

ISUD 2021 (13th)

13-15 June 2021, ETH Zürich, Switzerland

<https://www.isud-conference.org/>Program Monday 14th of June 2021 Part I

Zürich Time = UTC+2h	Session	Talk	Chair
07:00 - 07:10		Welcome (E. Windhab) - Host	
07:10 - 07:20		Welcome (G. De Cesare) - President	
07:20 - 07:40	Environmental Flows	<i>Jean-Noël Saugy, Najla Schaller, Robin Schroff, Azin Amini and Giovanni De Cesare:</i> Eco-morphological and bedload transport assessment on a physical model of a large river widening using ultrasonic Doppler velocity measurements	De Cesare / S. Fischer
07:40 - 08:00	Environmental Flows	<i>Takeshi Moriya, Hiroshige Kikura and Hideharu Takahashi:</i> Basic study on ultrasonic remote leakage position estimation method for underwater exploration	De Cesare / S. Fischer
08:00 - 08:20	Environmental Flows	<i>Robin Schroff, Christian Moertl and Giovanni De Cesare:</i> Ultrasonic Doppler Flow Tracker measurements as a co-indicator for the eco-morphological assessment in a residual flow reach	De Cesare / S. Fischer
08:20 - 08:40	Environmental Flows	<i>Marie Burckbuchler and Stéphane Fischer:</i> Towards handheld UVP	De Cesare / S. Fischer
08:40 - 08:50		BREAK	
08:50 - 09:10	Environmental Flows	<i>Mohammad Reza Maddahi, Majid Rahimpour, Robert Boes and Ismail Albayrak:</i> Determining minimum number of transects for accurate flow measurements using moving vessel ADCPs	Y. Takeda / E. Windhab
09:10 - 09:30	Applied Flows	<i>Erich Windhab, Yasushi Takeda, Damien Dufour, Kim Mishra, Samsun Nahar and Beat Birkhofer:</i> Flow process and rheology control by Ultrasound-Doppler along the food value chain from material pre-processing to gastro-intestinal digestion	Y. Takeda / E. Windhab
09:30 - 09:50	Applied Flows	<i>Reinhardt Kotze and Johan Wiklund:</i> In-line rheology monitoring of detergents with Carreau flow behaviour	Y. Takeda / E. Windhab
09:50 - 10:10	Applied Flows	<i>Kim Mishra, Damien Dufour, Silas Ehrenguber, Julia Merkel and Erich Windhab:</i> Yield stress determination in thixotropic crystal-melt suspensions	Y. Takeda / E. Windhab
10:10 - 10:20		BREAK	

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10:20 - 10:40	Applied Flows	<i>Tomonori Ihara and Tatsuya Hazuku:</i> Effects of inhomogeneous fluid field on UVP measurement	Y. Takeda / E. Windhab
10:40 - 11:00	Applied Flows	<i>Kohei Ohie, Taiki Yoshida, Yuji Tasaka, Masako Seki and Yuichi Murai:</i> Comprehensive evaluation for viscoelasticity of polyvinylpyrrolidone aqueous solutions by utilizing novel map representation based on ultrasonic spinning rheometry	Y. Takeda / E. Windhab
11:00 - 11:20	Applied Flows	<i>Lucas Grob, Eileen Ott, Liridon Zeneli, Yasushi Takeda and Erich J. Windhab:</i> Investigation and comparison of fluid dynamics in a hydrocyclone using ultra sonic doppler	Y. Murai / J. Wiklund
11:20 - 11:40	Applied Flows	<i>Yuichi Murai, Taiki Yoshida, Hyun Jin Park and Yuji Tasaka:</i> UVP applied for Doppler scanning of fruit-internal structures and its working principle	Y. Murai / J. Wiklund
11:40 - 12:00	Applied Flows	<i>Yuji Tasaka, Taiki Yoshida and Yuichi Murai:</i> In-line rheometry based on ultrasonic velocity profile measurement for non-Newtonian fluids	Y. Murai / J. Wiklund
12:00 - 13:00		Lunch / Dinner / Breeakfast - BREAK	
13:00 - 13:20	Applied Flows	<i>Johan Wiklund and Reinhardt Kotze:</i> New sensors for touch-free flow visualization inside industrial production equipment	Y. Murai / J. Wiklund
13:20 - 13:40	Applied Flows	<i>Jonathan Cheng, Bitong Wang, Ibrahim Mohammad, Gerrit Horstmann and Douglas Kelley:</i> UDV methods for characterizing flows in liquid metal batteries	Y. Murai / J. Wiklund
13:40 - 14:00	Acoustic Characterization	<i>Bitong Wang and Douglas Kelley:</i> Optimal Vessel Materials for Indirect-contact Ultrasound Measurements	H. Kikura / J. Czarске
14:00 - 14:10	Closing	Closing of the day	E. Windhab

