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3D Profilometer
Profilometer Plus
White light Interferometer
Optical Profiler+
AFM /Contact Profiler+
Raman+
Stress+
Confocal Microscope +..
A multi functional profiler that can measure surface roughness, chemical, magnetic, stress, film thickness etc. properties on same spot without taking the sample out of the tool.


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for Friction and Wear Studies
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Pin-on-Disk Tribometer
High Temperature Tribometer
Vacuum Tribometer
Those tribometers are conform to international standards
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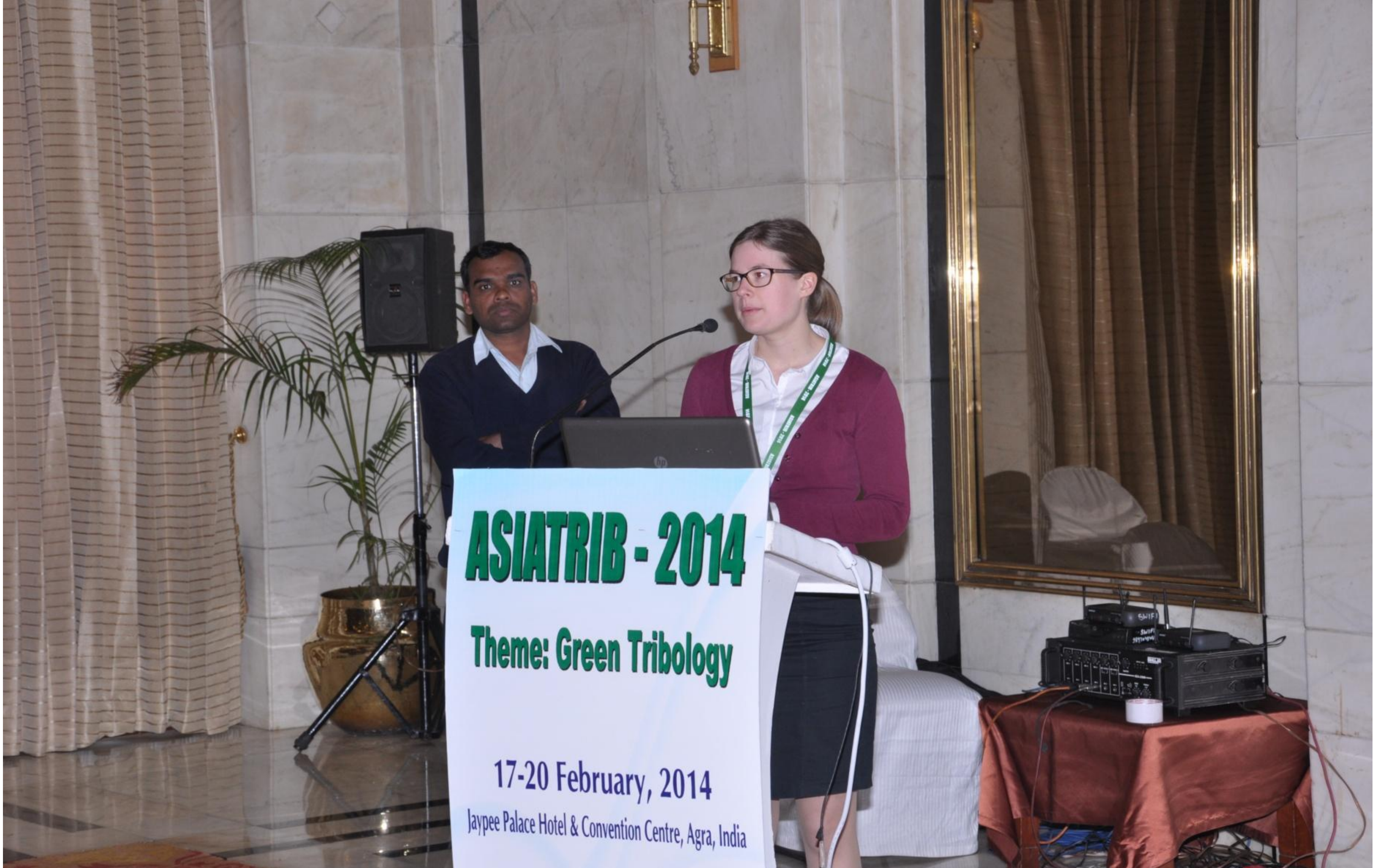
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TSI914624
Multi layered Graphene dispersion in hydrocarbon oil: heat transfer and tribological studies
TRIBOLOGICAL STUDIES ON Al6061-SiC/Gr HYBRID COMPOSITES


TSI914717
STUDIES ON FRICTION AND FILM FORMATION PROPERTIES OF GREASES
ITRIB
Complex of Tribological Researches «TRIB-System»


