


## Technical Program of ISUD 2023

**Oct. 23 Mon. (Day-1)**

9:00	<b>Conference Registration</b>
10:00	<b>Opening Session; Prof. H. Murakawa</b>
10:20	<b>Keynote Lecture 1, Chair: H. Kikura</b>
	<b>Development of low aspect ratio Taylor vortex bioreactor and flow analysis with ultrasonic measurement</b> Prof. H. Kawai and Y. Oishi
11:00	<b>Rheologies &amp; Non-Newtonian Fluid Flows, Chair: H. Murakawa</b>
	<b>Applications of ultrasonic spinning rheometry</b> Y. Tasaka, K. Ohie, H. Chin, A. Takano, T. Yoshida and Y. Murai <b>Flow prediction of complex fluids using rheometry coupled with ultrasonic velocity profiler</b> K. Ohie*, T. Yoshida, Y. Tasaka and Y. Murai <b>Evaluation of viscous characteristics of Newtonian and non-Newtonian fluids by falling head flow tests with an ultrasonic velocity profiler</b> R. Obinata*, S. Nomura, K. Tani, M. Kyoji and T. Ihara
12:00	<b>Lunch Break</b>
13:20	<b>Advanced Measurements &amp; Fundamental Flows, Chair: H. Kikura &amp; Y. Tasaka</b>
	<b>Transient flowrate measurement and evaluation for dynamic response of flowmeters</b> N. Furuichi and T. Yoshida <b>The OpenUVP is ready to launch eUVP</b> Y. Takeda, N. Shoji, H. Kikura and E. Windhab <b>Analysis of flow behavior and evaluation of agitation performance by impeller using UVP</b> H. Okumura*, K. Takasaka, N. Ohmura and A. Ishihata <b>Measurement of silica-sand behavior around rotating square cylinder in a circular container by ultrasound velocity profiler</b> Y. Oishi, S. Osanai, H. Kawai, H. Kikura and K. Kusumoto <b>Investigation of flow characteristics induced by vertical heated rod using ultrasound velocity profiler</b> T. T. Duong, C. T. Tran, T. T. Nguyen and H. Kikura <b>Nonlinear large-scale flow transition in a precessing cylinder and its potential for hydromagnetic dynamo action</b> T. Gundrum, V. Kumar, P. Federico, A. Giesecke, F. Stefani and S. Eckert
15:20	<b>Coffee Break</b>
15:50	<b>Novel Methodologies, Chair: T. Ihara &amp; H. J. Park</b>
	<b>Monitoring of Liquid-solid two-phase pipe flow using ultrasonic pulses</b> H. J. Park, T. Hayashi, D. Yoon, Y. Tasaka, Y. Murai, S. Takano and S. Masanobu <b>A novel idea of methodology for evaluating spatial propagation characteristics of ultrasound pulse-echo</b> T. Yoshida, S. Wada and N. Furuichi <b>Implementation of autocorrelation algorithm in VHDL for UVP instrumentation</b> I. F. Z. Schmidt, F. R. Coutinho, A. L. Stakowian, C. Y. Ofuchi, M. J. da Silva, F. Neves Jr and R. E. M. Morales <b>Investigation of the influence of the background ocean current on flow measurements using the UVP method</b> S. Ueno* and T. Ihara <b>Fundamental study of superimposed image flow visualization using UVP</b> Y. Namiki*, T. Nakada, N. Shoji, H. Takahashi and H. Kikura <b>Integration of time-resolved sensors and line measurements to improve the time resolution of the ultrasonic velocity profiler based on data-driven technique</b> N. Tiwari
18:00	<b>Welcome Reception</b>
20:00	

**Oct. 24 Tue. (Day-2)**

9:30	<b>Conference Registration</b>
10:00	<b>Keynote Lecture 2</b> , Chair: Y. Takeda <b>Coupling of in-line UVPPD rheometry and USDMA for process control in polymorph crystallization processing of chocolate confectionery masses</b> <u>Prof. E. Windhab</u> , K. Mishra and L. Grob
10:40	<b>Short Break</b>
10:50	<b>Multiphase Flows 1</b> , Chair: Y. Murai <b>Classification of flow regimes in bubble column using the integration of ultrasound and KNN algorithm</b> <u>W. Wongsaroj</u> , J. Pulsawat, N. Shoji, N. Thong-Un, W. Treenusorn and H. Kikura <b>Effect of transverse magnetic field on rising bubble behavior in gallium eutectic alloy</b> <u>S. Maeda*</u> , H. Murakawa, K. Sugimoto and S. Eckert <b>Measurements of bubble rising velocity using ultrasonic tomography</b> <u>H. Murakawa</u> , Y. Kubo, S. Maeda and K. Sugimoto
11:50	<b>Lunch Break</b>
13:10	<b>Multiphase Flows 2</b> , Chair: H. Murakawa <b>Ultrasound pulse measurement of air-lift multiphase pipe flow in an inclined pipe</b> <u>Y. Murai</u> , T. Hayashi, D. Yoon, H. J. Park, Y. Tasaka, S. Takano and S. Masanobu <b>Measurement of solid-gas-liquid three-phase flow using pulsed ultrasound</b> <u>N. Shoji</u> , H. Kikura, H. Takahashi, K. Teramoto and H. Kawai <b>Study on ultrasonic echo measurement for vertical pipe gas-liquid multiphase flow containing large bubbles</b> <u>R. Obana*</u> , I. Watanabe, K. Maehara, K. Shimizu and S. Takagi
	<b>Excursion &amp; Met-Flow Dinner</b> 

**Oct. 25 Wed. (Day-3)**

9:30	<b>Conference Registration</b>
10:00	<b>Environmental Flows</b> , Chair: G. De Cesare & S. Fischer <b>Influence of the shear stress on fine sediment exchanges with the substrate using UVP measurements</b> R. Dubuis and <u>G. De Cesare</u> <b>Characterization of Thruster-Induced Turbulence for Fine Sediment Suspension</b> M. Marshall, A. Amini, <u>G. De Cesare</u> and A. L. Stakowian <b>Physical modeling and UVP monitoring yield an efficient protection of a lake reedbed from erosion</b> <u>Z. Vecsernyes</u> , N. Andreini, F. Wohlwend, K. Gobat, A. Jaeger and A. Venturi <b>Sediment dynamics by bistatic ultrasonic Doppler under real waves</b> N. Fritsch, G. Fromant, F. Floc'H, <u>S. Fischer</u> , Y. Cobac, C. Poitou, C. Prunier, S. Bertin, E. Augereau, M. Jaud and J. Tanrin <b>Rock-flow cell parameters evaluation using ultrasound Doppler velocimetry</b> A. L. Stakowian, G. N. D. Dextre, L. F. Botton, E. N. Dos Santos, <u>F. R. Coutinho</u> , C. Y. Ofuchi, M. J. Da Silva, G. De Cesare, R. E. M. Morales, O. Mariette <b>Ultrasonic sediment flux profiling with ACVP technology: application to sediment-laden boundary layer flows</b> D. Hurther and <u>G. De Cesare</u>
12:00	<b>Conference Photo</b>
12:20	<b>Lunch Break</b>
13:40	<b>Special Lecture</b> , Chair: H. Murakawa <b>Nondestructive testing and condition monitoring techniques based on multi-wavelength infrared measurements</b> <u>Prof. T. Sakagami</u>
14:20	<b>Closing Session</b> , Prof. H. Murakawa
	<b>Lab. Tour</b>

Presenters are underlined in the program and names indicated by asterisk are nominated to Ubertone Student Award.

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