



18th International Symposium on Transport
Phenomena and Dynamics of Rotating Machinery

ISROMAC 18
November 23rd-26th 2020 → Online

PROGRAM

Organized by:



Waseda University



Pacific Center of
Thermal-Fluid Engineering
(PCTFE)

Supported by:



Nippon Travel Agency



Turbomachinery Society
of Japan (TSJ)

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General Schedule

Timezone used is UK time: GMT/UTC. Japan and Korea are UTC+9. China is UTC+8. Europe is UTC+1. US/Canada span UTC-8 west coast to UTC-5 east coast/UTC-4 maritimes.

ISROMAC18 (4 Rooms, 15/18 min presentation - 5 min Q&A)					ISROMAC18 (4 Rooms, 15/18 min presentation - 5 min Q&A)				
Nov. 23, 2020 (Mon)					Nov. 24, 2020 (Tue)				
Time (GMT+0)	Room 1	Room 2	Room 3	Room 4	Time (GMT+0)	Room 1	Room 2	Room 3	Room 4
08:40-09:00	Opening Ceremony				08:50-09:00	Opening			
09:00-10:00	Plenary Session 1 Prof. François Avellan (EPFL, Switzerland)				09:00-10:00	Plenary Session 2 Prof. Helmut J. Holl (Johannes Kepler University of Linz, Austria)			
10:00-10:10	Break				10:00-10:10	Break			
10:10-10:35	S(1:15) 3 papers S11	S(1:15) 3 papers S20		S(1:40) 4 papers S10	10:10-10:35	S(1:40) 4 papers S16		S(1:40) 4 papers S9	S(1:40) 4 papers S14
10:35-11:00			S(1:15) 3 papers S17		10:35-11:00				
11:00-11:25					11:00-11:25				
11:25-11:50					11:25-11:50				
11:50-13:10	Lunch (1:20)				11:50-13:10	Lunch (1:20)			
13:10-13:35	S(1:40) 4 papers S11	S(1:40) 4 papers S19	S(1:40) 4 papers S17	S(0:50) 2 papers S10	13:10-13:35	S(1:40) 4 papers S16	S(1:40) 4 papers S2	S(1:40) 4 papers S9	S(1:40) 4 papers S14
13:35-14:00					13:35-14:00				
14:00-14:25					14:00-14:25				
14:25-14:50				14:25-14:50					
14:50-15:00	Break				14:50-15:00	Break			
15:00-15:25	S(1:40) 4 papers S11	S(00:50) 2 papers S19			15:00-15:25		S(1:40) 4 papers S2	S(1:40) 4 papers S3	S(1:40) S14 Discussion
15:25-15:50					15:25-15:50				
15:50-16:15					15:50-16:15				
16:15-16:40					16:15-16:40				

S1	Advanced and multiphysics CFD	S11	Hydraulic machines and systems
S2	Aero-acoustics of turbomachines	S12	Liquid rocket engines
S3	Cavitation and multi-phase flows	S13	Marine energy and propulsion systems
S4	Cavitation in turbomachines	S14	Mass and Heat transfer & transport phenomena
S5	Combustion in turbomachines (included in S10)	S15	Positive displacement fluid machinery
S6	Compressors and fans	S16	Pumping machinery
S7	Design and optimization of turbomachines	S17	Rotor and structural dynamics in turbomachines
S8	Experimental techniques applied to turbomachines	S18	Steam and gas turbines
S9	Fluid-structure interaction in turbomachines	S19	Turbocharging systems
S10	General topics	S20	Wind energy

ISROMAC18 (4 Rooms, 15/18 min presentation - 5 min Q&A)					ISROMAC18 (4 Rooms, 15/18 min presentation - 5 min Q&A)												
Nov. 25, 2020 (Wed)					Nov. 26, 2020 (Thu)												
Time (GMT+0)	Room 1	Room 2	Room 3	Room 4	Time (GMT+0)	Room 1	Room 2	Room 3	Room 4								
08:50-09:00	Opening				08:50-09:00	Opening											
09:00-10:00	Plenary Session 3 Prof. Chisachi Kato (University of Tokyo, Japan)				09:00-10:00	Plenary Session 4 Prof. Mehrdad Zangeneh (University College London, United Kingdom)											
10:00-10:10	Break				10:00-10:10	Break											
10:10-10:35	S(2:05) 5 papers S16	S(00:50) 2 papers S18	S(2:05) 5 papers S3	S(1:15) 3 papers S8	10:10-10:35	S(1:40) 4 papers S13	S(1:15) 3 papers S6	S(1:40) 4 papers S4	S(1:40) 4 papers S7								
10:35-11:00					10:35-11:00												
11:00-11:25					11:00-11:25												
11:25-11:50					11:25-11:50												
11:50-12:15					Lunch (00:55)					11:50-12:45	Lunch (00:55)						
12:15-13:10	12:45-13:10								S(1:15) 3 papers S7								
13:10-13:35	S(1:40) 4 papers S12	S(1:40) 4 papers S2	S(1:15) 3 papers S15	S(1:40) 4 papers S1	13:10-13:35	S(1:15) 3 papers S13	S(1:40) 4 papers S6	S(1:15) 3 papers S4	S7 Panel Discussion								
13:35-14:00					13:35-14:00												
14:00-14:25					14:00-14:25												
14:25-14:50					14:25-14:50												
14:50-15:00	Break				14:50-15:15	Closing Ceremony											
15:00-15:25	S(2:05) 5 papers S12	S(1:40) 4 papers S2	S(1:40) 2 papers + Discussion S15	S(00:50) 2 papers S1													
15:25-15:50																	
15:50-16:15																	
16:15-16:40																	
16:40-17:05																	

S1	Advanced and multiphysics CFD	S11	Hydraulic machines and systems
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S9	Fluid-structure interaction in turbomachines	S19	Turbocharging systems
S10	General topics	S20	Wind energy

Opening Ceremony

November 23rd, 2020 (Monday) - Plenary Session Room

08:40–9:00 (GMT+0)	Opening Ceremony Chair: Dr. Arthur Favrel (Waseda University, Japan)
	Opening Speech: Prof. Kazuyoshi Miyagawa (Waseda University, Japan) Chair of ISROMAC18
	Introductory Speech: Prof. Masaru Ishizuka, President of Pacific Center of Thermal-Fluid Engineering (PCTFE)
	Conference Information: Gabriel Taillon (Waseda University, Japan)
	Introduction of Plenary Lecture 1: Prof. Shuhong Liu (Tsinghua University, China)

