

## ***Opening Ceremony of the UW-TU: AOS*** ***(N-1 version)***

***Memorial Workshop on Next Generation Transport Aircraft: April 12-13, 2017***

***Memorial Symposium: 3:00-5:00 April 13, 2017***

***Signing Ceremony of AOS and Reception: April 14, 2017***

***Reception: 2:00-4:00 April 13, 2017***

### **April 12 (Wed.)**

<p>13.00 - 17.00</p> <p><i>HUB Room-250, UW</i></p> <p><i>Chair : Prof.Okabe</i></p>	<p><b>Memorial Workshop on Next Generation Transport Aircraft</b></p> <ul style="list-style-type: none"><li>● <b>Numerical simulation and analysis for cost effective aircraft design</b><ul style="list-style-type: none"><li>- Opening remarks Takuma Takahashi (Deputy Director of Aerospace and Defense Industry Division, Ministry of Economy, Trade and Industry, Japan) (5min)</li><li>- Title: Introduction of “Development of Numerical Simulation Methods for Cost-Effective Aircraft Design” Speaker: Shigeru Obayashi (Director, Institute of Fluid Science, Tohoku University) (25min)</li><li>- Title: High-fidelity numerical simulation of airfoil flows at non-cruise high Reynolds number conditions Speaker: Soshi Kawai (Associate Professor, Department of Aerospace Engineering /, Co-director, Next Generation (Jisedai) Aircraft Research Center Tohoku University) (25min)</li><li>- Title: Experimental testing and optimization of tow-steered composites Speaker: Ryosuke Matsuzaki (Junior Associate Professor, Department Mechanical Engineering, Tokyo University of Science) (25min)</li><li>- Title: Analytical evaluation of impact damage in circular laminates Speaker: Hiroshi Suemasu (Professor, Department of Engineering and Applied Sciences, Sophia University)</li></ul></li><li>Break (15 min)</li><li>● <b>Composite Materials</b><ul style="list-style-type: none"><li>- Title: Effects of the Manufacturing Process on AFP composites Speakers: Dr. Paul Davidson ( University of Washington)</li></ul></li></ul>
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	<p>Nobuo Arai or Don Lee (Toray Composite Materials America, Inc.) (60min)</p> <ul style="list-style-type: none"><li>- Title: Effects of Moisture Diffusion on Sandwich Composites Speaker: Mark Tuttle (Director, AMTAS Department of Mechanical Engineering, University of Washington) (30min)</li><li>- Title: Opportunities and Challenges for Polymer Matrix Composites in Aerospace” Speaker: Tia Benson Tolle (Director, Materials and Fabrication Boeing Commercial Airplanes, Product Development) (30min)</li></ul>
<p>17.00 - 19.00</p> <p><i>HUB Room-250, UW</i></p>	<p><b>Poster Session on Composite Materials for Aircraft and Aero Space Engineering</b></p> <p>Title: Determination of the Elastic Constants of CFRP Using Resonant Ultrasound Spectroscopy Presenter: Go Yamamoto (Associate Professor, Tohoku University)</p> <p>Title: Continuum damage mechanics modeling of PMC laminates including transverse cracks Presenter: Sota Onodera (Graduate student, Tohoku University)</p> <p>Title: An attempt to extend skew-symmetric forms to modal discontinuous Galerkin schemes Presenter: Hiroyuki Asada (Graduate student, Tohoku University)</p> <p>Title: Multiscale Modeling for Evaluation of Free-Surface Effect on Crack Formation in Carbon Fiber-Reinforced Composites Presenter: Yuta Kumagai (Graduate student, Tohoku University)</p> <p>Title: Multiscale Plasticity Modeling on Mechanical Anisotropy of Advanced Materials Presenter: Yoshiteru Aoyagi (Associate Professor, Tohoku University)</p> <p>Title: Curved fiber laminating device for processing of tow-steered composites Presenter: Atsushi Shinoda (Graduate student, Tokyo University of Science)</p>

	<ul style="list-style-type: none"> <li>- Title: Some Novel Approach for Strength Improvement of Composite T-Joints Presenter: Shinsaku Hisada (Graduate Student, The University of Tokyo)</li> </ul>
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### **April 13 (Thu.)**

<p>09.00 – 12:00</p> <p><i>HUB Room-250, UW</i></p> <p><i>Chair : Prof.Obayashi</i></p>	<p><b>Memorial Workshop on Composite Materials for Aircraft and Aero Space Engineering</b></p> <ul style="list-style-type: none"> <li>• <b>Cross - ministerial Strategic Innovation Promotion Program (SIP) : Innovative Materials for Structure Program</b> <ul style="list-style-type: none"> <li>- Title: Further Development of High Rate Production Innovative Aircraft CFRP and Quality Assurance Technology Speakers: Nobuo Takeda and Akira Hamamoto (TJCC, The University of Tokyo) (30min)</li> <li>- Title: Motivation, Status and challenges - Tough and high volume production-ability CFRP development Speaker: Toshio Abe (Churyo Engineering Co., Ltd.) (30min)</li> <li>- Title: Multiscale Simulation of CFRP Considering Geometrical Imperfection Speaker: Akinori Yoshimura (JAXA) (30min)</li> </ul> </li> </ul> <p>Break(30min)</p> <ul style="list-style-type: none"> <li>- Title: Optical Fiber Based Intelligent Process Monitoring and Modeling of CFRP Structures Speakers: Nobuo Takeda and Shu Minakuchi (TJCC, The University of Tokyo) (30min)</li> <li>- Title: Impact Damage Simulations on Composite Laminates Speakers: Anthony Waas and Solver Thorsson (William E Boeing Department of Aeronautics and Astronautics, University of Washington)(30min)</li> </ul>
<p>12.00 – 13:00</p> <p><i>TBC</i></p>	<p>Lunch</p>

