International Symposium

"Recent Progress on Mathematical Modeling in Ironmaking 2008"

For the Innovation of Ironmaking

by the Partnership on Mathematical Modeling

Otemachi Sankei Plaza, Tokyo, Japan

16-17 October 2008

General Information ***(click here)***

Organizing Committee

Chairmen

・Tatsuro Ariyama, Tohoku University

・ Takanobu Inada, Sumitomo Metal Industries, Ltd.

Committee members

・Hiroshi Nogami, Ichinoseki National College of Technology

・Koki Nishioka, Kyusyu University

・Shigeru Ueda, Tohoku University

・Shinroku Matsuzaki, Nippon Steel Corporation

・Taihei Nouchi, JFE Steel Corporation

・Kaoru Nakano, Sumitomo Metal Industries, Ltd.

・Kazuya Miyagawa, Kobe Steel Ltd.

Adviser

・ Jun-ichiro Yagi, Tohoku University

Cooperating Organizations

・The Society of Chemical Engineers, Japan

・The Japan Society of Mechanical Engineers

Organized by Iron and Steel Institute of Japan

General Information

Date and time: **Oct.16 13:00 – Oct.17 16:30, 2008**
(Banquet: Oct.16 17:30 – 19:30)

Venue: **Otemachi Sankei Plaza, Tokyo, Japan** Map
(http://www.s-plaza.com/map/map_e.html)
Room 301 and 302 (3rd floor) Floor Map
(http://www.s-plaza.com/rooms/pdf/plaza3f.pdf)

Registration fee: **¥20,000 (student ¥ 10,000)**
Please pay by cash on the day

Pre-Registration: **Click here** **by Oct.3, 2008**

Presentation Titles and Schedule (click here)