Closing Ceremony

November 26th, 2020 (Thursday) - Plenary Session Room

14:50–15:15 (GMT+0)	Closing Ceremony Chair: Dr. Nakjoong Lee (Waseda University, Japan)
	Presentation of ASME Journal of Energy Resources Technology Special Issue: Prof. Ryo S. Amano (University of Wisconsin-Milwaukee, USA)
	Introduction of next ISROMAC chair
	Conference statistics & closing: Dr Arthur Favrel & Prof. Kazuyoshi Miyagawa (Waseda University, Japan)

1 Advanced and multiphysics CFD

November 25th, 2020 (Wednesday) - Room 4

13:10–14:50 (GMT+0)	S1 Advanced and Multiphysics CFD (Part 1) Chair: Dr. Akira Fujii (ANSYS, Japan)
13:10–13:35	ISROMAC2020-00033 Kaleb Brookshire and O. Coutier-Delgosha <i>An Analysis of Computation Fluid Dynamics and Surface Piercing Propellers Hydrodynamic Loads</i>
13:35–14:00	ISROMAC2019-00085 Sasuga Ito , Masato Furukawa, Kazutoyo Yamada, and Kaito Manabe <i>Applying Ensemble Kalman Filter to Transonic Flows through a Two-Dimensional Turbine Cascade</i>
14:00–14:25	ISROMAC2019-00115 Weixiang Ye , Prof. K. Miyagawa, and Prof. X. W. Luo <i>A modified partially averaged Navier-stokes model for the turbulent flows over a backward facing step</i>
14:25–14:50	ISROMAC2019-00055 Alexander Fuhring , D. Kožulović, C. Bode, and M. Franke <i>Modeling of Wake Effects in Steady State Mixing Plane Simulations of a High Lift Turbine Cascade with Different Combinations of Wake Passing Frequency and Wake Orientation</i>
14:50–15:00	Break
15:00–15:50 (GMT+0)	S1 Advanced and Multiphysics CFD (Part 2) Chair: Prof. Koichi Nishibe (Tokyo City University, Japan)
15:00–15:25	ISROMAC2020-00032 Alexander Fuchs* , Johann Göttler, and Oskar J. Haidn <i>Leakage and Movement Behavior of Brush Seals</i>
15:25–15:50	ISROMAC2020-00027 Dr. Akira Fujii <i>Unsteady Prediction of Thermal Flow by Machine and Deep Learning</i>

* Pre-recorded presentation

2 Aero-acoustics of turbomachines

November 24th, 2020 (Tuesday) - Room 2

13:10–14:50 (GMT+0)	S2 Aero-acoustics in turbomachines (Part 1)	
	Chair:	Prof. Michel Roger (Ecole Centrale de Lyon, France)
13:10–13:35	ISROMAC2019-00056	Rebecca Schäfer* and Martin Böhle <i>Validation of the Lattice Boltzmann Method for the simulation of the aerodynamics and aeroacoustics in a centrifugal fan</i>
13:35–14:00	ISROMAC2019-00034	P. Bernicke and Prof. Rinie Akkermans <i>Hybrid Overset-LES Simulations of Noise Reduction Concepts of Loaded Airfoils</i>
14:00–14:25	ISROMAC2019-00227	Dr. Kentaro Hayashi , S. Nakaye, and S. Nishimura <i>Lattice Boltzmann Simulation of Industrial Axial Fan Noise</i>
14:25–14:50	ISROMAC2019-00015	Prof. Michel Roger and Prof. Stéphane Moreau <i>Analytical Modeling of Modulated Rotating-Blade Noise: the Skipping Rope and the Darrieus Wind Turbine</i>
14:50–15:00	Break	
15:00–16:40 (GMT+0)	S2 Aero-acoustics in turbomachines (Part 2)	
	Chair:	Prof. Stéphane Moreau (Université de Sherbrooke, Canada)
15:00–15:25	ISROMAC2019-00130	Prof. Marlene Sanjose , Sandra Hub, Frieder Lörcher, and Stéphane Moreau <i>Noise mechanisms in a radial fan without volute</i>
15:25–15:50	ISROMAC2019-00166	Dr. Manuel Henner , B. Demory, M. Alaoui, M. Laurent, and B. Behey <i>Effect of blade curvature on fan integration in engine cooling module</i>
15:50–16:15	ISROMAC2019-00234	Dr. Till M. Biedermann , P. Czeckay, N. Hintzen, F. Kameier, and C. O. Paschereit <i>Aeroacoustic Scaling Laws of Leading Edge Serrations for Rotating Applications</i>
16:15–16:40	ISROMAC2019-00020	Prof. Damiano Casalino E. Grande, G. Romani, D. Ragni, and F. Avallone <i>Towards the definition of a benchmark for low Reynolds number propeller aeroacoustics</i>

* Pre-recorded presentation

November 25th, 2020 (Wednesday) - Room 2

13:10–14:50 (GMT+0)	S2 Aero-acoustics in turbomachines (Part 3) Chair: Prof. Stéphane Moreau (Université de Sherbrooke, Canada)
13:10–13:35	ISROMAC2019-00114 Keqi Hu, Yuanqi Fang, Yao Zheng, Dr. Gaofeng Wang , and Stéphane Moreau <i>Numerical Investigation of Influence of Entropy Wave on the Pressure Field and Wall Heat Transfer Characteristics of a High-Pressure Turbine Guide Vane</i>
13:35–14:00	ISROMAC2019-00088 Dr. Kazuyoto Yamada , M. Furukawa, S. Sakurada, T. Mizokami, S. Aso, K. Sakoda, and T. Fukui <i>Effect of Resonant Environment on Discrete Frequency Noise Generation from a Two-Dimensional Airfoil</i>
14:00–14:25	ISROMAC2019-00044 Prof. Michel Roger and Prof. Stéphane Moreau <i>Tonal-Noise Assessment of Quadrotor-Type UAV Using Source-Mode Expansions</i>
14:25–14:50	ISROMAC2019-00061 R. S. McKay, S. T. Go, S. Jung, and Dr Michael J. Kingan <i>Noise from Unmanned Aerial Vehicle Contra-Rotating propellers</i>
14:50–15:00	Break
15:00–16:40 (GMT+0)	S2 Aero-acoustics in turbomachines (Part 4) Chair: Prof. Michel Roger (Ecole Centrale de Lyon, France)
15:00–15:25	ISROMAC2019-00094 Ignacio Zurbano Fernandez , Alain Guédel, Mirela Robitu, and Michel Roger <i>Analytical prediction of the broadband noise of a plug fan</i>
15:25–15:50	ISROMAC2020-00060 Orestis Amoiridis , Riccardo Zamponi, A. Zarri, J. Christophe, and C. Schram <i>Localization and characterization of rotating noise sources on axial fans by means of an irregularly shaped microphone array</i>
15:50–16:15	ISROMAC2019-00050 Pavel Kholodov and Stéphane Moreau <i>Identification of Noise Sources in a Realistic Turbofan Rotor Using Large Eddy Simulation</i>
16:15–16:40	ISROMAC2019-00087 Alessandro Zarri* , Julien Christophe, Stéphane Moreau, and Christophe Schram <i>Sweep-angle effect on low-order acoustic prediction for low-speed fans</i>