<p><b>15:00 – 17:15</b></p> <p><i>HUB Room-250, UW</i></p> <p><i>Moderator Prof. Ohuchi</i></p> <p><i>TOTAL 125~135min</i></p>	<p><b>UW-TU:AOS Opening Memorial Symposium</b></p> <p>(First Half-Total 54 min talk: 57+3=60 min)</p> <ul style="list-style-type: none"> <li>• <b><u>Welcome Address</u></b> <ul style="list-style-type: none"> <li>- Prof. Susumu Satomi, President, Tohoku University (3 min)</li> <li>- Dean of College of Engineering, Michael Bragg, University of Washington (3 min)</li> <li>- Dean of College of Engineering, Hirotugu Takizawa, Tohoku University (3 min)</li> <li>- Toray Composite Materials America, Inc. Vice President, Nobuyuki Odagiri (3min)</li> </ul> </li> <li>• <b><u>TU Globalization and collaboration with US</u></b> <ul style="list-style-type: none"> <li>- Prof. Toshiya Ueki, Executive Vice President, Tohoku University (5 min)</li> </ul> </li> <li>• <b><u>Goals and Roles of UW-TU:AOS</u></b> <ul style="list-style-type: none"> <li>- Prof. Fumio Ohuchi, Interim Chair of Materials Science and Engineering, University of Washington (10 min)</li> </ul> </li> <li>• <b><u>Keynote Speech:</u></b>  <b>Japan's National Project "Cross-ministerial Strategic Innovation Promotion Program" and UW-TU:AOS</b> <ul style="list-style-type: none"> <li>- Prof. Nobuo Takeda, International Initiatives Organization, Tohoku University / Director, TJCC, the University of Tokyo and Masahiro Takemura, SIP Director, Structural materials for Innovation, Japan Science and Technology Agency (JST) (30 min)</li> </ul> </li> </ul> <p>(Second Half-Total 56 min talk: 56+9=65 min)</p> <ul style="list-style-type: none"> <li>• <b><u>UW-TU:AOS's Strategic Development in Education and Research</u></b>  <b>Education and Information Exchange</b> <ul style="list-style-type: none"> <li>- Prof. Kyosuke Yoshimi, Graduate School of Engineering, Tohoku University (8 min)</li> </ul> </li> <li>• <b><u>Research Matching in Energy Systems for Transportation</u></b> <ul style="list-style-type: none"> <li>- Prof. Shigeru Obayashi, Director, Institute of Fluid Science, Tohoku University (8 min)</li> <li>- Prof. Dan Schwartz, Clean Energy Institute, Director, Chemical Engineering Department, University of Washington (8min)</li> </ul> </li> <li>• <b><u>Research Matching in Next Generation Airplane and Space Technology</u></b> <ul style="list-style-type: none"> <li>- Prof. Anthony Waas, Aerospace and Astronautics Department, University of Washington (8 min)</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- Prof. Kristi Morgansen, Space Research Center, Aerospace and Astronautics Department, University of Washington (8 min)</li> </ul> <p><b>Research Matching in Natural Hazard and Disaster Engineering</b></p> <ul style="list-style-type: none"> <li>- Prof. Yamaguchi, Tohoku University, representing Int. Res. Inst. of Disaster Science (IRIDeS) (8min)</li> <li>- Prof. Laura L Lowes, University of Washington, Natural Hazard Engineering (8 min)</li> </ul> <p>VIP dinner</p>
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### **April 14 (Fri.)**

<p>10.00 – 10:30</p> <p><i>Gerberding Hall Conference room</i></p> <p><i>No Public</i></p>	<p><b>UW-TU: AOS Signing ceremony</b></p> <ul style="list-style-type: none"> <li>• Address <ul style="list-style-type: none"> <li>- Prof. Ana Mari Cauce, President of UW</li> <li>- Prof. Susumu Satomi, President of TU</li> <li>- Mr. Masahiro Omura, Consul General of Japan in Seattle</li> <li>- Prof. Toru Tamiya, Director of JSPS San Francisco Office</li> </ul> </li> <li>• MOU signing</li> <li>• Gift Exchange</li> <li>• Group photo</li> </ul> <p><i>*Moderator: Vice Provost Jeffrey Riedinger , UW</i></p>
	<ul style="list-style-type: none"> <li>- Walk in the campus and visit AOS</li> <li>- Lunch at the Faculty Club</li> <li>- Transfer to the Official Residence of Consul General of Japan</li> </ul>
<p>14.00 - 16.00</p> <p><i>Official residence of Consul General of Japan</i></p> <p><i>Address: 23 Highland Drive Seattle, WA 98109</i></p>	<p><b>UW-TU:AOS Reception</b></p> <p><i>Official residence of Consulate General of Japan in Queen Ann.</i></p> <ul style="list-style-type: none"> <li>• Address <ul style="list-style-type: none"> <li>- Mr. Masahiro Omura, Consul General of Japan in Seattle</li> <li>- Prof. Susumu Satomi, President of TU</li> <li>- VIP invited by Consulate General of Japan in Seattle</li> </ul> </li> <li>• Toast <ul style="list-style-type: none"> <li>- VIP (Toray would be preferable) invited by TU</li> </ul> </li> </ul>

	<ul style="list-style-type: none"><li>• AOS introduction<ul style="list-style-type: none"><li>- Prof. Fumio Ohuchi, UW</li></ul></li></ul> <p><i>*Moderator: Associate Executive Vice President Masahiro Yamaguchi , TU</i></p>
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