

## Tentative Program – Abstract based

**Thursday 7 Nov 24**

Plenary Room

Time	Activity	Presenter/ Authors
08:00-08:15	Conference Introductory Briefing	Deputy Chair
08:15-08:30	<b>Welcome address – The University of Melbourne</b>	Deputy Dean (Research)
08:30-08:45	<b>Conference Opening Address</b>	Chair
08:45-09:00	<b>VFS Address</b>	Executive Director VFS
09:00-10:00	<b>Research and Education - Strategic Updates</b>	Country leads
10:30-11:00	<b>Tea/Coffee/Drinks Break</b>	
<b>Aerodynamics 1</b>		
11:00-11:30	Aerodynamic Interference between the Lift Rotors and Main Wing on an eVTOL Aircraft	Akira Sato, Yasutada Tanabe & Hiroki Ikemoto
11:30-12:00	A Simplified Wake Geometry Model for Rapid Calculation of Induced Velocity	Junbiao Shen & Pan Li
12:00-12:30	Computational Analysis of the Effect of Rotor/Fuselage Wake on Pusher Propeller Aerodynamics of Next-Genera on Rotorcraft	Kyu Tae Park, Sung U Kang, Byoung Soo Lee, Nameun Park, Rho Shin Myong & Hakjin Lee
12:30-13:30	<b>Lunch and Networking</b>	
<b>Simulation, Modelling and Testing 1</b>		
13:30-14:00	Further Evolution in Conversion of a Scaled Radio-controlled Helicopter Model into a Rotor System for Wind Tunnel Testing in JAXA	Kobiki Noboru
14:00-14:30	Development of Vortex Ring State Indicator for a Helicopter	Abdul Rashid Tajar, Ashim Yadav, S. P. Tripathy, Anil Bhambhani & Vijay Panvar
14:30-15:00	Standardization and Performance Testing of Agricultural UAVs in the SUT UAV Sandbox	Jitlada Aumpirom, Auraluck Pichitkul, Suradet Tantrairatn & Atthaphon Ariyarit
15:00-1530	Aeroacoustic Modeling and Design of eVTOL Rotor in Forward Flight for Urban Air Mobility Application	Auraluck Pichitkul & Lakshmi Sankar
15:30-16:00	<b>Tea/Coffee/Drinks Break</b>	
<b>Systems 1</b>		
16:00-16:30	Impact Performance Analysis on Suppressing Intruder Drone by PN Guided UAV	Jinwoo Park, Dongjin Lee, Zihao Wang & KC Wong
16:30-17:00	Design the Formation Flight Control Law for Multiple Unmanned Rotorcrafts with the Consideration of the Nonlinear Flight Dynamics	Jun-Young Ahn & Chang-Joo Kim
17:00-17:30	Mathematical Modelling Approach to Predict Instantaneous Health of Helicopter Engines	Gaurav Malik & Rabindra Patro
17:30-17:35	Day 1 – Closing Address	

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Session Room

Time	Activity	Presenter/ Authors
<b>Simulation, Modelling and Testing 2</b>		
11:00-11:30	Estimation of rotation vector using a cyclic mean-path algorithm on a unique underactuated swashplateless rotor	Haofei Guan & KC Wong
11:30-12:00	Passive Flow Control Devices on Helicopter Rotor Hub and Engine Pylon to Alleviate Tail Shake and Pilot Workload	N Lingaiah, Anil Bhambhani & Sarba Prasad Tripathy
12:00-12:30	Comparison of tight and loose coupling in elastic helicopter simulation	Oskar Wengrzyn, Manuel Keßler & Ewald Krämer
12:30-13:30	<b>Lunch and Networking</b>	
<b>Aerodynamics 2</b>		
13:30-14:00	Trim Analysis and Flight Modelling of a Quad-Tilt-Wing UAV	Yasutada Tanabe, Hideaki Sugawara, Satoshi Arikawa & Koji Muraoka
14:00-14:30	Development of rotor noise prediction code based on vortex method for design of low-noise rotor blade	Si Jin Kim, Sa-Lang Lee, Sang Min Son, Nameun Park, Rho Shin Myong & Hakjin Lee
<b>Simulation, Modelling and Testing 3</b>		
14:30-15:00	Assessment of Rapid Modelling Tools for Unmanned eVTOL Proprotor Design Applications	Issareephat Kanishthanonda Auraluck Pichitkul, Suradet Tantrairatn Atthaphon Ariyarat, Lakshmi Sankar
15:00-15:30	<b>Tea/Coffee/Drinks Break</b>	
<b>Systems 2</b>		
15:30-16:00	Design and Verification of Manipulation Strategy in Helicopter Flight Mode for a Quad Tilt Rotor UAV	Bohai Deng, Jinfa Xu, Kun Liu
16:00-16:30	Model predictive control of quadrotor UAV based on feedback linearization	Xingyu Yuan, Jinfa Xu, Fengrui Liu & Bohai Deng

