

OS6: Free Flight Experiment with MSBS and Ballistic Range

November 19, 2024

EX-4-A

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| OS6-1
9:00-9:30 | Comprehensive Static and Dynamic Modeling of a Magnetic Suspension and Balance System <i>(Invited)</i>
<u>Colin P. Britcher</u> , Caleb Hull (Old Dominion University, USA), David Cox, Mark Schoenenberger (NASA Langley Research Center, USA) |
| OS6-2
9:30-9:45 | Validation of Dynamic Stability Measurement of a Space Orbital Plane Model using Magnetic Suspension
<u>Hiroki Sugiura</u> (Japan Aerospace Exploration Agency, Japan), Narumi Kobayashi, Asei Tezuka (Waseda University, Japan) |
| OS6-3
9:45-10:00 | Aerodynamic Characteristics of a Space Orbital Plane Model Measured with 1-m Magnetic Suspension and Balance System
<u>Naoki So</u> , Itsuki Kida, Ryusei Haga, Muku Miyagi, Hiroyuki Okuizumi, Shigeru Obayashi (Tohoku University, Japan) |
| OS6-4
10:00-10:15 | Prospects for a New MSBS at Imperial College
<u>Jonathan F Morrison</u> (Imperial College London, UK) |
| OS6-5
10:15-10:30 | Three-Degree-of-Freedom Free-Motion Wind Tunnel Testing Using a Magnetic Suspension System
<u>Kazuyuki Ueno</u> , Takushi Sato, Yuki Takeda, Reo Nagasaka (Iwate University, Japan), Mamoru Kikuchi (Iwate Prefectural University, Japan) |
| OS6-6
10:40-10:55 | A Decade of Progress in 1-m MSBS
<u>Shigeru Obayashi</u> , Hiroyuki Okuizumi, Hideo Sawada, Yasufumi Konishi (Tohoku University, Japan), Taku Nonomura (Nagoya University, Japan), Keisuke Asai (Tohoku University, Japan) |
| OS6-7
10:55-11:10 | Oxford 3-DoF Magnetic Suspension & Balance System: Update on Recommissioning Efforts
<u>Nnaemeka Anyamele</u> , Luke J. Doherty, Peter Ireland (University of Oxford, UK) |
| OS6-8
11:10-11:25 | Forced Displacement Technique for Measuring Blunt Body Aerodynamics in a Magnetic Suspension Wind Tunnel
<u>Mark Schoenenberger</u> , David Cox (NASA Langley Research Center, USA), Colin Britcher, Caleb Hull (Old Dominion University, USA) |
| OS6-9
11:25-11:40 | Comparisons of Supporting Methods for a Magnetic Suspension and Balance System
<u>Yoshinao Isomura</u> , Noriaki Arima, Kazuya Seo (Kogakuin University, Japan) |
| OS6-10
11:40-11:55 | Free-motion Wind Tunnel Testing of a Lifting Atmospheric Entry Capsule
<u>Kenshin Onuma</u> , Kazuyuki Ueno, Yuki Takeda, Keisuke Asai (Iwate University, Japan), Hiroki Nagai, Tsubasa Ikami, Yoshihito Sasaki, Masaki Okawa (Tohoku University, Japan) |

OS6-11

11:55-12:10

Dynamic Instability Analysis of Free-Flying Objects in Transonic Regime Using Ballistic Range

Jinyoung Kim (Tohoku University, Japan / Seoul National University, Korea), Ethan De Leon (Tohoku University, Japan / University of California, San Diego, USA), Jungmu Hur (Seoul National University, Korea), Tsubasa Ikami, Koichi Takahashi, Toshihiro Ogawa (Tohoku University, Japan), Michiko Ahn Furudate (Chungnam National University, Korea), Bok Jik Lee (Seoul National University, Korea), Hiroki Nagai (Tohoku University, Japan)