ISEM2008 Program

Date	Time	Small Hall (5F)	Time	Event Hall Heian (2F)	Time	Event Hall Zuiun (2F)
Thu April 24	9:30~10:10	Opening Address				
	10:10~11:00	Plenary Lecture 1				
	11:10~12:10	Session 24-S-1 (Numerical Study)	11:10~12:10	Session 24-H-1 (Chemical Analysis)		
					13:20~14:20	Poster Session 1 (1F, Exhibition Hall)
	14:30~15:20	Plenary Lecture 2				
	15:30~16:50	Session 24-S-2 (Blasting)	15:30~16:50	Session 24-H-2 (Gas Generants)	15:30~16:30	Session 24-Z-2 (Hazard & Safety)
	17:00~17:40	Special Session for Munitions Safety				
			18:00~20:00	Banquet (2F, Fukuju & Tohgen)		
Fri April 25	9:30~10:50	Session 25-S-1 (Propellant)	9:30~10:50	Session 25-H-1 (Shock Compression)		
	11:00~11:50	Plenary Lecture 3				
					12:50~13:50	Poster Session 2 (1F, Exhibition Hall)
	14:00~14:50	Plenary Lecture 4				
	15:00~16:00	Session 25-S-2 (Gas Detonation)	15:00~16:40	Session 25-H-2 (Thermal Analysis)		
	16:10~17:10	Session 25-S-3 (Energetic Materials 1)	16:50~17:30	Session 25-H-3 (Sensitivity)		
	17:20~18:20	Session 25-S-4 (Energetic Materials 2)				
	18:20~18:30	Closing Address				

Registration (5F Small Hall Lobby): Wednesday, April 23 9:00 ~ 17:00
Thursday, April 24 9:00 ~ 17:00
Friday, April 25 9:00 ~ 12:00

ISEM2008 Program (Tentative)

Thursday, April 24, 2008

Small Hall (5F)

9:00 ~ **Registration**

9:30 ~ 10:10 **Opening Address - Chair: Dr. Shuzo Fujiwara**

Address from the Chairman
Prof. Terushige Ogawa
(President of the Japan Explosives Society, Yokohama National University)

Address from Ministry of Economy, Trade and Industry (METI)
Mr. Tsuyoshi Makino
(Director, Industrial Safety Div., Nuclear and Industrial Safety Agency)

Address from the All Japan Association for Security of Explosives
Mr. Teruto Nakamura
(President of the All Japan Association for Security of Explosives)

Address from Japan Explosives Industry Association
Mr. Koichiro Shimada
(President of Japan Explosives Industry Association)

10:10 ~ 11:00 **Plenary Lecture 1 - Chair: Prof. Atsumi Miyake**

PL1 (PL-Y01) **Energetics and dynamics of explosion at extreme conditions**
Prof. Jai-ick Yoh (Seoul National University, Korea)

11:10 ~ 12:10 **Oral Session 24-S-1 (Numerical Study)**
- Chair: Prof. Jai-ick Yoh, Co-chair: Dr. Ken Okada

24-S-1-1 (A29) **Numerical study on propagation of spherical detonation**
M. Asahara, N. Tsuboi, A. K. Hayashi, E. Yamada

24-S-1-2 (M59) **Numerical investigation on chamber pressure fluctuation in ignition stage of granular solid propellant**
H. Miura, A. Matsuo, Y. Nakamura

24-S-1-3 (D67) **Numerical study on physics of continuous spin detonation**
E. Dzieminska, N. Tsuboi, A. K. Hayashi, T. Fujiwara, P. Wolanski

14:30 ~ 15:20 **Plenary Lecture 2 - Chair: Prof. Kunihisa Katsuyama**

PL2 (PL-O02) **The Swebrec function: A new fragment size distribution and its use in blast engineering**
Prof. Finn Ouchterlony (Luleå University of Technology, Sweden)

15:30 ~ 16:50 **Oral Session 24-S-2 (Blasting)**
- Chair: Prof. Finn Ouchterlony, Co-chair: Dr. Hiroyuki Arai

24-S-2-1 (C18) **New aspect of fragmentation mechanism of rock under dynamic compression**
S. Cho, S. Kim, D. Cheon, J. Synn, H. Yang, K. Xia, B. Mohanty, K. Kaneko

24-S-2-2 (H22) **Underwater explosion of 0.1 g-lead azide in water-filled pipe**
T. Homae, K. Wakabayashi, T. Matsumura, Y. Nakayama

