



## Technical Sessions (Thursday Afternoon, September 20)

### Thursday Afternoon (September 20) 13:30 - 15:10

#### WS: Single- & Multi-Stage Pump Flow Prediction 1 (RY305)

Chairs: Dr. Hiroyoshi Watanabe (Ebara Corporation, Japan), Prof. Satoshi Watanabe (Kyushu University, Japan)

[IAHR2018-065](#) “Investigation on Inner Flow Quality Assessment of Centrifugal Pump Based on Euler Head and Entropy Production Analysis”, Bo Qian (Zhejiang University, China), Jinping Chen (Jiangsu Zhenhua Pump Ltd., China), Peng Wu (Zhejiang University, China), Dazhuan Wu (Zhejiang University, China), Peng Yan (Science and Technology on Water Jet Propulsion Laboratory, Marine Design & Research Institute of China, China), Shiyang Li (Zhejiang University, China)

[IAHR2018-332](#) “Prediction of flow phenomena, performance and thrust forces of three-stage pump by using URANS”, Hiroyoshi Watanabe (Ebara Corporation, Japan)

[IAHR2018-365](#) “Detailed Flow Characteristic Analyses of a Three-Stage Centrifugal Pump at Design and Off-Design Conditions”, Jin-Hyuk Kim (Korea Institute of Industrial Technology, Korea), Bo-Min Cho (ANFLUX Inc., Korea), Sung Kim (Korea Institute of Industrial Technology, Korea), Yong-Kab Lee (ANFLUX Inc., Korea), Young-Seok Choi (Korea Institute of Industrial Technology, Korea)

[IAHR2018-305](#) “Unsteady RANS Simulation of Three-stage Centrifugal Pumps with Different Impeller-Diffuser Gaps”, Taiki Takamine (Kyushu University, Japan), Satoshi Watanabe (Kyushu University, Japan), Kazuyoshi Miyagawa (WASEDA University, Japan)