* Pre-recorded presentation

3 Cavitation and multi-phase flows

November 24th, 2020 (Tuesday) - Room 3

15:00–16:40 (GMT+0)	S3 Cavitation and multi-phase flows (Part 1) Chairs: Dr Mohamed Farhat (EPFL, Switzerland) Prof. Yuka Iga (Tohoku University, Japan)
15:00–15:25	ISROMAC2019-00174 K. Kobayashi, Y. Katayama, Prof. Satoshi Watanabe, and S. Tsuda <i>Experimental investigation on cavity pressure inside sheet cavitation</i>
15:25–15:50	ISROMAC2019-00023 Sebastian Klein, Tobias Traudt, and Michael Oschwald <i>Influence of cavitation on the acoustic boundary conditions in water hammer experiments</i>
15:50–16:15	Invited Talk Dr Ali Amini and Dr Mohamed Farhat <i>Recent Advancements in Mitigating Tip Vortex Cavitation</i>
16:15–16:40	Invited Talk Prof. Outi Supponen, Prof. Danail Obreschkow and Dr Mohamed Farhat <i>Ultra-high-speed experiments on single cavitation bubbles</i>

November 25th, 2020 (Wednesday) - Room 3

10:10–12:15 (GMT+0)	S3 Cavitation and multi-phase flows (Part 2) Chairs: Prof. Yuka Iga (Tohoku University, Japan) Prof. Shin-Ichi Tsuda (Kyushu University, Japan)	
10:10–10:35	ISROMAC2019-00142	Koki Sugaya , Takaho Ochiai, Junnosuke Okajima, and Yuka Iga <i>Experimental Study of Break-off Frequency in Cavitation Disappearance Phenomenon on NACA16-012 Hydrofoil</i>
10:35–11:00	ISROMAC2019-00202	Dr. Takahito Miki , Keita Fujiyama, Shin-ichi Tsuda, and Tomohiro Irie <i>Cavitation analysis of a Delft twisted hydrofoil using multi-process cavitation model</i>
11:00–11:25	ISROMAC2020-00040	Yoshifumi Mukai , Taisei Mineshima, Shunsuke Nakai, and Kazuyoshi Miyagawa <i>Investigation of Fluid Exciting Force on a Hydrofoil under Various Cavitating Flows</i>
11:25–11:50	Keynote Speech	Prof. Shin-ichi Tsuda , Yuichi Kunishima and Prof. Satoshi Watanabe <i>Large Eddy Simulation of Cavitating Flow around Clark Y-11.7% Hydrofoil Using Two Kinds of Homogeneous Cavitation Model</i>
11:50–12:15	ISROMAC2020-00031	Dr. Qin Wu , Yunqing Liu, Biao Huang, and Guoyu Wang <i>Experimental and numerical investigation of cavitating flow-induced vibration of a flexible hydrofoil</i>

4 Cavitation in turbomachines

November 26th, 2020 (Thursday) - Room 3

10:10–11:50 (GMT+0)	S4 Cavitation in turbomachines (Part 1)	
	Chair:	Dr. Motohiko Nohmi (Ebara Corporation, Japan)
10:10–10:35	ISROMAC2019-00183	Matteo Tumminia* , Dario Valentini, Giovanni Pace, Ruzbeh Hadavandi, Lucio Torre, Angelo Pasini, and Luca d'Agostino <i>Maximum Likelihood Identification of Cavitation Instabilities in Axial Inducers</i>
10:35–11:00	ISROMAC2019-00164	Yashwant Moganaradjou , Anindita Apurbaa Phukan, S. Vengadesan, and Dhiman Chatterjee <i>Numerical investigation of the effect of leakage flow on cavitation in centrifugal pump</i>
11:00–11:25	ISROMAC2019-00071	Ruizhi Zhang, An Yu, Michihiro Nishi, and Prof. Xianwu Luo <i>Numerical Investigation of Pressure Fluctuation and Cavitation inside a Francis Turbine Draft Tube with Air Admission through a Fin</i>
11:25–11:50	ISROMAC2020-00028	Prof. Satoshi Watanabe and Y. Tsujimoto <i>One-dimensional stability analysis of cavitation surge in pumps considering phase lag in dynamic cavitation characteristics</i>
11:50–13:10	Lunch Break	
13:10–14:25 (GMT+0)	S4 Cavitation in turbomachines (Part 2)	
	Chair:	Prof. Xianwu Luo (Tsinghua University, China)
13:10–13:35	ISROMAC2019-00218	Takeshi Sano , Masamichi Iino, and Satoshi Maeda <i>Effect of leading edge profile on cavitation performance of mixed flow impeller</i>
13:35–14:00	ISROMAC2019-00235	Tsuneda Tomoki , Shusaku Kagawa, Hiroaki Nakamoto, and Motohiko Nohmi <i>A Preliminary Study for Numerical Prediction of Cavitation Erosion in Pumps</i>
14:00–14:25	ISROMAC2019-00186	Prof. Ryoichi Amano <i>Investigation of Cavitation in Kaplan Hydro Turbine Runner Chamber</i>

* Pre-recorded presentation

5 Combustion in turbomachines

The paper of this session is included in S10 General Topics.