24-S-2-3 (M33) **Characteristics of ANFO explosive after blasting detonating cord**
K. Matsushita, K. Iwai, S. Kido, K. Nozoe, S. Tanaka, F. Sumiya, K. Katoh, S. Kubota, Y. Wada, Y. Ogata

24-S-2-4 (S41) **Microfractography of fracture surface of a carbon steel tube caused by contact detonation**
K. Sawada

17:00 ~ 17:40 **Special Session for Munitions Safety**
- Chair: Dr. Hitoshi Miyoshi

SS1 (T74) **Towards safer munitions with MSIAC**
Mr. Patrick Touzé (NATO, Belgium)

Event Hall (2F, Heian)

11:10 ~ 12:10 **Oral Session 24-H-1 (Chemical Analysis)**
- Chair: Prof. Hidetsugu Nakamura

24-H-1-1 (H37) **Reclamation of soils contaminated with heavy metals and depleted uranium from explosives' testing**
C. M. Hockensmith, S. T. Kuykendall

24-H-1-2 (H64) **Detection of explosives using a vacuum ultraviolet ionization time-of-flight mass spectrometry**
R. Hayashi, W. Kowhakul, A. Susa, M. Koshi

24-H-1-3 (M69) **Chemically modifying and vaporizing explosives with electromagnetic radiation at a resonant wavelength**
J. Monat, J. Gump

15:30 ~ 16:50 **Oral Session 24-H-2 (Gas Generants)**
- Chair: Prof. Mitsuru Arai

24-H-2-1 (A27) **Combustion aspects of some tetrazoles and copper oxide(II) mixtures**
M. Abe, T. Ogura, Y. Miyata, K. Okamoto, S. Date, M. Kohga, K. Hasue

24-H-2-2 (M28) **Burning characteristics of aminoguanidinium 5,5'-azobis-1H-tetrazolate / ammonium nitrate as gas generating mixtures**
Y. Miyata, M. Abe, S. Date, M. Kohga, K. Hasue

24-H-2-3 (Y35) **Thermal decomposition characteristic of 1,2,4-Triazole-3-One derivatives**
S. Yoshino, A. Miyake, T. Ogawa

24-H-2-4 (D55) **Burning mechanism of guanidium 1,5'-bi-1H-tetrazolate/copper(II) oxide**
S. Date, N. Itadzu, T. Sugiyama, Y. Miyata, M. Abe, K. Hasue

Event Hall (2F, Zuiun)

15:30 ~ 16:30 **Oral Session 24-Z-2 (Hazard & Safety)**
- Chair: Dr. Shuji Hatanaka

24-Z-2-1 (A46) **Relational information system for chemical accidents satabase (RISCAD) - Case studies on explosives accidents (II) -**
S. Abe, K. Katoh, K. O. Heisig, Y. Wada, Y. Ogata

24-Z-2-2 (L10) **Fire damage investigation using FDS in a basement building**
C.S. Lin, S.C. Wang, K.D. Chou

24-Z-2-3 (S01) **Accident data analysis and hazard assessment in fireworks manufacture**
M. Surianarayanan, S. P. Sivapirakasam, G. Swaminathan

Exhibition Hall (1F)

9:30 ~ 17:50 **Trade Show**

13:20 ~ 14:20 **Poster Session 1**

Event Hall (2F, Fukuju & Tohgen)

18:00 ~ 20:00 **Banquet**

Friday, April 25, 2008

Small Hall (5F)

9:00 ~ **Registration**

9:30 ~ 10:50 **Oral Session 25-S-1 (Propellant)**
- Chair: Prof. Merrill W. Beckstead, Co-chair: Dr. Mieko Kumasaki

25-S-1-1 (F14) **Correlation between the particle size of ferric oxide catalyst and the burning rate of AP-HTPB composite propellant**
K. Fujimura

25-S-1-2 (W52) **Combustion mechanism of tetra-ol glycidyl azide polymer**
Y. Wada, Y. Seike, M. Nishioka, N. Tsuboi., T. Shimada, K. Hasegawa, K. Kobayashi., K. Hori

25-S-1-3 (K53) **Combustion characteristics of HAN-based liquid monopropellant**
T. Katsumi, H. Kodama, H. Shibamoto, J. Nakatsuka, K. Hasegawa, K. Kobayashi, H. Ogawa, N. Tsuboi, S. Sawai, K. Hori

25-S-1-4 (L60) **Phenomenon of negative erosion and excitation of the cellular micro-structures in the energetic materials unsteady combustion**
A. Lukin

11:00 ~ 11:50 Plenary Lecture 3 - Chair: Prof. Masafumi Tanaka

PL3 (PL-B03) **Recent progress in modeling solid propellant combustion**
Prof. Merrill W. Beckstead (Brigham Young University, USA)

