Program for the 3rd NIMS Conference

Tsukuba International Congress Center (Epochal Tsukuba)

March 3 (Thu.)

Opening Remark (Chair: S. Kishimoto, NIMS)

9:00- 9:10 **T. Kishi (President of NIMS)**

Plenary Presentation (Chair: K. Yagi, NIMS)

9:10- 9:50 **O-01 Predicting Tragedies, Accidents, Errors and Failures Using a Learning Environment**
R.B. Duffey (Atomic Energy of Canada,)

Session 1: Safety Measure in Industry (Chair: T. Shinohara, NIMS)

9:50-10:20 **O-02 Development of RBI Guideline for non-nuclear region in Japan**
S. Sakai (Univ. of Tokyo, Japan)

10:20-10:50 **O-03 Materials Reseach and Maintenance Technology for Electric Power Facilities**
S. Suzuki (Tokyo Electric Power Company, Japan)

10:50-11:10 *Coffee Break*

11:10-11:40 **O-04 Maintenance Technologies of Long Span Bridges on Honshu-Shikoku Crossing**
K. Mori (Honshu-Shikoku Bridge Authority, Japan)

11:40-12:10 **O-05 To Prevent "Material Failures & Accidents" in Chemical Process Industries, Japan**
K. Yamamoto (JGC Corp., Japan)

12:10-13:10 *Lunch Break*

Session 2: Design of Structures and Devices for Humans Safety (Chair: T. Mukai, NIMS)

13:10-13:50 **O-06 Advanced New Wrought Magnesium Alloys for Structual Applications in Vehicles**
K. U. Kainer (GKSS Research Center, Germany)

13:50-14:30 **O-07 Using Magnesium Components to Improve Vehicle Safety**
G. S. Cole (President of Light Weight Strategies LLC, USA)

14:30-15:10 **O-08 Composite Materials, Damping, Monitoring: a comprehensive approach to the safety of civil engineering structures at Empa**
A. Bergamini (Swiss Federal Laboratory for Materials Testing and Research, Switzerland)

15:10-15:25 *Coffee Break*

15:25-15:55 **O-09 Corrosion in Steel Bridges and its Protection for Long Life and Life**
Y. Fujino (Univ. of Tokyo, Japan)

15:55-16:25 **O-10 Weight Reduction of Body in White in the Latest Car**
E. Nakanishi (Nissan Motor Co. Ltd., Japan)

16:25-18:00 **Poster Session and Coffee Break** *(Multi-Purpose Hall, Epochal Tsukuba)*

18:30-20:30 **Banquet** *(Sansui-Tei)*

March 4 (Fri.)

Session 3: Light Weight Composite Materials (Chair: Y. Kagawa, Univ. of Tokyo)

9:00- 9:40 **O-11 Hybrid Fiber Metal Laminate: a durable material for aircraft structures**
Jenn-Ming Yang (UCLA, USA)

9:40-10:20 **O-12 Role of Residual Stresses on Mechanical Behavior of Ceramic Composites**
J. P. Singh (Argonne National Laboratory, USA)

10:20-10:50 **O-13 Manufacturing, Processing and Mechanical Properties of Metal Matrix Composites**
C. Fujiwara (Mitsubishi Heavy Industries, Japan)

10:50-11:10 *Coffee Break*

Session 4: Self-repairing Materials (Chair: N. Shinya, NIMS)

11:10-11:40 **O-14 Nature-guided Self-repairing Materials**
K. Takeda (Nagoya Univ., Japan)

11:40-13:20 *Lunch Break*

Session 5: Shock Absorbing Materials (Chair: H. Nakajima, Osaka Univ.)

13:20-14:00 **O-15 Modeling and Testing of Energy Absorbing Lightweight Materials and Structures for Automotive Applications**
M. Maier (Univ. of Kaiserslautern, Germany)

14:00-14:30 **O-16 Modification of Solid Alloy and Cellular Structures in Closed-Cell Aluminum for the Enhancement of Energy Absorption**
T. Miyoshi (Shinko Wire Company Ltd., Japan)

14:30-15:00 **O-17 Designing of Shock Attenuation in Footwear Sole**
T. Nishiwaki (ACICS Corp., Japan)

15:00~15:20 *Coffee Break*

Session 6: High Damping Materials and Systems (Chair: S. Takeuchi, Tokyo Univ. of Science)

15:20-16:00 **O-18 Active and Passive Damping of Noise and Vibrations Through Shape Memory Alloys: mechanisms and applications**
J. V. Humbeeck (Katholieke University of Leuven, Belgium)

16:00-16:30 **O-19 Dynamic Characteristics of Damping Materials and Application to Vibration and Noise Reduction**
Y. Inoue (Kochi Univ. of Technology, Japan)

16:30~16:45 *Coffee Break*

16:45-17:15 **O-20 The Development of Response Control and Seismic Isolation Technologies in Takenaka Corporation**
M. Higashino (Takenaka Corp., Japan)

17:15-17:45 **O-21 Research and Development Trends for Building Passive Control Using Various Damping Materials**
K. Kasai (Tokyo Institute of Technology, Japan)

Closing Remark T. Noda (NIMS)