General Inquiry

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International Symposium

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		Start	End	Chair Persons	Authors	Affiliation	Title
Oct.16, 2008							
		13:20	13:30		Tatsuro Ariyama	Tohoku University	Opening Remarks
Keynote		13:30	14:00	Tatsuro Ariyama	Jun-ichiro Yagi	Tohoku University	Past Progress and Future Perspective of Mathematical Modeling on Ironmaking Processes
Session 1 Application of Mathematical Modeling to Ironmaking - 1	1	14:00	14:20	Takanobu Inada	P.R. Austin, S.J. Chew, D. Maldonado, J.G. Mathieson, D.J. Pinson, B.D. Wright, P. Zulli	BlueScope Steel	Recent Applications of Mathematical Modeling to Ironmaking at BlueScope Steel
	2	14:20	14:40	Takanobu Inada	Jin-Kyung Chung, Sung-Man Kim	POSCO	Utilization of 2-D Numerical Model in BF Operation
	3	14:40	15:00	Takanobu Inada	Sami-Alex Zaimi, Frank Huang, Thiago Rabelo Nunes Campos, Dave Pomeroy, Mouna Abbana-Bennani, Gérard Danloy, Ruben Perez Chust, Benoît Lecacheux	AlcelorMittal	Worldwide Daily Use of Blast Furnace Models in ArcelorMittal Group – from Theory to Validation
		15:00	15:20	Coffee break			
	4	15:20	15:40	Shinroku Matsuzaki	Tsunehisa Nishimura, Shinroku Matsuzaki, Akihiko Shinotake, Kazuya Kunitomo, Masaaki Naito	Nippon Steel Corporation	Development of Mathematical Model of Blast Furnace in Nippon Steel Corporation
	5	15:40	16:00	Shinroku Matsuzaki	Tadashi Yaso, Makoto Hirai, Yoshihisa Otsuka, Muneyoshi Sawayama, Toshifumi Tagawa, Kentaro Nozawa, Shinji Kitano	Kobe steel	Application of Mathematical Models to the Initial Blow-in Operation of Kakogawa No.2 Blast Furnace
Session 2 Application of Mathematical Modeling to Ironmaking - 2	6	16:00	16:20	Shinroku Matsuzaki	ZHANG Jianliang, CHEN Shanshan, GUO Hongwei, ZUO Haibin, YANG Tianjun	University of Science and Technology Beijing	Numerical Simulation of the Integrated Hot Stove
	7	16:20	16:40	Shinroku Matsuzaki	Yoshihisa Kimura, Kouji Takatani, Nobuhiro Otsu	Sumitomo Metal	Three-dimensional Mathematical Modeling and Design of Hot Stove
		17:30	19:30	Banquet			
Oct.17, 2008							
Session 2 Application of Mathematical Modeling to Ironmaking - 2	8	9:00	9:20	Kazuya Miyagawa	Neelam Kaur, G.S. Gupta	Indian Institute of Science	Study of Fluid Dynamics in a Packed Bed in the Presence of Fines and Liquid Flow
	9	9:20	9:40	Kazuya Miyagawa	GUO Hongwei, ZHANG Jianliang, LIU Zhengjian, YANG Tianjun	University of Science and Technology Beijing	Online Charging Simulation System for Bell-less BF
	10	9:40	10:00	Kazuya Miyagawa	Koki Nishioka, Ko-ichiro Ohno, Takayuki Maeda, Masakata Shimizu	Kyushu University	Mathematical Modeling of Iron and Slag Dripping Behavior in Blast Furnace
Session 3 Visualization and Process Analysis	11	10:00	10:20	Kazuya Miyagawa	LIU Zhengjian, ZUO Haibin, ZHANG Jianliang, ZHANG Xu, YANG Tianjun	University of Science and Technology Beijing	New Recognition Algorithm for Sintering Machine Tail Characteristic Section Image
		10:20	10:40	Coffee break			
	12	10:40	11:00	Kaoru Nakano	Shinroku Matsuzaki, Masahiro Ito, Masaaki Naito	Nippon Steel Corporation	Development of Visualization Technology of Blast Furnace Using Temperature and Pressure Sensor Data
	13	11:00	11:20	Kaoru Nakano	Guo Hongwei, Zuo Haibin, Liu Zhengjian, Zhang Jianliang, Yang Tianjun	University of Science and Technology Beijing	New Blast Furnace Expert System Based on Data Mining
	14	11:20	11:40	Kaoru Nakano	Yoshiaki Kashiwaya, Kenichi Osasa, Koichi Fukuda, Kenji Kato, Masaaki Naito	Hokkaido University	Development of Cellular Automaton Method for Simulating the Coke Gasification in a Pore
				Lunch			
	15	13:00	13:20	Taihei Nouchi	Henrik Saxén, Frank Pettersson, Jarmo Söderman, Mikko Helle, Hannu Helle	Åbo Alademi University	Optimization of Biomass Used as Auxiliary Reductant in the Blast Furnace
Session 4 Application of Discrete Element Method	16	13:20	13:40	Taihei Nouchi	Junya Kano, Eiki Kasai, Fumio Saito, Takazo Kawaguchi	Tohoku University	Numerical Simulation for Granulation Kinetics of Iron Ores
	17	13:40	14:00	Taihei Nouchi	Masaru Ida, Kiyoshi Ogata, Takeshi Sato, Mitsuru Kiguchi, Masao Fujita	JFE Steel	Development of Burden Distribution Control at New Kurashiki No. 4 Blast Furnace Based on DEM
	18	14:00	14:20	Taihei Nouchi	Hideki Kawai, Hiroshi Takahashi	Muroran Institute of Technology	Computer Simulation of the Effect of Center Charging Solid Density on the Solid Flow and Deadman Behavior in Blast Furnace
		14:20	14:40	Coffee break			
	19	14:40	15:00	Koki Nishioka	Kaoru Nakano, Hirosi Nogami	Sumitomo Metal	Investigation on Raceway Phenomena by Use of DEM
	20	15:00	15:20	Koki Nishioka	A.T. Adema, Y. Yang, R. Boom	Delft University	Prediction of the Cohesive Zone Properties in the Ironmaking Blast Furnace
	21	15:20	15:40	Koki Nishioka	Hiroshi Mio, Ko Yamamoto, Atsuko Shimosaka, Yoshiyuki Shirakawa, Jusuke Hidaka	Doshisha University	Analysis of Granular Flow in Blast Furnace by Discrete Element Method
	22	15:40	16:00	Koki Nishioka	Taihei Nouchi, Michitaka Sato, Kanji Takeda	JFE Steel	Studies of Ironmaking by Discrete Element Method and Examples of Application to Analysis of Phenomena in Blast Furnace
	23	16:00	16:20	Koki Nishioka	S. Ueda, H. Nogami, J. Kano, T. Ariyama	Tohoku University Ichinoseki National College of Technology	Development of Blast Furnace Operation Simulator Including Discrete Element Concept for Solid Motion
		16:20	16:30		Takanobu Inada	Sumitomo Metal	Closing Address