

Editorial

APSS 2017 special issue

The Asia Pacific Symposium on Safety 2017 (APSS 2017) was held at the Kitakyushu International Conference Center in Fukuoka Prefecture, Japan, on November 30 and December 1, 2017. This meeting was first held in Gyeongju, Korea in 1999, and has been held every two years since then on a rotating basis among the participating countries, with the aim of allowing researchers and engineers in the field of industrial safety, occupational health and environmental protection to present their research results, have discussions with persons involved in related research fields, and above all to promote friendships with each other.

It was the third time for Japan to host APSS, the earlier venues having been Kyoto (2001) and Osaka (2009). APSS 2017 was largely organized by the Japan Society of Safety for Engineering (JSSE), with the wholehearted support of the National Institute of Occupational Safety and Health, Japan (JNIOSH) and the Korean Society of Safety (KOKOS). This time, APSS attracted over 200 participants from many countries of the Asia-Pacific area, including Japan, Korea, USA, China, Malaysia, Thailand, and Taiwan.

During the two-day conference, there were two keynote speeches by prominent scientists from Japan and Korea, four special presentations from Japan, Malaysia, USA and Korea in the plenary session organized by JNIOSH, 95 oral presentations in general sessions, and 47 poster presentations. The presentations in the general sessions were made in the following categories: explosion and fire (14), risk assessment (13), process safety (10), material safety (9), human body protection (9), electrical safety (9), combustion (7), construction safety (5), emergency evacuation (5), chemical safety (4) and others (4).

With the cooperation of the INDUSTRIAL HEALTH journal, the following outstanding papers were selected for this special issue.

(1) Improvement of inspection system for reduction of small-scale construction site accident in Korea: In this paper, Sejong Lim *et al.* analyze the trend of construction accidents focusing on small-scale construction sites and

determine the correlation between the ratios of official inspections by government and total fatal injuries per 10,000 persons by construction size in Korea. They conclude that official inspections are a key factor in minimizing fatal accident numbers on small-scale construction sites.

(2) The impact of work rest scheduling for prolonged standing activity: In this paper, Ismail Abdul Rahman *et al.* describe their extensive study of fatigue levels from workers' perspectives, in which they also investigated the impact of work-rest scheduling on standing workers of different genders working 12-h shifts. They found that prolonged standing affects muscle fatigue and discomforts, especially of the foot, ankle, lower back and leg, and that different types of work-rest scheduling and gender have significant effects on muscle fatigue development.

(3) Charge elimination method for a charged roll using a passive type ionizer with an air assist: In this paper, Yuki Wakatsuki *et al.* report the effectiveness of a passive-type ionizer with air-blown assistance in the elimination of the static charge generated at high speed by a roll-to-roll process. They found that supplying air flow beneath the needle electrode of the passive ionizer improves the charge elimination because the ions are effectively transported to a place where eliminating the charge of the roll does not affect the corona onset condition.

(4) Unstable behavior of segmental ring under various pressures and its discrete element simulation: In this paper, Naotaka Kikkawa *et al.* thoroughly investigate an accident which resulted in five fatalities during a tunnel-boring machine tunnel construction under the seabed in Japan in 2012. They make clear, through experimentation using a small-scale physical model and DEM simulation, that the cause of the accident was the K-segment slipping out of the segment ring due to a thrusting tailskin.

As the leader of the working group for APSS 2017, I am very pleased to have been able to contribute to the realization of this special issue, and would like to extend my sincere appreciation to everyone whose great efforts contributed to the success of APSS 2017.

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