6 Compressors and fans

November 26th, 2020 (Thursday) - Room 2

10:10–11:25 (GMT+0)	S6 Compressors and Fans (Part 1)
	Chair: Prof. Kazutoyo Yamada (Iwate University, Japan)
10:10–10:35	ISROMAC2019-00162 Vu-Dinh Dang , Prof. Amélie Danlos, Michaël Pereira, Mohammadali Shirinbayan, Florent Ravelet, Farid Bakir, and Abbas Tcharkhtchi <i>Effects of some settings of rotational-molding process on the aeromechanical performance of an axial fan</i>
10:35–11:00	ISROMAC2019-00101 Kenta Tajima , Hiroshi Miida, Nobumichi Fujisawa, and Yutaka Ohta <i>The Effect of Unsteady Vortex Behavior on Noise Characteristics in a Centrifugal Compressor</i>
11:00–11:25	ISROMAC2019-00239 Isao Tomita and Masato Furukawa <i>Design Concept with Tip Leakage Vortex Control for Centrifugal Compressor Flow Stabilization</i>
11:25–13:10	Lunch Break
13:10–14:50 (GMT+0)	S6 Compressors and Fans (Part 2)
	Chair: Dr Florent Ravelet (ENSAM, France)
13:10–13:35	ISROMAC2019-00172 Dr Van-Thang Nguyen , Prof. Amélie Danlos, Richard Paridaens, Florent Ravelet, Michael Deligant, Sofiane Khelladi, and Farid Bakir <i>Experimental study of a centrifugal compressor with two successive and counter-rotating impellers</i>
13:35–14:00	ISROMAC2019-00026 Anika Theis , M. Böhle <i>Influence of the Rotor Blade Aspect Ratio on the Performance of an Axial Fan</i>
14:00–14:25	ISROMAC2019-00012 Aaron Kasper , Alexander Hergt, Thomas Stürzebecher, Sebastian Grund, Jasmin Flamm, Eberhard Nicke <i>Flow Structure within an Aggressive S-Shaped Intermediate Compressor Duct</i>
14:25–14:50	ISROMAC2019-00059 Jannik Eckel* and V. Gümmer <i>Numerical Investigation of Compressor Tandem Aerofoils Featuring Near-Endwall Modification</i>

* Pre-recorded presentation

7 Design and optimization of turbomachines

November 26th, 2020 (Thursday) - Room 4

10:10–11:50 (GMT+0)	S7 Design and Optimization of turbomachines (Part 1) Chair: Dr. Hiroyoshi Watanabe (Ebara Corporation, Japan)
10:10–10:35	ISROMAC2020-00029 Ujjwal Shrestha* and Young-Do Choi <i>Optimization of J-Groove shape for the suppression of swirl flow in the draft tube of Francis hydro turbine</i>
10:35–11:00	ISROMAC2019-00147 Ryo Watanabe , Kazuyoshi Miyagawa, Mohammad Hossein Khozaei, Naoki Yamaguchi, Toshitake Masuko <i>Optimization procedure for a Francis Turbine Runner using 2D Through-Flow Analysis</i>
11:00–11:25	ISROMAC2020-00163 Koray Sevinc <i>Aerodynamic design optimization of a bellmouth shaped air intake for jet engine testing purposes and its experiment based validation</i>
11:25–11:50	ISROMAC2019-00228 Yosuke Misono T. Kuboyama, Y. Moriyoshi, and T. Yamada <i>Improvement in accuracy of engine cycle simulations by using a turbocharger prediction model instead of measured efficiency map</i>
11:50–12:45	Lunch Break
12:45–14:00 (GMT+0)	S7 Design and Optimization of turbomachines (Part 2) Chairs: Mr. Satoshi Kawasaki (Japan Aerospace Exploration Agency (JAXA), Japan) Dr Byungjin An (Ebara Corporation, Japan)
12:45–13:10	ISROMAC2019-00199 Samuel Sudhof , Uemura Norimichi, Masaharu Uchiumi <i>Supervised Learning for Generating Fair Curves with Curvature Boundary Conditions</i>
13:10–13:35	ISROMAC2019-00032 Lisa Hühn , Julius Wilhelm, Corina Schwitzke, Hans-Jörg Bauer <i>Extensive experimental and analytical investigation of the aerodynamic flow field of labyrinth seals with innovative liner configurations</i>
13:35–14:00	ISROMAC2019-00102 Alessandro Apollonio , A. Anderlini, D. Valentini, G. Pace, A. Pasini, M. V. Salvetti, and L. d'Agostino <i>Turbopump Design: Comparison of Numerical Simulations to an Already Validated Reduced-Order Model</i>
14:00–14:50	Workshop on inverse design based multi-point optimization

* Pre-recorded presentation

8 Experimental techniques applied to turbomachines

November 25th, 2020 (Wednesday) - Room 4

10:10–11:25 (GMT+0)	S8 Experimental techniques applied to turbomachines Chairs: Dr Shigeyuki Tomimatsu (DMW Corporation, Japan) Prof. Teiichi Tanaka (National Institute of Technology, Kumamoto College, Japan)
10:10–10:35	ISROMAC2019-00110 Prof. Yu Ito <i>The world's first test facility that enables the visualization of cavitation on a rotating inducer in both cryogenic and ordinary fluids</i>
10:35–11:00	ISROMAC2019-00030 Silvio Chemnitz and Reinhard Niehuis <i>Accurate Boundary Layer Measurements using Hot-Wire Anemometry - Improvements and Error Analysis</i>
11:00–11:25	ISROMAC2019-00082 Prof. Teiichi Tanaka, Takeshi Toyomoto, Kosuke Nasu, and Michiya Tabaru <i>Transient Characteristics of a Centrifugal Pump at Rapid Startup</i>

9 Fluid-structure interaction in turbomachines

November 24th, 2020 (Tuesday) - Room 3

10:10–11:50 (GMT+0)	S9 Fluid-structure interaction in turbomachines (Part 1) Chair: Dr. Koichi Yonezawa (Central Research Institute of Electric Power Industry, Japan)
10:10–10:35	ISROMAC2019-00139 Dr Antoine Placzek* <i>Assessment of single passage simulations for the aeroelastic stability of a multistage centrifugal compressor</i>
10:35–11:00	ISROMAC2019-00219 Shinji Fukao , Kensuke Futahasji, Ryuichi Umehara, and Takeo Baba <i>Evaluation of self-induced oscillation of the flow control valve by fluid structure interaction analysis</i>
11:00–11:25	ISROMAC2019-00161 Anna Bru Revert* , Paul F. Beard, John W. Chew, and Sebastiaan Bottenheim <i>Sealing Performance of a Turbine Rim Chute Seal Under Rotationally-Induced Ingestion</i>
11:25–11:50	ISROMAC2019-00215 Ryosuke Mori , Kazushi Ajiro and Kazuyoshi Miyagawa <i>Characteristics of fluid exciting force due to blade row interaction of a propeller turbine</i>
11:50–13:10	Lunch Break
13:10–14:50 (GMT+0)	S9 Fluid-structure interaction in turbomachines (Part 2) Chair: Dr. Takeshi Sano (Mitsubishi Heavy Industries, Japan)
13:10–13:35	ISROMAC2019-00198 Dr. Koichi Yonezawa , K. Nishimura, T. Sano, K. Miyagawa, and Y. Tsujimoto <i>Sloshing of Fluid between Rotating Inner Vertical Shaft and Stationary Outer Casing</i>
13:35–14:00	ISROMAC2019-00022 Matthias Schuff , Virginie Anne Chenaux <i>Coupled Mode Flutter of a Linear Compressor Cascade in Subsonic and Transonic Flow Conditions</i>
14:00–14:25	ISROMAC2019-00209 Kazufusa Tsutaya , Z. Liu, M. Kubo, and K. Miyagawa <i>Mitigation method for pressure fluctuations induced by acoustic resonance</i>
14:25–14:50	ISROMAC2019-00038 Keisuke Matsumoto , Tomoyuki Hayashi, Būngo Iwase, Kazuyoshi Miyagawa, Hideaki Kawaguchi, Hidetoshi Chiba, and Hikaru Masuda <i>Characteristics prediction of a tilting pad journal bearing by using fluid-structure coupled CFD</i>