TSI914684
Ferrography provides an early warning of Machinery Components Abnormal Wear Modes
Author
K.N.V.Subrahmanyam
Technical Head-Lubricant Analysis
Petrolabs India Pvt.Ltd
TSI914521
Ultrasound Assisted Lubrication
Dinesh Pratap Singh,
For UE Systems, Inc.
Time based vs Condition Based Lubrication
1. Test
2. Identify
3. Diagnosis
Seal Failures
TSI914557


ON-LINE MODEL
S. Rath, A.K. Marik, P.P. Sengupta, S.K. Thakur, P. Pathak and M.B.S. Namboothiripad*
R & D Centre for Iron & Steel (RDCIS), SAIL, Ranchi, India. *Rourkela Steel Plant, SAIL, Rourkela, India
Email: srath@sail-rdcis.com
Abstract
Coefficient of friction at the roll-strip interface is an important parameter required for prediction of roll force, torque and power for model based operation (level-2 automation) of hot strip mills. As there is no direct method of its measurement, it is being estimated from other measurable parameters like flow stress of material, strip temperature, roll gap, mill speed, and roll force using a mathematical-Artificial Neural Network (ANN) hybrid model developed for the purpose. This paper discusses the methodology of model development and its validation by comparing predicted roll force and measured roll force.
Importance of the Estimation of Coefficient of Friction
Conceptualization of Hybrid Model:
Model Development Philosophy
White Box Model (Mathematical model)
Black Box Models (Pattern in Data)
Grey Box Models (Hybrid)
Data Communication System for On-line Model
Mathematical Model for Roll Force
On-line Level-2 Model Screenshot
Validation of Model


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TSI914631
TSI914632
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L&T Power
of Milling Plant in Thermal Power Stations
Rishikesh Kumar & Dr. Shrikant Bhave
ineering & Technology Group, R&D Dept., Vadodara, India
Reference No. TSI914631
Incipient Fault Detection of Rolling Element Bearing Running at Slow speed
Chiranjan Mandal, R.R.Prasad, P.P.Sengupta
Research & Development Centre for Iron & Steel, SAIL, Ranchi, India
Email: chiranjan@sail-rdcis.com
BACKGROUND:
RESULT & DISCUSSION:
INTRODUCTION:
CONCLUSION:


TSI914558
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TSI914688
ESTIMATION OF COEFFICIENT OF FRICTION AT ROLL-STRIP INTERFACE DURING HOT STRIP ROLLING USING HYBRID ON-LINE MODEL
ASIATRIB - 2014
S. Rath, A.K. Marik, P.P. Sengupta, S.K. Thakur, P. Pathak and M.B.S. Namboothiripad*
R & D Centre for Iron & Steel (RDCIS), SAIL, Ranchi, India. *Rourkela Steel Plant, SAIL, Rourkela, India
Email: srath@sail-rdcis.com
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Mathematical Model for Roll Force
On-line Level-2 Model Screenshot
Validation of Model
PREDICTION OF HARDENABILITY OF ALLOY STEEL DURING QUENC
WITH DIFFERENT OILS THROUGH A CORRELATION ANALYSIS
M. K. Dubey, R. Mahapatra, N.Sivasurian, J.N.Pandey, A. K. Harinara
D. Saxena, G. K. Acharya, S. S. V. Ramakumar, B. Basu and R. K. Malh
Indian Oil Corporation Limited, R&D Centre, Sector 13, Faridabad, Haryana, India
Email:mahapatrar@indianoil.in
Problem Statement
Objective of the Work
Approaches adopted
Physico chemical properties of quenching oil samples A,B and C
Mechanism of Quenching
Experimental Work
Comparative Quenching Test Results
Conclusions


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rication, Characterisation and Wear Performance
luation of Polymer Composites with
st Furnace Slag Particles as Filler
Prasanta Kumar Padhi, Dr.Alok Satapathy
Taguchi Experimental Model:
Influence of the solid particles on Wear and friction m
of the thermal barrier coating
Abstract


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of Nitrocarburized 34CrMo4 Steel
THEORETICAL COMPUTATION OF THE OPERATIONAL CHARACTERISTICS IN A LARGE THRUST BEARING
D.V. Srikanth, K.K. Chaturvedi, A. Chenna Keshava Reddy
INTRODUCTION
PAD DISCRETIZATION & FILM SHAPE
BEARING GEOMETRY
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Ultrasonic applications in Tribology
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Ultrasonic Theory
Tribological characterization of MWCNT-reinforced Si3N4 composites
Zs. Koncsik, M. B. Maros, L. Kuzsella
Abstract
Investigated samples
Testing equipment
Test parameters
Test results