14:00 ~ 14:50 Plenary Lecture 4 - Chair: Prof. A. Koichi Hayashi

PL4 (PL-P04) **Limits and initiation of a gas detonation at various confinements**
DSc. Oleg G. Penyazkov (National Academy of Sciences of Belarus, Republic of Belarus)

15:00 ~ 16:00 Oral Session 25-S-2 (Gas Detonation)
- Chair: DSc. Oleg G. Penyazkov, Co-chair: Dr. Yuji Wada

25-S-2-1 (M24) **A detailed chemical reaction model of H_2/O_2 combustion in a supercritical state**
Y. Morii, N. Tsuboi, M. Koshi, H. Ogawa, A. K. Hayashi, T. Shimizu

25-S-2-2 (T63) **Effects of initial pressure on single spinning detonation in a square tube**
N. Tsuboi, M. Asahara, A. K. Hayashi

25-S-2-3 (S72) **Numerical analysis on the dynamics of two-headed detonations in square tube**
Y. Sugiyama, A. Matsuo

16:10 ~ 17:10 Oral Session 25-S-3 (Energetic Materials 1)
- Chair: Dr. Takehiro Matsunaga

25-S-3-1 (P06) **Density effects on the one-dimensional characterization of hexanitrostilbene**
A. Parker, W. G. Proud, D. J. Chapman

25-S-3-2 (C58) **Properties of lead-free primers – Development of a testing facility at the Cavendish laboratory**
A. Collins, W. Proud

25-S-3-3 (N12) **Cast PBX related technologies for IM shells and warheads**
B. Nouguez, P. Vignaud

17:20 ~ 18:20 **Oral Session 25-S-4 (Energetic Materials 2)**
- Chair: Dr. Hiroshi Koseki

25-S-4-1 (K23) **Formation of ammonium nitrate particles by a melt spray**
J. Kim, J. Kim, J. H. Kim, K. Koo

25-S-4-2 (C68) **Preparation and characterization of copper, nickel, and ammonium azides**
S. M. Caulder, F. Forohar

25-S-4-3 (A48) **Transient reactive conduction modeling of cook-off of munitions**
E. Aydemir, A. Ulas, N. Serin

18:20 ~ 18:30 **Closing Address**
Address from the Chairman of the Executive Committee
Dr. Shuzo Fujiwara
(National Institute of Advanced Industrial Science and Technology, Japan)

Event Hall (2F, Heian)

9:30 ~ 10:50 **Oral Session 25-H-1 (Shock Compression)**
- Chair: Dr. Masatake Yoshida

25-H-1-1 (C17) **Application of explosive compaction technology to fabrication of medical porous-surfaced implants**
A. Chiba, T. Yamamuro, Y. Morizono

25-H-1-2 (W31) **Study on the promotion of thawing Frozen soil by shock Loading**
T. Watanabe, H. Maehara, S. Itoh

25-H-1-3 (I40) **Development of impact test facility for automotive shock absorber using powder gun**
Y. Imazu, Y. Akahoshi,T. Koura, S. Haruyama

25-H-1-4 (M93) **Characteristics of transmitted Shock in Explosive Matrix containing Voids**
B. Mohanty

15:00 ~ 16:40 **Oral Session 25-H-2 (Thermal Analysis)**
- Chair: Dr. Mitsuaki Iida

25-H-2-1 (L26) **Study on the potential hazard for oxidation of tetrahydrofuran**
X. Li, H. Koseki

25-H-2-2 (K30) **Kinetic analysis of thermal reaction of hydrazine in nitric acid solution**
A. Kimura, A. Miyake, T. Ogawa

25-H-2-3 (I43) **Characteristics of heat flow of magnesium particles measured with high sensitivity calorimeter**
Y. Iwata, H. Koseki

25-H-2-4 (W44) **Combustion mechanism of ammonium nitrate**
Y. Wada, K. Hori, M. Arai

25-H-2-5 (R08) **Simulation of the cook-off, SADT and time to maximum rate for single-base propellants using DSC data**
B. Roduit, P. Folly, A. Sarbach, B. Berger, J. Mathieu, M. Ramin, B. Vogelsanger

16:50 ~ 17:30 Oral Session 25-H-3 (Sensitivity)
- Chair: Prof. Shingo Date

25-H-3-1 (Y45) **Development of a small-scaled drop hammer test for detoxifying absorbents**
K. Yuasa, M. Kumasaki, M. Arai