* Pre-recorded presentation

10 General topics

November 23rd, 2020 (Monday) - Room 4

10:10–11:50 (GMT+0)	S10 General topics (Part 1)	
	Chair:	Dr. Nakjoong Lee (Waseda University, Japan)
10:10–10:35	ISROMAC2019-00128	Chisato Ichihara , D. Yamaguchi., R. Kobayashi, K. Nishibe, K. Yokota, and K. Sato <i>Control of Jet Structure Utilizing the Change in the Outlet Velocity Distribution with Time</i>
10:35–11:00	ISROMAC2019-00076	Yu Tamanoi , Y. Watanabe, R. Kobayashi, and K. Sato <i>Jet Direction Control Using Secondary Flows</i>
11:00–11:25	ISROMAC2019-00066	Dr. Jay Unadkat and Dr. Zahir Hussain <i>On the stability of boundary-layer flow over a rotating cone in an enforced axial free stream</i>
11:25–11:50	ISROMAC2019-00014	Dr. Zahir Hussain and Prof. Stephen J. Garrett <i>On the stability of boundary-layer flow over a rotating cone using new solution methods</i>
11:50–13:10	Lunch Break	
13:10–14:00 (GMT+0)	S10 General topics (Part 2)	
	Chair:	Gabriel Taillon (Waseda University, Japan)
13:10–13:35	ISROMAC2019-00167	Alexandre Mauricio , W. Wang, J. Antoni, and Prof. Konstantinos Gryllias <i>Advanced signal processing techniques for helicopter's gearbox monitoring</i>
13:35–14:00	ISROMAC2019-00035	Artur Schimpf , Y. Gu, and M. Böhle <i>Analysis of Flow Models for Aerostatic Thrust Bearings with Porous Material</i>

11 Hydraulic machines and systems

November 23rd, 2020 (Monday) - Room 1

10:10–11:25 (GMT+0)	S11 Hydraulic Machines and Systems (Part 1) Chair: Prof. Shouichiro Iio (Shinshu University, Japan)	
10:10–10:35	ISROMAC2019-00176	X. Meng* , M. Guo, Zhigang Zuo, M. Nishi, and S. H. Liu <i>Numerical Simulation of the flows in a wide-angle diffuser with a short splitter vane</i>
10:35–11:00	ISROMAC2019-00150	L. Yu, H. C. Zhang, H. Chen, Dr. Zhigang Zuo* , and S. H. Liu <i>Numerical study on flows in an inducer with varying pitch considering cavitation instability</i>
11:00–11:25	ISROMAC2019-00182	Dr. Miao Guo * , Huijun Zou, Baoyu Chen, Zhigang Zuo, and Shuhong Liu <i>Experimental performance of a pump and the related vortices in a pump intake of a model pump station</i>
11:25–13:10	Lunch Break	
13:10–14:50 (GMT+0)	S11 Hydraulic Machines and Systems (Part 2) Chair: Prof. Shuhong Liu (Tsinghua University, China)	
13:10–13:35	ISROMAC2019-00153	Naoto Ogawa , M. Goto, S. Iio, T. Kitahora, Y. D. Choi, and M. Inagaki <i>Performance improvement of cross-flow turbine with a cylindrical cavity and guide wall</i>
13:35–14:00	ISROMAC2019-00141	Prof. Hironori Kikugawa , Y. Kawano, M. Shuto, and A. Furukawa <i>Improvement of compact Darrieus-type hydraulic turbine for extra low head by changing inlet shape</i>
14:00–14:25	ISROMAC2020-00042	Yuya Ishii , W. Takahashi and K. Miyagawa <i>Proposal of a design method for Francis turbines operated in a wide range of flow rates</i>
14:25–14:50	ISROMAC2019-00185	Shengbing Li , Z. Zuo, J. Fang, B. Zhu and S. Liu <i>Strategic planning of the 1000MW units of Baihetan powerstation</i>
14:50–15:00	Break	

* Pre-recorded presentation

November 23rd, 2020 (Monday) - Room 1

15:00–16:40 (GMT+0)	S11 Hydraulic Machines and Systems (Part 3) Chair: Prof. Eduard Doujak (TU Wien, Austria)	
15:00–15:25	ISROMAC2019-00144	Takuji Hosotani , Toru Shigemitsu, Yuki Kawaguchi, Takuya Inamoto, Takeru Ishiguro, and Ding Nan <i>Influence of meridional plane shape on performance and internal flow of high head contra-rotating small hydroturbine</i>
15:25–15:50	ISROMAC2019-00221	Dr. Nakjoong Lee , Young-Cheol Hwang, Morihito Inagaki, and Kazuyoshi Miyagawa <i>Design Optimization of High Specific Speed Prototype Francis Turbine by Design of Experiments</i>
15:50–16:15	ISROMAC2019-00008	Dr. Markus Lenarcic , A. Gehrler <i>Study on S-shape instabilities and pressure pulsations in reversible pump-turbines: Conflictive mechanisms behind a varying rotor-stator distance and development of a new guide vane design for improving transient behavior during turbine start-up and in case of load-rejection</i>
16:15–16:40	ISROMAC2019-00018	Johannes Junginger , O. Kirschner, and S. Riedelbauch <i>Measurements of fast transitions at a reversible pump turbine model in closed-loop test rig</i>

