



AIVELA XXIX Annual National Meeting

16-17 December 2021

FINAL PROGRAMME

Thursday, 16th December

09.15 - 09.30

Welcome

09.30 - 10.30

Technical Session #1

Chairman: Prof. Enrico Primo Tomasini, Università Politecnica delle Marche

"Turbulence anisotropy and intermittency in the flow layers of an open-channel flow on a rough bed", *F. Coscarella, N. Penna, S. Servidio, R. Gaudio, Università della Calabria*

"Mobile-based smart-PIV approach for cardiovascular flows applications: a focus on coronary arteries", *G. C. A. Caridi, E. Torta, C. Chiastra, D. Gallo, U. Morbiducci, Politecnico di Torino*

"Experimental characterization of a phase and speed control system for multi-rotor drones", *C. Andolfi, Università degli Studi Niccolò Cusano*

10.30 - 11.20

Invited Lecture

"Full-field: Scanning Laser Doppler Vibrometry for damage identification", *by Prof. Dario Di Maio, University of Twente, NL*

11.20 - 11.40

Break

11.40 - 13.00

Technical Session #2

Chairman: Prof. Giulio D'Emilia, Università degli Studi dell'Aquila

"Visualization of a Small Jet using a Synthetic Schlieren Technique", *M. Faruoli, G. Abbruzzese, R.M. Di Tommaso, E Nino, Università degli Studi della Basilicata*

"Transport analysis of solid sediments in a ballast water flow", *A. Amoresano, P. Iodice, G. Langella, L. Mocerino, F. Quaranta, Università degli Studi di Napoli "Federico II"*

"On the Wall Pressure Fluctuations induced by a Supersonic Jet over the Wing pressure side", *S. Meloni, E. de Paola, L. Curcio and R. Camussi, Università degli studi Roma Tre*

"Particle Image Velocimetry measurements in a turbulent channel flow laden with elongated particles", *A. Capone, F. Di Felice, F. Alves Pereira, CNR-INM*

13.00 - 14.00	<i>Break</i>
14.00 - 14.40	Tutorial by Instrumentation Manufacturer "Product Sound Optimization in Five Steps" by <u>Dr Marco Di Giusto</u> , HEAD acoustics
14.40 - 15.10	Tutorial by Instrumentation Manufacturer "Diversity Combining for drastic reduction of Speckle Noise in Laser Vibrometers" by <u>Dr Jochen Schell</u> , Polytec GmbH
15.10 - 16.30	Technical Session #3 <i>Chairman: Prof. Roberto Camussi, Università Roma Tre</i> "Study of FBG-Based Optical Sensors for Thermal Measurements in Aerospace Applications", <u>A. Aimasso</u> , M. D. L. Dalla Vedova, P. Maggiore, G. Quattrocchi, Politecnico di Torino "Chaotic and wavelet detection of thermoacoustic instability", T. Pagliaroli, <u>G. Troiani</u> , E. Giacomazzi, R. Camussi, ENEA C.R. Casaccia "Acoustic Modal Analysis of a Tenor Saxophone", <u>D.E. Lucchetta</u> , L. Schiaroli, G. Battista, M. Martarelli, P. Castellini, Università Politecnica delle Marche "Hydrodynamic Performances of Aeronautical Propeller for Drones", <u>E. Martellini</u> , G. Aloisio, M. Falchi, S. Grizzi, T. Pagliaroli, Università degli Studi Niccolò Cusano
16.30 - 17.00	"Giulio Guj" degree prize - Award Ceremony & Presentation by the Winning Candidate "Studio sperimentale con tecnica PIV della propagazione di un'onda di maremoto sulla costa", <u>Matteo Sollevanti</u> , Sapienza University of Rome
17.00	Members' General Assembly
18.00	<i>End of Meeting Day 1</i>