25-H-3-2 (S02) **Experimental investigation of mechanical sensitivity and noise level for different pyrotechnic**
S. P. Sivapirakasam, S. Suresh, R. Anand, M. Surianarayanan

Exhibition Hall (1F)

9:30 ~ 15:00 Trade Show

12:50 ~ 13:50 Poster Session 2

Poster Session 1 & 2

24-PP-Odd : Poster Session 1 (13:20 ~ 14:20, April 24)
25-PP-Even : Poster Session 2 (12:50 ~ 13:50, April 25)

24-PP-01 (S03) **Thermal characterization of pyrotechnic flash compositions**
S. P. Sivapirakasam, M. Surianarayanan, F. Chandrasekaran

25-PP-02 (K04) **Dynamics of thermoelastic stresses at initiation of the PETN by laser pulse**
A. Khaneft, E. Duginov

24-PP-03 (H05) **Experimental and numerical study on dynamic buckling of 304 stainless steel cylinders impacted by explosively driven flyer plates**
T. Hiroe, K. Fujiwara, H. Hata, K. Sashima

25-PP-04 (B07) **Structure of elastic presage of earthquake**
I. L. Boltenhagen

24-PP-05 (W11) **Effect of wall material and ventilation on flashover phenomenon in a compartment Fire**
S. C. Wang, C. S. Lin, C. C. Yu

25-PP-06 (F15) **The results of mechanical test of AP-HTPB composite propellant with nano ferric oxide used as combustion catalyst**
K. Fujimura

24-PP-07 (F16) **New lift powder for fireworks**
H. Fukui, T. Nagaishi, S. Sonoda, S. Hatanaka, T. Mizuno

25-PP-08 (G19) **Effect of strength of the material of the flyer plate on the collision parameters in explosive welding**
S. H. Ghaderi, K. Hokamoto, M. Fujita

24-PP-09 (R20) **Jet profile estimations over different stand offs for shaped charges and JPCs, a computational approach**
S. A. Rofi, F. Huang

25-PP-10 (P21) **Characterization of titanium/stainless steel welded using underwater shock wave technique**
M. Palavesamuthu, A. Mori, K. Hokamoto

24-PP-11 (W32) **Study on the food processing by shock loading**
T. Watanabe, H. Maehara, S. Itoh

25-PP-12 (W34) **A method to study bubble pulse in water tank**
B. Wang, D. Tan, Y. Wang

24-PP-13 (M36) **Effect of aging treatment on explosive welding process of beryllium copper to steels**
Y. Morizono, Y. Hirokawa, M. Matsuda, M. Nishida

25-PP-14 (M39) **Aging study on heat generation and thermal decomposition characteristics of smokeless powders by microcalorimetry and DSC**
J. Maruyama

24-PP-15 (A47) **Experimental investigation of cook-off of munitions**
E. Aydemir, A. Ulas, N. Serin

25-PP-16 (I49) **The sand gap test of an emulsion explosive with air-gap**
K. Ishikawa, T. Homae, E. Kuroda, S. Kubota, K. Wakabayashi, T. Matsumura, Y. Nakayama

24-PP-17 (Y50) **TATB response on microwave radiation**
W. Yu, G. Zeng, F. Nie, H. Huang, Y. Zhang, L. Haibo, J. Li

25-PP-18 (Z51) **Effects of submicron TATB microstructures on its thermal performance**
G. Zeng, F. Nie, W. Yu, B. Chen, Z. Qiao, H. Huang, L. Zhao, W. Pang

24-PP-19 (M54) **Sympathetic detonation experiments of plastic high explosive by using mortar, light weight concrete and sand as gap materials**
T. Matsumura, K. Ishikawa, K. Wakabayashi, T. Homae, Y. Nakayama

25-PP-20 (N56) **Blast wave of smokeless powder in aluminum container**
Y. Nakayama, K. Okada, K. Ishikawa, K. Wakabayashi, T. Matsumura

24-PP-21 (K57) **Artificial neural networks models of energetic materials burning**
M. Kohga, V. Abrukov, D. Makarov, K. Okamoto

25-PP-22 (K62) **Development of NQR technique for transportation security**
A. Konnai, T. Asaji, H. Nohmi, N. Odano

24-PP-23 (I66) **A comparative study on impact sensitivity of explosive materials at low temperature conditions**
M. Izumo, S. Sivaprakasam, M. Arai, K. Ishikawa, Y. Nakayama

25-PP-24 (S70) **Underwater explosion test of precompressed emulsion explosives**
F. Sumiya

24-PP-25 (S71) **Aluminium hydride and modern propellants**
R. Shafiee, M. Kamali, M. Moradi