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Lubricant Film Thickness Measurement: Reciprocating Pin-o
Contact Pressure & Area Measurement: Rolling Wheel-o
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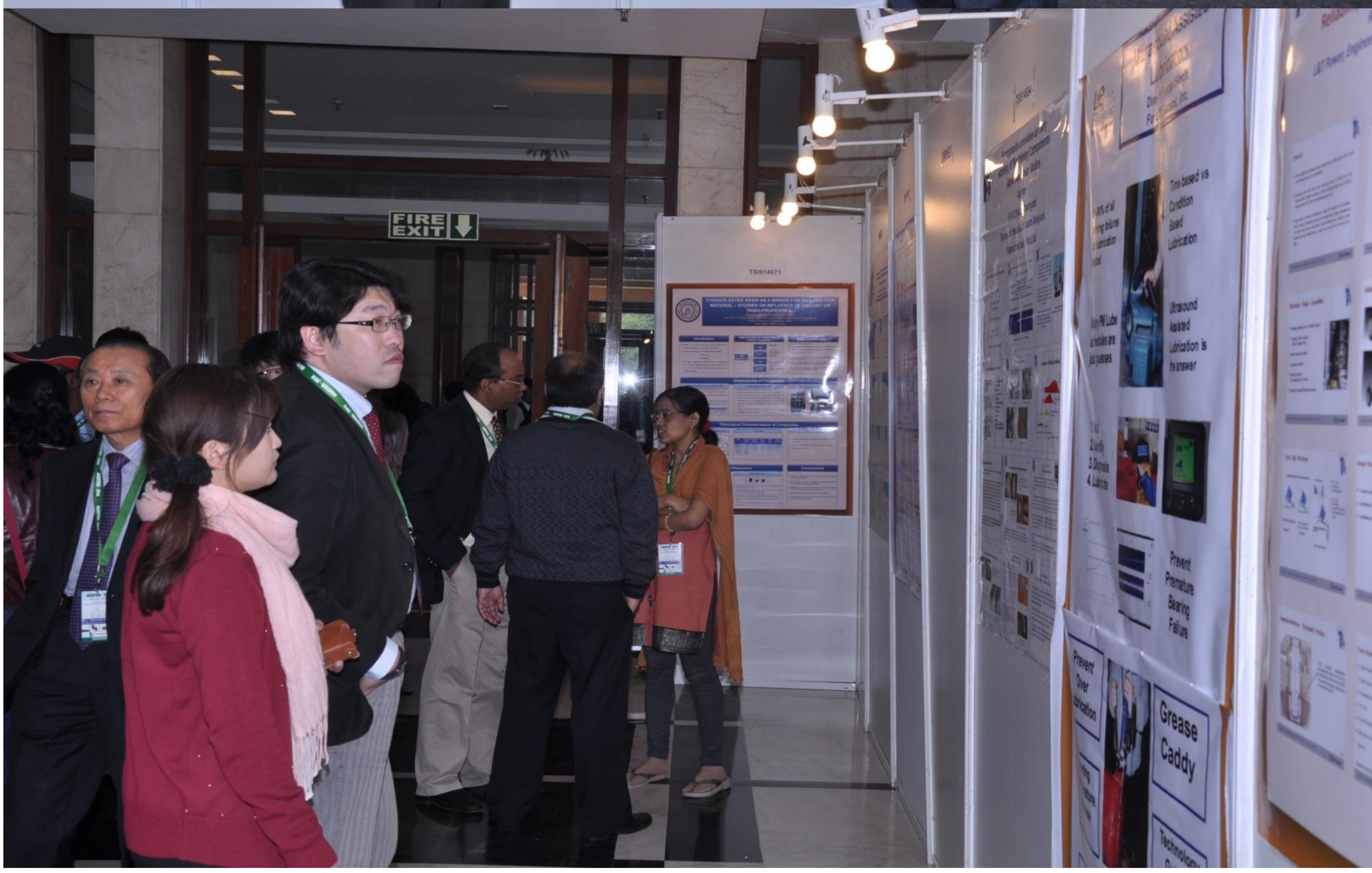
Test results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TECHNICAL PROGRAM
Venue: Diwan-e-Khas III
Technical Session - V
(12.30 pm to 2.15 pm)
V-C : Tribo-Testing-II
Jens Hardell, Sergej Mozgovoy, Anshuman Dube, Mats Oldenburg, Braham Prakash
A Novel High Temperature Tribometer for Hot Sheet Metal Forming Applications
A. Hausberger, I. Godor, F. Grün, Th. Schwarz
Efficient material development for elastomeric sealing materials via the correlation between tribological model tests and component testing
Dr A. K. Jain, Vishal Bajpai, Roopak Sharma, Anuj Bhandari
Development of New Transmission oil for Heavy Earthmoving equipment
P.Mishra, Mandakini Behari
Tribological Behavior of Multi-Walled Carbon Nanotube Reinforced Polymethyl Methacrylate Composite
Tea Break
(2.15 pm to 2.30 pm)
Technical Session -VI
(2.30 pm to 4.15 pm)
VI-C : Tribo-Testing-III
G. D. Thakre, Savita Kaul, P. K. Arya, B. M. Shukla
Experimental investigation of load bearing capabilities of metal working fluids
C.S.Ramesh, R.Noor Ahmed, Wajid Hussain, Wasim Ahmed
Tribological Studies on hot forged Al 6061-10 wt% TiB2 composite
Frederik Wolf
Effects of Rheology in Tribology
Arun Sikder, Steve Shaffer
High productivity Green Instrumentation for Designing Tribotests