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07:10- 07:20		Welcome (E. Windhab) - Host	
07:20 - 07:40	Acoustic Characterization	<i>Hannes Emmerich, Richard Nauber, Lars Büttner, Leon Knüpfer, Sascha Heitkam and Jürgen Czarske:</i> In-situ ultrasonic characterization of froth for flotation	H. Kikura / J. Czarske
07:40 - 08:00	Acoustic Characterization	<i>Hideharu Takahashi, Naruki Shoji, Gen Endo, Ikuo Wakaida and Hiroshige Kikura:</i> Fundamental Study on Remote Investigation in Fukushima Daiichi Nuclear Power Plant by Advanced Super Dragon Articulated Robot Arm	H. Kikura / J. Czarske
08:00 - 08:20	Acoustic Characterization	<i>Sardini Sayidatun Nisa Saillellah, Hideharu Takahashi and Hiroshige Kikura:</i> The Development of Soluminescence Elemental Analysis, Case Study: Na and Sr in Aqueous Solution	H. Kikura / J. Czarske
08:20 - 08:40	Acoustic Characterization	<i>Yoshihiko Oishi, Hideki Kawai, Daichi Sasayama and Hiroshige Kikura:</i> Frequency Analysis of Water-Vegetable Oil Emulsion Produced by Taylor-Couette System with Small Aspect Ratio Using Ultrasonic Doppler and Attenuation Method	H. Kikura / J. Czarske
08:40 - 08:50		BREAK	
08:50 - 09:10	Fundamental Flows	<i>Neetu Tiwari and Yuichi Murai:</i> Ultrasound velocity profiling-based viscosity and pressure estimation in shear-thinning unsteady flow	H. Murakawa
09:10 - 09:30	Fundamental Flows	<i>Hideki Murakawa and Tomonori Shimizu:</i> Measurements of continuously released bubbles motion in liquid-metal using ultrasonic techniques	H. Murakawa
09:30 - 09:50	Industrial Guest Presentation	<i>Patrick Reissner (Belimo, CH):</i> Water-glycol compensation for heat measurement in HVAC applications	K. Mishra
09:50 - 10:10		BREAK	

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10:20 - 10:40	Flow Metering and Flow Mapping	<i>Takumi Hayashi, Hyun Jin Park, Yuji Tasaka and Yuichi Murai:</i> Vertical bubbly pipe flow measurement using combined signal of ultrasonic Doppler and echo intensity profiles	Y. Tasaka
10:40 - 11:00	Flow Metering and Flow Mapping	<i>Weiling Liu, Hao Liu, Chao Tan and Feng Dong:</i> Multi-receiver Correction for Velocity Distribution Measurement of Oil-water Two-phase Flow using Multi-line PWUD Method	Y. Tasaka
11:00 - 11:20	Flow Metering and Flow Mapping	<i>Zeliang Zhang, Munkhbat Batsaikhan, Hideharu Takahashi and Hiroshige Kikura:</i> Measurement System for Flow Mapping and Shape Detection using Sectorial Array Sensors	Y. Tasaka
11:20 - 11:40	Signal Processing and Methodology	<i>Hyun Jin Park, Shintaro Akasaka, Yuji Tasaka and Yuichi Murai:</i> Measurement of size and velocity of rising bubbles by a vector UVP	H. Park / T. Ihara
11:40 - 12:00	Signal Processing and Methodology	<i>Dongik Yoon, Tomonori Ihara and Hyun Jin Park:</i> An instantaneous velocity vector measurement using conventional ultrasonic transducers	H. Park / T. Ihara
12:00 - 13:00		Lunch / Dinner / Breeakfast - BREAK	
13:00 - 13:20	Signal Processing and Methodology	<i>Wongsakorn Wongsaroj, Hideharu Takahashi, Natee Thong-Un and Hiroshige Kikura:</i> The development of ultrasonic velocity profiler for velocity vector measurement in bubbly flow	H. Park / T. Ihara
13:20 - 13:40	Signal Processing and Methodology	<i>Naruki Shoji, Hideharu Takahashi and Hiroshige Kikura:</i> Development of Advanced UVP Instruments Applicable to 3-D Velocity Vector Measurement	H. Park / T. Ihara
13:40 - 14:00	Signal Processing and Methodology	<i>Fabio Rizental Coutinho and Cesar Yutaka Ofuchi:</i> Extending Nyquist limit by velocity difference dealiasing rules using a triple PRT scheme	H. Park / T. Ihara
14:00 - 14:20		<i>Yasushi Takeda and Erich Windhab:</i> Evolution of UVP and eUVP	H. Park / T. Ihara
14:20 - 14:30		Evaluation of the student award by committee	
14:30 - 14:50	Final Info & Next ISUD & Farewell	Student award & Info by the ISUD Board & Next ISUD & Farewell	G. De Cesare Y. Murai E. Windhab