, social programs, publications as proceedings and CD-ROM, technical/cultural tour, overall symposium organization, web page operation and registration, the number of participants, quality of papers, etc. The committee concluded unanimously that the ASV6 was extremely satisfactory in every respect of the above items

#### 4.7 Day Tour and Post-Symposium Tour

There were day-tours during the symposium for the accompany persons. As a post-symposium tour, the committee first planned a four-day boat trip to Diamond Mountain in North Korea. This plan has, however, never been realized because of the political and economic difficulties of Hyundai Maritime Company. The committee had to inform cancellation of the program to the ten persons who applied to the tour. The organizing committee had instead prepared an alternative program: one-day tour to Kyongju and Pohang cities. In Pohang, they visited the unique Pohang Accelerator Laboratory (PAL) and Pohang Institute of Technology. In Kyongju, they saw the Bulkuk-Sa Temple and the historic remains of Posuk-Chung (Fig. 6), the Floating Cup on a Meandering Stream in Korea. Seeing the old cultures in the ancient city and modern science in the industrial area in a day must have intrigued the visitors. More than 70 persons participated in this cultural and scientific symposium tour.



Fig. 6. Posuc-Chug in Kyongju.

# 5. Conclusions

The closing ceremony was made during the banquet held in the ballroom of the Paradise Hotel in the evening of May 30. Prof. K. S. Chang, the co-chairman of the ASV6 summarized the activities of the organizing committee as mentioned before. He also urged the participants to join him in expressing their impression on the ASV6. Prof. S. H. Winoto, Dr. A. Kusnowo (Indonesian Institute of Sciences), Dr. M. Ginting (Indonesian Institute of Sciences), Prof. H. Kleine (Tohoku University), Prof. B. Suwantragul (King Mongkut's University of Technology), and some others expressed what they felt in the symposium. According to Dr. M. Ginting, the ASV6 in Busan was such a symposium that made him totally feel free from any kind of inconvenience.

The organizing committee was able to arrange some sponsorship from several local and international companies. We believe that it has made the participants financially comfortable in such a relatively luxurious symposium. The organizing committee believes that the philosophy of the symposium set up in the initial organizing stage is fulfilled. Now it just hopes that all the participants have pleasant and enduring memory on this ASV6 held in BEXCO, Busan, Korea.

#### **Author Profile**



Tae-Hyun Chang: He was educated at Dong-A University (B.E, 1969, M.E. 1971) in Korea. After obtaining his B.E. he worked at Busan Thermal Power Plant (Korea Electric Company) for 10 years as a mechanical engineer. He obtained his Ph.D. at the Department of Mechanical Engineering of the University of Wales (Swansea, UK) in 1991. He has been working for Kyngnam University since 1978 at the Division of Mechanical and Automation Engineering. He was promoted to a professor and appointed as the dean of evening school for two years in 1998. His major research field is convection heat transfer with and without swirl in a pipe. He has published five text books and more than 80 research papers.



Keun-Shik Chang: He finished his academic discipline of Ph.D. at the University of California, Berkeley in 1977, and NRC Research Associateship at NASA-Ames Research Center in 1978. He has since served as a professor of Department of Aerospace Engineering in Korea Advanced Institute of Science and Technology (KAIST). He is the founder of Korea Society of Computational Fluids Engineering (KSCFE). His research interests are in engineering flow computation and shock wave experiment. He has published hundredsome international journal and conference papers.



Kyung Chun Kim: He was educated at Pusan National University (B.A. 1979) and at Korea Advanced Institute of Science and Technology (M.S. 1981, Ph.D. 1987) in Korea. His research interests are the identification of turbulence structures in complex flows, micro-fluidics, wind engineering and turbulent convective heat and mass transfer using various types of experimental methods including PIV/LIF technique. He is a professor of school of mechanical engineering at Pusan National University, and director of the laboratory for Micro-fluidics and Bio-fluid Mechanics in PNIT



Deog Hee Doh: He received a B.A. at Korea Maritime University (1985). He finished his M.Sc. degree at the graduate school of Korea Maritime University (1988). He obtained his Ph.D. degree at the Department of Mechanical Engineering of the University of Tokyo, Japan in 1995. His graduate work is issuing the development of 3D-PTV and simultaneous measurement techniques on temperature and velocity fields for thermal turbulent flows. He worked as an invited researcher for the Advanced Fluid Engineering Research Center (AFERC) in 1995. He has been working for Korea Maritime University since 1995 at the School of Mechanical and Information Engineering. His major research subjects are to develop spatial measurement techniques such as 3D-PIVs, 3D-PTVs for the analysis of turbulent flows.



Yeon Won Lee: He graduated from Kyungpook National University (B.A. 1981, M.S. 1983) in Korea. He received his Ph.D. degree from the University of Tokyo (Doctor of Engineering 1993) in Japan. His research interests are CFD, wave energy conversion and various natural energy problems. Now he is an associate professor of School of Mechanical Engineering at Pukyong National University and chief of planning and management of Brain Korea 21 Project Group in Pukyong National University.