12 Liquid rocket engines

November 25th, 2020 (Wednesday) - Room 1

13:10–14:50 (GMT+0)	S12 Liquid rocket engines (Part 1) Chair: Prof. Masaharu Uchiumi (Muroran Institute of Technology, Japan)	
13:10–13:35	ISROMAC2019-00210	Hiromitsu Kakudo , Takashi Yokoyama, and Satoshi Takada <i>Heat generation of ball bearing for rocket-engine turbopump in low-temperature gas hydrogen</i>
13:35–14:00	ISROMAC2019-00100	Sota Kondo , Moena Kanamaru, Satoshi Kawasaki, and Yuka Iga <i>Influence of Rotational Speed of an Inducer on the Propagation Velocity of Super-synchronous Rotating Cavitation</i>
14:00–14:25	ISROMAC2020-00041	Bungo Iwase , Keisuke Masumoto, Tomoyuki Hayashi, Kazuyoshi Miyagawa, Satoshi Kawasaki <i>Characteristics of axial thrust of an unshrouded impeller equipped with balance piston system</i>
14:25–14:50	ISROMAC2019-00156	Luca Sales and Prof. Angelo Pasini <i>Definition and Validation of Cavitating Rocket Turbopump Transmission Matrices for Modular Multi Actuator Disk Approach</i>
14:50–15:00	Break	
15:00–17:05 (GMT+0)	S12 Liquid rocket engines (Part 2) Chair: Prof. Angelo Pasini (University of Pisa, Italy)	
15:00–15:25	ISROMAC2019-00064	Kazuki Yasuda , D. Nakata, and M. Uchiumi <i>Experimental study on temperature change by cavitation accompanying self-pressurization of propellant for small rocket engines</i>
15:25–15:50	ISROMAC2019-00212	Julian Dominic Pauw, Oskar J. Haidn and Alexander Rabl <i>Experimental Investigation of Turbopump Components for Space Applications</i>
15:50–16:15	ISROMAC2019-00038	Max Axel Müller, Tobias Traudt , Stefan Schlechtriem <i>Numerical calculation of the Rotordynamic Coefficients of a LOX-Turbopump Seal for the LUMEN LOX/LNG demonstrator rocket engine</i>
16:15–16:40	ISROMAC2019-00029	Anirudh Mukund Saraf , Tobias Traudt, Michael Oswald <i>LUMEN Turbopump: Preliminary Thermal Model</i>
16:40–17:05	ISROMAC2019-00140	Robson Hahn , R. H. S. Hahn, J. Deeken, M. Oswald, and S. Schlechtriem <i>Turbine Design and Optimization Tool for LUMEN Expander Cycle Demonstrator</i>

13 Marine energy and propulsion systems

November 26th, 2020 (Thursday) - Room 1

10:10–11:50 (GMT+0)	S13 Marine Energy and propulsion systems (Part 1) Chair: Prof. Abdus Samad (Indian Institute of Technology Madras, India)
10:10–10:35	ISROMAC2019-00196 B. Ranjith, P. Madhan Kumar, Prof. Manabu Takao , and Abdus Samad <i>High-Performance Ocean Energy Harvesting Turbine Design - A Strategy of Compound Leaning</i>
10:35–11:00	ISROMAC2019-00105 Prof. Manabu Takao, Kotaro Kanetsuki , M. M. A. Alam, S. Okuhara, and Y. Kinoue <i>Comparative Study on Starting Characteristics of Turbines for Wave Energy Conversion</i>
11:00–11:25	ISROMAC2019-00096 Y. Hayamizu, Keisuke Kitano , T. Suzuki, S. Morita, S. Ohtsuka, M. Takao, Y. Kinoue, and T. Setoguchi <i>A Straight-Bladed Vertical-Axis Turbine for Wave Energy Conversion: Effect of Guide Vane Geometry on Performance</i>
11:25–11:50	ISROMAC2019-00106 Keito Matsumoto , M. Takao, S. Okuhara, M. M. A. Alam, A Takami, and Y. Kinoue <i>A Twin Impulse Turbine for Wave Energy Conversion - Performance Improvement by Means of Fluidic Diode</i>
11:50–13:10	Lunch Break
13:10–14:25 (GMT+0)	S13 Marine Energy and propulsion systems (Part 2) Chair: Prof. Manabu Takao (National Institute of Technology, Matsue College, Japan)
13:10–13:35	ISROMAC2019-00093 Masaki Sakaguchi , Prof. Yoichi Kinoue, T. Murakami, N. Shiomi, Y. Imai, S. Nagatani and M. Takao <i>Bi-Directional Impulse Turbine with Spiral Flow Collector for Tidal Energy Conversion</i>
13:35–14:00	ISROMAC2020-00006 Naoya Isatake, Kousuke Yamanouchi, Prof. Hiromitsu Hamakawa , Eru Kurihara, and Hidechito Hayashi <i>Fundamental Study on Improvement of Performance of Wells Turbine Blade</i>
14:00–14:25	ISROMAC2019-00037 Lei Shi , Bayeul-Laine Annie-Claude, and Coutier-Delgosha Olivier <i>Numerical simulations of unsteady vortical flows around a cycloidal propeller</i>

14 Heat and mass transfer & Transport phenomena

November 24th, 2020 (Tuesday) - Room 4

10:10–11:50 (GMT+0)	S14 Mass and Heat Transfer & transport phenomena (Part 1) Chair: Prof. Helmut J. Holl (Johannes Kepler University of Linz, Austria)
10:10–10:35	ISROMAC2019-00053 Simon van Buren and W. Polifke <i>Enhanced longitudinal heat transfer in oscillatory channel flow - A theoretical perspective</i>
10:35–11:00	ISROMAC2019-00214 Prof. Helmut J. Holl and Gottfried Simon <i>Transport of heat and material properties in Continuous Casting of Steel</i>
11:00–11:25	ISROMAC2019-00099 Dr. Yasutaka Hayamizu, Akihiro Nakamura , T. Hyakutake, T. Gonda, S. Morita, S. Ohtsuka, and S. Yanase <i>Particle Behavior in Curved Microchannels: Aspect Ratio Effects</i>
11:25–11:50	ISROMAC2020-00019 Junnosuke Okajima , Masaki Ito, and Yuka Iga <i>Influence of Heat Transfer from Heated NACA0015 Hydrofoil on Cavitating Flow</i>
11:50–13:10	Lunch Break
13:10–14:50 (GMT+0)	S14 Mass and Heat Transfer & transport phenomena (Part 2) Chair: Prof. Yu Ito (The University of Tokyo, Japan)
13:10–13:35	ISROMAC2019-00194 Victoria Simader and Prof. Helmut J. Holl <i>Reduction of the unbalance excited vibrations during the resonance passage of a rotor</i>
13:35–14:00	ISROMAC2019-00124 Philipp Brodbeck <i>Experimental determination of turbocharger heat flows for validation of a power separation approach</i>
14:00–14:25	ISROMAC2019-00098 Dominik Hofer , Michael Krieger, and Martin Kirchhofer <i>High resolution 2.5D PIV measurements of the flow fields generated by small fans</i>
14:25–14:50	ISROMAC2019-00193 Prof. Helmut J. Holl and Lukas Keplinger <i>Bending and torsion vibrations of a beam excited by a moving load</i>
14:50–15:00	Break
15:00–16:40 (GMT+0)	Mass and Heat Transfer & transport phenomena - Discussion Chairs: Prof. Helmut J. Holl (Johannes Kepler University of Linz, Austria) Prof. Yu Ito (The University of Tokyo, Japan)