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Time	Activity	Presenter/ Authors
<b>Aerodynamics 3</b>		
08:00-08:30	Parameter Influence of Unsteady Aerodynamic Characteristics During Rotor Airfoil Dynamic Stall	Liuqing Yang, Guoqing Zhao, Qijun Zhao, Simeng Jing & Qing Wang
08:30-09:00	Simulation of Muti-rotor Vehicle in the Vortex Ring State using Vortex Particle Method	Sa-Lang Lee, Mohammadsadegh Araghizadeh, Sang Min Son, Rho Shin Myong & Hakjin Lee
09:00-09:30	Analysis on Impact of Plunging Motion on Airfoil Unsteady Aerodynamic Force	Yu Peng, Zhi-hao Yu, Jin-rui Zhao & Yong Liu
09:30-10:00	Prediction of Aerodynamics and Wake Dynamics of Tilt Rotor in Transition Flight using Coupled Panel and Vortex Particle Methods	Sang Min Son, Sa-Lang Lee, Youngjung Kee & Hakjin Lee
10:30-11:00	<b>Tea/Coffee/Drinks Break</b>	
<b>Design 1</b>		
11:00-11:30	Research on the conceptual configuration design and flight control strategy of Tail-sitter UAV	Fengrui Liu, Jinfa Xu, Bohai Deng & Xingyu Yuan
11:30-12:00	Optimal propeller blade design for a quad-tilt-wing UAV	Keita Kimura, Hideaki Sugawara, Koji Muraoka & Satoshi Arikawa
12:00-12:30	Visual Target Detection of Unmanned Aerial Vehicle in Return-to-landing under Complex Environment	Shengxin Yu & Jinfa Xu
12:30-13:30	<b>Lunch and Networking</b>	
<b>Simulation, Modelling and Testing 3</b>		
13:30-14:00	Computational Investigation on Aerodynamic Characteristics of Blade Shape on High-Speed Coaxial rotor with Lift-Offset	Takeshi Akasaka, Shun Kuribayashi, Yusuke Hamamoto & Yasutada Tanabe
14:00-14:30	Aerodynamics-Dynamics Coupling Investigation for Gimballed Rotor Systems	Yu Peng, Zhi-hao Yu, Jin-rui Zhao & Yong Liu
14:30-15:00	Helicopter Steady-state Autorotation Desired Targets and Control Law Optimization	Kangrui Wei, Yousong Xu & Qijun Zhao
15:00-15:30	<b>Tea/Coffee/Drinks Break</b>	
<b>Design 2</b>		
15:30-16:00	Design and Performance Evaluation of Rotors for Foldable Tiltrotor Aircraft	Bing Wang & Pan Li
16:00-16:30	Evaluating a piggyback cargo eVTOL system in contemporary Japan	Yu Ito
16:30-17:00	Bio-Inspired Hybrid Mechanism for Enhancing Micro Helicopter Performance	Xun Huang, Linghai Lu & James Whidborne
17:00-17:30	The Principle of Vibration Reduction by CG Offset and its Experimental Verification	Yuji Yoshizaki, Shigeru Sunada & Ryota Kikuchi
17:30-17:45	Day 2 –Conference Closing Address	Chair