25-PP-26 (O73) **Measurement of the vibration on the blasting demolition of tall chimney**
Y. Ogata, S. Kubota, K. Katoh, Y. Wada, M. Kato

24-PP-27 (N75) **Large-scale explosion experiment of a model underground magazine**
Y. Nakayama, D. Kim, K. Ishikawa, K. Wakabayashi, T. Matsumura, M. Iida

25-PP-28 (K77) **An analysis of the explosion accidents during the storage of nitrocellulose which occurred in Japan**
K. Katoh, S. Itoh, S. Abe, K. O. Heisig, S. Kubota, Y. Ogata, Y. Wada

24-PP-29 (S78) **Numerical simulation of the projectile impact behavior on aluminum targets divided by water**
T. Saburi, S. Kubota, H. Hamashima, Y. Ogata, Y. Wada, T. Nakanishi

25-PP-30 (K79) **Atomization of high energetic liquid film by pulse laser reflection at inclined surface of high refractive index material**
T. Kajiwara, T. Nishiyama, K. Nagayama, S. Kubota, M. Nakahara

24-PP-31 (U80) **Preparation of thin film containing high energetic materials**
Y. Utsunomiya, A. Toyoda, T. Kajiwara, T. Nishiyama, K. Nagayama, S. Kubota, Y. Yamada, Y. Mitarai

25-PP-32 (K81) **Simulation of SDT by simple equations of state for high explosive**
S. Kubota, K. Nagayama, T. Saburi, H. Hamashima, Y. Ogata

24-PP-33 (K82) **Observation of sympathetic detonation for an emulsion explosive**
S. Kubota, T. Saburi, K. Katoh, H. Hamashima, K. Nagayama, K. Ishikawa, Y. Nakayama, Y. Wada, Y. Ogata

25-PP-34 (M83) **Influence of physical properties of carbon on the detonation behaviour of ammonium nitrate and carbon mixtures**
A. Miyake, H. Echigoya, K. Katoh, S. Kubota, Y. Wada, Y. Ogata, T. Ogawa

24-PP-35 (I84) **Influence of physical properties of carbon on the thermal decomposition behaviour of ammonium nitrate and carbon mixtures**
Y. Izato, A. Miyake, H. Echigoya, T. Ogawa

25-PP-36 (W85) **Fragment velocity measurement of steel container by visible light and flash X-ray photography**
K. Wakabayashi, T. Homae, K. Ishikawa, E. Kuroda, T. Matsumura, Y. Nakayama

24-PP-37 (W86) **Vibrational frequency change of nitromethane subjected to pressure pulse loading**
K. Wakabayashi, E. Yamada, M. Koshi, T. Matsumura, Y. Nakayama

25-PP-38 (S88) **Thermal decomposition properties of guanidine nitrate and azodicarbonamide compositions**
Y. Shimada, A. Miyake, T. Ogawa, K. Takahara

24-PP-39 (S89) **Study on the hazard of mixtures containing highly-concentrated hydrogen peroxide and combustible materials**
D. Suto, J. Nakamura

25-PP-40 (S90) **Explosion strength of hydrazine nitrate/hydrazine hydrate mixture evaluated by underwater explosion test**
E. Sato, K. Ishikawa, T. Matsumura, Y. Nakayama, A. Miyake, T. Ogawa

24-PP-41 (H91) **Fragment behavior driven by explosive**
H. Hamashima, S. Kubota, T. Saburi, K. Kato, Y. Wada, Y. Ogata

25-PP-42 (H92) **Analysis of 10kg-class blastproof steel container under internal blast loading**
H. Hamashima, S. Kubota, T. Saburi, K. Kato, Y. Wada, Y. Ogata

24-PP-43 (K94) **Small-scale explosion experiment of a model underground magazine**
D. Kim, Y. Nakayama

25-PP-44 (D95) **Ignition of an HMX-based explosive by a low-velocity impact**
F. Delmaire-Sizes, R. Belmas, D. Picart, C. Gruau

24-PP-45 (K96) **Thermal decomposition characteristics of cyclic ethers**
H. Kitoh, A, Kimura, A, Miyake, T. Ogawa

25-PP-46 (M97) **Spontaneous ignition behaviour of wood chip**
S. Miki, A. Miyake, T. Ogawa

24-PP-47 (M98) **Production of pressure vessel by explosive forming**
H. Maehara , H. Iyama, S. Itoh

25-PP-48 (M99) **Visualization of explosion phenomena using a high-speed video camera with an uncoupled objective lens by fiber optic cables**

H. Miyoshi, H. Hata, H. Kusano, N. Tokuoka