



AIVELA XXVIII Annual National Meeting
17-18 December 2020
FINAL PROGRAMME

Thursday, 17th December

09.15 - 09.30 *Welcome*

09.30 - 10.30 **Technical Session #1**

Chairman: Prof. Giorgio Querzoli, University of Cagliari, Italy

"Wavelet and Chaotic Vibro-acoustic characterization and balancing of electric driven pusher propellers for distributed propulsion system", *T. Pagliaroli, P. Candeloro, L. Flamini, R. Camussi, C. Aquilini, N. Paletta, Niccolò Cusano University, Italy*

"Wavelet and Recurrence Quantification Analysis Applied to Ultrasonic Absorptive Coating", *E. Martellini, T. Pagliaroli, P. Lv, Niccolò Cusano University, Italy*

"Proper Orthogonal Decomposition, Wavelet and Recurrence Detection Analysis of a Sloshing Flow", *T. Pagliaroli, F. Gambioli, F. Saltari, Niccolò Cusano University, Italy*

10.30 - 11.30 **Invited Lecture by Instrumentation Manufacturers**

"INTRODUCTION TO DIGITAL IMAGE CORRELATION and VIRTUAL DEMO SESSION"

Dr Stefano Somaschi, Luchsinger Srl, Italy

11.30 - 11.40 *Break*

11.40 - 13.20 **Technical Session #2**

Chairman: Prof. Fabio Cozzi, Politecnico di Milano, Italy

"Experimental study of three in-line bubbles rising in still water by means of a Three-Dimensional (3D) shadowgraph technique", *F. Di Nunno, F. Granata, M. Miozzi, R. Gargano, G. de Marinis, F. Alves Pereira, F. Di Felice, University of Cassino and Southern Lazio, Italy*

"Axisymmetric Drop Shape Analysis using a low-cost home-made setup", *M. Guilizzoni, J. Sapienza, Politecnico di Milano, Italy*

"Imaging analysis of sediment behavior in a ballast pump system", *A. Amoresano, P. Iodice, G. Langella, L. Mocerino, F. Quaranta, University of Naples "Federico II", Italy*

"Vision based quality Control Of Composite Components: considerations about measurement accuracy", *G. D'Emilia, A. Gaspari, E. Natale, University of L'Aquila, Italy*

"Applicazione della tecnica Fluid-Coupled Laser Acoustic Detection al controllo non distruttivo dei component meccanici", *M.-S. Gulino, M. Bruzzi, D. Vangi, University of Florence, Italy*

- 13.20 - 14.30 *Break*
- 14.30 - 15.00 **Invited Lectures by Instrumentation Manufacturers**
"INTRODUCTION TO LASER VIBROMETRY"
Dr Wolfgang Ochs, Polytec GmbH, Germany
- 15.00 - 15.30 **"ADVANCEMENTS in LASER DOPPLER VIBROMETRY in respect to SPECKLE NOISE"**
Dr Jörg Sauer, Polytec GmbH, Germany
- 15.30 - 16.30 **Invited Lecture**
"DISCOVERING LASER DOPPLER VIBROMETRY: 30 YEARS OF TEACHING AND RESEARCH"
Prof. Enrico Primo Tomasini & Prof. Paolo Castellini, Marche Polytechnic University, Italy
- 16.30 - 16.45 **Manufacturers presentations**
"VibroGO VGO-200: truly portable laser vibration measurement"
Dr Paolo Ribaldone, BPS Srl, Italy
"Latest products at Fluxoptica"
by Dr Germano Ragosta, Fluxoptica Srl
- 16.45 *End of Meeting Day 1*

Friday, 18th December

- 09.15 - 09.30 *Welcome*
- 09.30 - 11.10 **Technical Session #3**
Chairman: Dr Tiziano Pagliaroli, Niccolò Cusano University, Italy
"Experimental Fluid Dynamic Characterization of Serrated Rotors for Drone Propulsion", *P. Candeloro, R. E. Nargi, E. Grande, D. Ragni, T. Pagliaroli, Niccolò Cusano University, Italy*
"An in-vitro investigation on the fluid dynamics of the thoracic aorta", *G. Querzoli, M. G. Badas, S. Ferrari, M. Garau, M. Pibiri, R. Prost, V. Satta, E. Sica, G. Matta, University of Cagliari*
"Evolution of flow structures in twin-rotors wakes in drones by time-resolved PIV", *R. E. Nargi, F. De Gregorio, P. Candeloro, G. Ceglia, T. Pagliaroli, Niccolò Cusano University, Italy*
"Preliminary analysis of the flow field in a transparent model of a SRF cavity by PIV", *F. Cozzi, G. Pianello, A. D'Ambros, C. Pagani, D. Sertore, Politecnico di Milano, Italy*
"Hardware/software phase-locked velocimetry for the analysis of counter-rotating propellers wake", *A. Capone, F. Di Felice, F. Alves Pereira, Institute of Marine Engineering - CNR, Italy*
- 11.10 - 11.20 *Break*

- 11.20 - 11.50 **Invited Lecture by Instrumentation Manufacturers**
"NEW SEEDING APPROACHES for PLANAR and VOLUMETRIC VELOCITY MEASUREMENTS"
Dr Carsten Kykal, TSI Inc., Germany
- 11.50 - 12.30 Members' General Assembly
- 12.30 - 13.10 **Technical Session #4**
Chairman: Prof. Enrico Primo Tomasini, Marche Polytechnic University, Italy
"Optical flow video processing to analyse breath interferences with and without protecting masks", *T. Tocci, L. Capponi, G. Rossi, R. Marsili, F. Castellani, F. Natili, M. Marini, I. Battistoni, University of Perugia, Italy*
"Preliminary Analysis on Environmental and Intrinsic Factors on FBG-based Vibration Sensors", *M. D. L. Dalla Vedova, G. Quattrocchi, P. C. Berri, P. Maggiore, Polytechnic University of Turin, Italy*
- 13.10 - 13.20 *Final Greetings & End of Meeting*

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