15 Positive displacement machines

November 25th, 2020 (Wednesday) - Room 3

13:35–14:50 (GMT+0)	S15 Positive displacement fluid machinery (Part 1) Chair: Prof. Ahmed Kovacevic (University of London, UK)	
13:35–14:00	ISROMAC2019-00191	David Rowinski, Karan Bansal, and Prof. Davide Ziviani <i>Modeling and Validation of Single Screw Expander Using a Modified Cut-Cell Method</i>
14:00–14:25	ISROMAC2019-00126	Prof. Craig Bradshaw , Davide Ziviani, and Eckhard A. Groll <i>Discussion of Numerical Methods used in Positive Displacement Comprehensive Mechanistic Models: Case Study using the Z-Compressor</i>
14:25–14:50	ISROMAC2020-00023	Sonawat Arihant , Young-Seok Choi, Kyung Min Kim, and Jin-Hyuk Kim <i>Sensitivity analysis of clearance for Positive Displacement Hydro Turbine</i>
14:50–15:00	Break	
15:00–15:50 (GMT+0)	S15 Positive displacement fluid machinery (Part 2) Chair: Prof. Davide Ziviani (Purdue University, USA)	
15:00–15:25	ISROMAC2019-00108	Prof. Ahmed Kovacevic and Dr. Sham Rane <i>Challenges in 3D CFD Modelling of Rotary Positive Displacement Machines</i>
15:25–15:50	ISROMAC2019-00168	Dr. Fabio Fatigati , M. Di Bartolomeo, D. Di Battista, R. Cipollone <i>Development and numerical assessment of a regulation strategy for Sliding Rotary Vane Expander based on revolution speed variation</i>
15:50–16:40	Discussion	

16 Pumping machinery

November 24th, 2020 (Tuesday) - Room 1

10:10–11:50 (GMT+0)	S16 Pumping Machinery (Part 1) Chair: Prof. Satoshi Watanabe (Kyushu University, Japan)
10:10–10:35	ISROMAC2019-00017 Jun Feng and Prof. Martin Böhle <i>Feasibility study for the application of a neural network for operating condition detection of a centrifugal pump</i>
10:35–11:00	ISROMAC2019-00200 Yohei Tanaka , T. Kitabata, K. Nasu, S. Watanabe, S. Ohashi, and A. Sakata <i>Effect of suction pipeline resistance on cavitation surge in a turbopump with inducer</i>
11:00–11:25	ISROMAC2019-00146 Xueyi Song , Weiping Yu, Xiaohui Pan, and Xianwu Luo <i>Energy balance analysis for a canned motor pump used for heat supply system</i>
11:25–11:50	ISROMAC2019-00180 Taiki Takamine , S. Nakano, S. Watanabe, and H. Watanabe <i>Effect of Axial Offset of Rotor on Thrust Characteristics of a Centrifugal Pump</i>
11:50–13:10	Lunch Break
13:10–14:50 (GMT+0)	S16 Pumping Machinery (Part 2) Chair: Prof. Satoshi Watanabe (Kyushu University, Japan)
13:10–13:35	ISROMAC2019-00178 Zheng Bian, Sean McClean, Prof. Adolfo Delgado , and Abhay Patil <i>Development of A High Load Capacity Test Rig to Evaluate the Static Performance of Process Fluid-Lubricated Thrust Bearings</i>
13:35–14:00	ISROMAC2019-00070 Yong-In Kim* , Sung Kim, Hyeon-Mo Yang, Kyoung-Yong Lee, Yong-Kab Lee, and Young-Seok Choi <i>A Comparative Study on Accurate Prediction of Cavitation Characteristics for Head Drop in a Mixed-flow Pump with Steady- and Unsteady-state Analysis</i>
14:00–14:25	ISROMAC2019-00197 Akihiro Ikuta , Naruki Nitta, Kazuyoshi Miyagawa, Yasushi Shinozuka, Shigeyuki Tomimatsu <i>Influence of Forward skew vane angle on positive slope characteristics of mixed flow pumps</i>
14:25–14:50	ISROMAC2019-00208 Daisuke Sugiyama , Asuma Ichinose, Tomoki Takeda, Kazuyoshi Miyagawa, Hideyo Negishi, and Atsuhiko Tsunoda <i>Investigation of Internal Flow in Centrifugal Pump Diffuser using Laser Doppler Velocimetry (LDV) and Computational Fluid Dynamics</i>

* Pre-recorded presentation

November 25th, 2020 (Wednesday) - Room 1

10:10–12:15 (GMT+0)	S16 Pumping Machinery (Part 3) Chair: Prof. Young-Seok Choi (Korea Institute of Industrial Technology, Korea)	
10:10–10:35	ISROMAC2019-00031	Medi Bayat and H. L. Sørensen <i>Evaluation of natural frequency, Campbell diagram and forced torsional vibration of deepwell pumps for the marine, oil and gas industry</i>
10:35–11:00	ISROMAC2019-00039	Yuan Li , Hua Chen, Xiangjun Li, Minghe Jiang, Guinian Wan <i>The influence of casing treatment on the performance of a centrifugal pump</i>
11:00–11:25	ISROMAC2019-00206	Yumeno Inaba , Asuma Ichinose, Kazuyoshi Miyagawa, Masamichi Iino, and Takeshi Sano <i>Investigation of flow structure in a narrow clearance of a low specific speed centrifugal impeller</i>
11:25–11:50	ISROMAC2019-00220	Takuma Kawahara , Hideaki Takamiya, Hitoshi Motono, Yasuhiro Hotta, and Kazuyoshi Miyagawa <i>Influence of engine torque fluctuations on performance characteristics of pumps mounted on vehicles</i>
11:50–12:15	ISROMAC2020-00016	Prof. Ling Zhou , Yang Yang, Ling Bai, Wei Li, Weidong Shi <i>Inter-stage Difference of Pressure Pulsation in an Electrical Submersible Pump</i>