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Outline
Background of the study
Experimental set-up
Materials and samples
Contact conditions
Experimental results
Friction coefficient
Material transfer
Wear of the steel pin
Contact mechanisms
Conclusions
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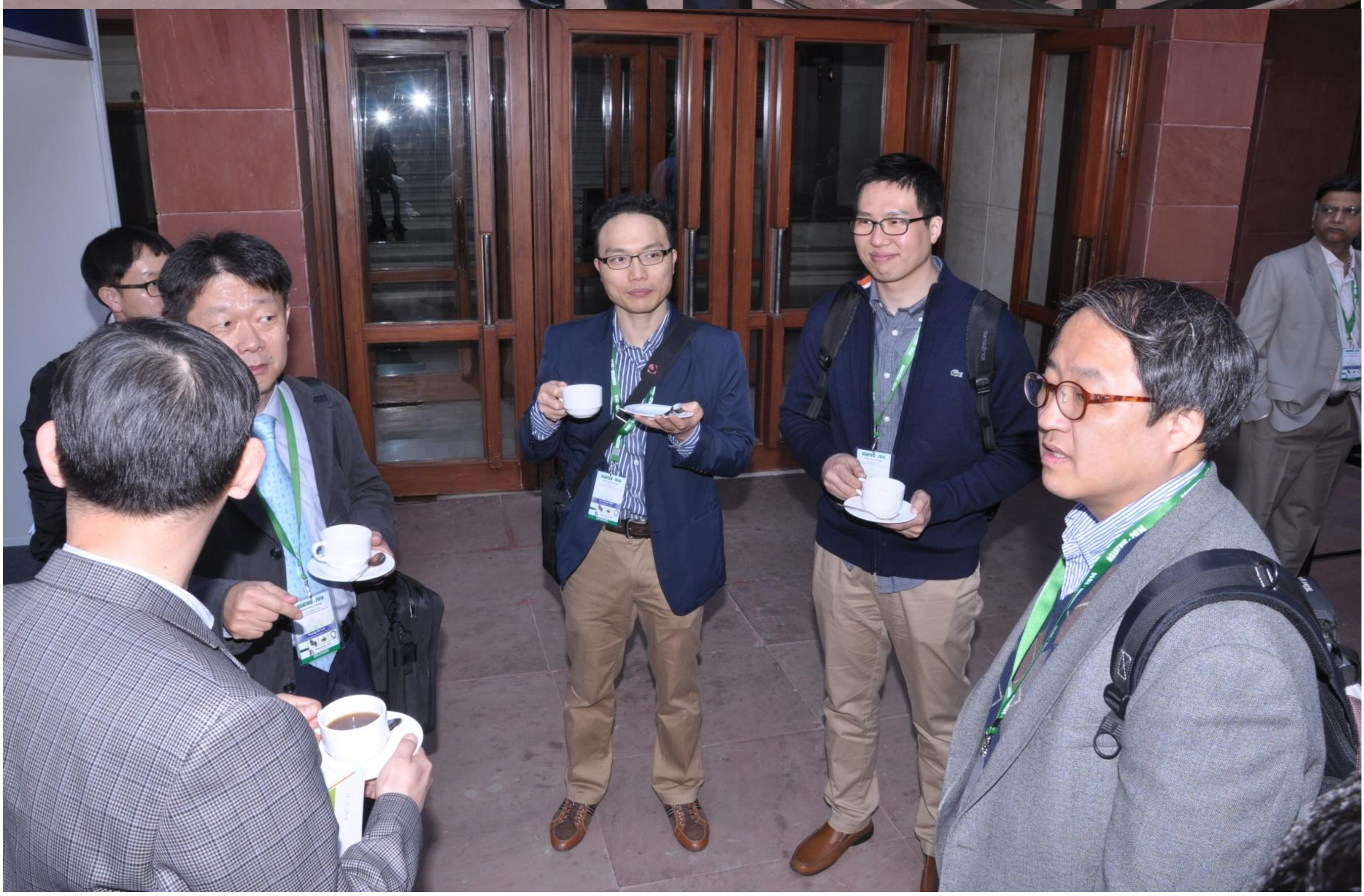


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