Friday, 17th December

09.15 - 09.30	<i>Welcome</i>
09.30 - 10.30	Technical Session #4 <i>Chairman: Prof. Gianluca Rossi, Università degli Studi di Perugia</i> "Online Estimation of Equivalent Conicity from Contactless Measurements of Wheel and Rail Profiles", L. Bocciolini, F. Piccioli, D. Massini, G. Cherici, L. Lo Scalzo, <u>L. Pugi</u> , Università degli Studi di Firenze

"Nonlinear Damping Properties of Nanocomposite Beams via Frequency Responses and Laser Doppler Vibrometry", B. Carboni, G. Sawan Kumar, W. Lacarbonara, B. Krause, G. Lanzara, Sapienza Università di Roma

"Line Scanning with Gas-Coupled Laser Acoustic Detection (GCLAD)", M.S. Gulino, M. Bruzzi, D. Vangi, Università degli Studi di Firenze

10.30 - 11.10

Invited Lecture

"3D particle tracking based on defocusing: Latest advancements and application to acoustofluidic flows", by Prof.

Massimiliano Rossi, Technical University of Denmark, DK

11.10 - 11.30

Break

11.30 - 12.00

Tutorial by Instrumentation Manufacturer

"TSI new Laser- and Phase Doppler Solution to help users to achieve faster, easier, better results" by Dr Carsten Kykal, TSI

12.00 - 13.20

Technical Session #5

Chairman: Dott. Fabrizio De Gregorio, CIRA- Centro Italiano Ricerche Aerospaziali

"Potentially Automated Mechanical Characterization of Metal Components by means of Hardness Test Complemented by Non-Contact 3D Measurement", G. Bolzon, Politecnico di Milano

"Digital Image Correlation analysis on the bone displacement during split crest: an ex-vivo study", A. T. Lugas, M. Terzini, C. Stacchi, T. Lombardi, D. Di Donato, G. Schierano, C. Bignardi, Politecnico di Torino

"Structural health monitoring of steel bridges by image based algorithm", F. Kazemi Majd, N. Fallahi, V. Gattulli, Sapienza Università di Roma

"Non-contact technique based on a vision system for the inspection of composite material components: analysis of the influence quantities", G. D'Emilia, L. Chiominto, A. Gaspari, E. Natale, Università degli Studi dell'Aquila

13.20 - 14.20

Break

14.20 - 15.00

Manufacturers' Presentations

15.00 - 17.20

Technical Session #6

Chairman: Prof. Matteo Davide Lorenzo Dalla Vedova, Politecnico di Torino

"Four-bladed rotor vortices tracking by TR-PIV", F. De Gregorio, G. Ceglia, T. Astarita, C.I.R.A.

"Deep Reinforcement Learning for active flow control of the wake of a bluff body", E. Amico, G. Cafiero, G. Iuso, Politecnico di Torino

"Optical-Flow based analysis for range hoods captured flow measurement", T. Tocci, L. Capponi, J. Pirisinu, F. Chiavarini, G. Rossi, R. Marsili, *Università degli Studi di Perugia*

"Infrared Thermography Measurements over a Tail-Plane Model of a Large Passenger Aircraft", A. Zanotti, A. Rausa, D. Grassi, L. Riccobene, G. Gibertini, A. Guardone, F. Auteri, *Politecnico di Milano*

"On the Robustness of Microflown Probe for the Assessment of the Vibro-Acoustic Signature: Methodological and Experimental Aspects in a Modal Test Environment", S. De Carolis, L. Fabbiano, A. Gaspari, L. Soria, G. Carbone, G. D'Emilia, G. Vacca, *Politecnico di Bari*

"Genetic Algorithm based control of the wake of a bluff body", E. Amico, D. Di Bari, G. Cafiero, G. Iuso, *Politecnico di Torino*

"An experimental study on the aeroacoustic properties of an aeronautical propeller for electric propulsion", P.Candeloro, E. Martellini, R. Nederlof, T. Sinnige, T. Pagliaroli, *Università degli Studi Niccolò Cusano*

Final Greetings & End of Meeting

17.20

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