17 Rotor and structural dynamics in turbomachines

November 23rd, 2020 (Monday) - Room 3

10:35–11:50 (GMT+0)	S17 Rotor and structural dynamics in turbomachines (Part 1) Chairs: Prof. Tsuyoshi Inoue (Nagoya University, Japan) Dr Yusuke Watanabe (Ebara Corporation, Japan)
10:35–11:00	ISROMAC2019-00075 Takafumi Suzuki , Jotaro Chiba, Shota Yabui, Shigeyuki Tomimatsu, and Tsuyoshi Inoue <i>Analysis of Morton Effect Induced Vibration based on Transfer Function Model: Influence of L/D ratio of Journal Bearing and Rotational speed</i>
11:00–11:25	ISROMAC2019-00065 Dr. Hideyuki Inoue , S. Yabui, and T. Inoue <i>The Characteristics of Rotordynamic Forces generated by Mechanical Seals</i>
11:25–11:50	ISROMAC2020-00014 Teruaki Yamawaki , C. Yoshimine, T. Nakano, Y. Waki, Y. Sumi <i>Development of High Specific Load Direct Lubricated Two Pads Journal Bearing</i>
11:50–13:10	Lunch Break
13:10–14:50 (GMT+0)	S17 Rotor and structural dynamics in turbomachines (Part 2) Chairs: Prof. Tsuyoshi Inoue (Nagoya University, Japan) Dr Yusuke Watanabe (Ebara Corporation, Japan)
13:10–13:35	ISROMAC2019-00054 Gudeta Benti* , David Rondon, Rolf Gustavsson, and Jan-Olov Aidanpää <i>Numerical and experimental study on the dynamic bearing properties of a four-pad and eight-pad tilting pad journal bearings in a vertical rotor</i>
13:35–14:00	ISROMAC2019-00045 David Rondon* , G. Benti, J. O. Aidanpää, and R. Gustavsson <i>Rotordynamic characterization of tilting-pad bearings with eight pads in vertical rotors</i>
14:00–14:25	ISROMAC2019-00157 Federico Bertelli, Prof. Angelo Pasini , and R. Bottai <i>Influence of Fluid-Induced Forces on Cavitating Turbopumps Rotordynamics in Forced Whirl Experiment</i>
14:25–14:50	ISROMAC2019-00073 Kai Becker , Wolfgang Seemann <i>Nonlinear behaviour of a hydrodynamically supported rotor under the combined influence of imbalance and self-excitation</i>

* Pre-recorded presentation

18 Steam and gas turbines

November 25th, 2020 (Wednesday) - Room 2

10:10–11:00 (GMT+0)	S18 Steam and gas turbines Chairs: Prof. Tetsuya Sato (Waseda University, Japan) Prof. Jae Su Kwak (Korea Aerospace University)
10:10–10:35	ISROMAC2019-00113 Akiyoshi Masaki, S. Ogushi, R. Tsuruta, D. Nishiwaki, T. Sato, K. Okai, J. Kazawa, D. Masaki, and M. Harada <i>Assessment of the Influence of Boundary Layer Ingestion (BLI) on the Axial Fan</i>
10:35–11:00	ISROMAC2019-00143 Daisuke Ito, Susumu Nakano, Yu Matsuzaki, Yoichi Takeda <i>Effects of plate edge thickness on breakup patterns and coarse droplet generation when a water film splashes from the plate edge into airflows</i>

19 Turbocharging systems

November 23rd, 2020 (Monday) - Room 2

13:10–14:50 (GMT+0)	S19 Turbocharging system (Part 1) Chair: Prof. Chen Hua (Dalian Maritime University, China)
13:10–13:35	ISROMAC2019-00213 Dr. Hideaki Tamaki , Satoshi Oouchida, Masaru Unno <i>EFD (Experimental Fluid Dynamics) Application in Radial Turbomachines</i>
13:35–14:00	ISROMAC2019-00040 Yu Wang , Hua Chen, Chao Ma, and Jinhui Sun <i>Aerodynamic and Mechanic Analyses of An Asymmetric Scalloped Radial Turbine</i>
14:00–14:25	ISROMAC2019-00111 Yu Wang , Hua Chen, Chao Ma, and Jinhui Sun <i>Effects of Misalignment of Turbine Wheels with Housing/Heat Seal</i>
14:25–14:50	ISROMAC2019-00024 Dr. Georges Salameh , Guillaume Goumy, Pascal Chesse <i>Water cooled turbocharger compressor heat transfer model initialization: adiabatic map generation</i>
14:50–15:00	Break
15:00–15:50 (GMT+0)	S19 Turbocharging system (Part 2) Chair: Dr. Hideaki Tamaki (IHI Corporation, Ltd., Japan)
15:00–15:25	ISROMAC2019-00222 Yohei Nakamura , Kazuyoshi Miyagawa, Yasuo Moriyoshi, and Tatsuya Kuboyama <i>Development of turbocharger engine system using 3D and 1D simulation to achieve 50% brake thermal efficiency</i>
15:25–15:50	ISROMAC2019-00179 Yuji Asanaka , K. Kobayashi, M. Sakakibara, Y. Itagaki, Y. Nakamura, and K. Miyagawa <i>Effect of Pulsating Flow on Surge Frequency of a Turbocharger Compressor</i>

20 Wind energy

November 23rd, 2020 (Monday) - Room 2

10:10–11:25 (GMT+0)	S20 Wind Energy Chairs: Prof. Akihiro Honda (Hirosaki University, Japan) Prof. Takao Maeda (Mie University, Japan)
10:10–10:35	ISROMAC2019-00025 T. Maeda, Y. Kamada, T. Tada, M. Hanamura, N. Goshima, Pham Huu Hoang , K. Iwai, A. Fujiwara, and M. Hosom <i>Effect of Icing Airfoil on Aerodynamic Performance of Horizontal Axis Wind Turbine</i>
10:35–11:00	ISROMAC2019-00177 A. Honda and Nanako Sasanuma <i>Investigation of wind properties at MUTSU Bay and TSUGARU Strait JAPAN</i>
11:00–11:25	ISROMAC2019-00175 Jose de Jesus Monjardin-Gomez , R. Gómez-Martínez, R. Campos-Amezcu, R. Sánchez-García, L. G. Trujillo-Franco, A. Campos-Amezcu, H. F. Abundis-Fong <i>Numerical and experimental analysis of the turbulence impact on small wind turbines performance</i>