



**XXXI A.I.VE.LA.
ANNUAL NATIONAL MEETING**

Milan, 5-6 December 2023

PRELIMINARY PROGRAMME

TUESDAY, 5th DECEMBER

09.20 REGISTRATION

09.50 WELCOME

10.00 TECHNICAL SESSION #1

Chairman: Prof. A. Cigada, Politecnico di Milano

"Non-Intrusive Laser Based Flow Rate Measurement Technique for Multiphase Flows", G. Tribbiani, T. Truffarelli, G. Rossi, University of Padua

"High Speed Tracking of the Helicopter Ditching", E. Faiella, S. Grizzi, F. Passacantilli, I. Santic, M. Sellini, CNR – INM

"Non-invasive inspection methods for the defect analysis of filament wound composite cylinders and the process optimization", L. Chiominto, G. D'Emilia, A. Gaspari, E. Natale, A. Stamopoulos, University of L'Aquila

"Uncertainty Analysis Of A Non-Contact Image-Based Measurement System For Tracking Mandibular Movements", T. Truffarelli, C. Valenti, G. Tribbiani, S. Pagano, R. Marsili, G. Rossi, University of Perugia

"Characterisation of hydrophobic surfaces by droplet impact", A. Amoresano, A. Aronne, A. Bifulco, C. Imperato, S. Roscioli, University of Naples "Federico II"

11.40 TECHNICAL SESSION #2

Chairman: Prof. F. Cozzi, Politecnico di Milano

"Cross-Wavelet based algorithm for combustion diagnostics from radiative emission of solid rocket motors plume", E. Martellini, G. Troiani, M. Mancinelli, P. Candeloro, T. Pagliaroli, R. Camussi, Niccolò Cusano University

"DRL-based control of a three-dimensional bluff body's wake", E. Amico, J. Serpieri, G. Cafiero, G. Iuso, Polytechnic University of Turin

"Optical measurements of solid volume fraction and granular temperatures in granular flows over erodible bed", L. Sarno, M. N. Papa, Y. C. Tai, Y. Wang, P. Villani, University of Salerno

"Experimental dataset of H₂/CH₄-air Bunsen flames: interplay of intrinsic instabilities and turbulence", G. Troiani, P. E. Lapenna, F. D'Alessio, F. Creta, ENEA C.R. Casaccia

"Plastic litter detection using hyperspectral sensing and Linear Discriminant Analysis", M. Balsi, S. Bouchelaghem, M. Moroni, Sapienza University of Rome

- 13.20 LUNCH
- 14.30 **MANUFACTURER'S DEMO**
"Vibration measurements by 1D scanning LDV and Polytec QTEC® multi-detector technology", BPS Srl
- 14.50 **TECHNICAL SESSION #3**
Chairman: Dr G. Troiani, ENEA C.R. Casaccia
"Loss of wearability of hearing protectors", *D. Annesi, M. Cavacece, University of Cassino*
"Metrological concerns in point cloud processing methods for evacuation planning purposes", *L. Chiominto, G. D'Emilia, A. Gaspari, S. Marsella, M. Marzoli, E. Natale, University of Aquila*
"Preliminary design of an FBG-based sensor for measurements of strain and temperature", *M.D.L. Dalla Vedova, G. Quattrocchi, A. Aimasso, M. Bertone, P. Maggiore, Polytechnic University of Turin*
"Strategies to evaluate musculoskeletal disorders to the human arm hand system using similarity metrics", *M. Cavacece, University of Cassino*
- 16.10 **INVITED LECTURE**
"Defocus Particle Tracking: Recent developments and applications", *Prof. Massimiliano Rossi, Alma Mater Studiorum – University of Bologna*
- 16.45 COFFEE BREAK
- 17.00 **TECHNICAL SESSION #4**
Chairman: Prof. P. Chiariotti, Politecnico di Milano
"Experimental characterization of humerus bones with complex fracture patterns and fixation systems via laser vibrometry", *B. Carboni, S.K. Guruva, S. Gumina, V. Candela, J. Tirilló, C. Sergi, T. Valente, W. Lacarbonara, Sapienza University of Rome*
"Multi-objective wind tunnel testing campaign: combining aeroelastic and aeroacoustics testing activities", *E. Di Lorenzo, S. Vettori, D. Mastrodicasa, M. Chillemi, J. Cuenca, C. Colangeli, K. Janssens, R. Hallez, L. Erbig, M. Sanders, Siemens Industry Software*
- 17.40 **MANUFACTURERS' PRESENTATIONS**
- 18.10 **MEMBERS GENERAL ASSEMBLY**
- 19.00 END of MEETING DAY 1
- 20.30 GALA DINNER

WEDNESDAY, 6th DECEMBER

A.I.VE.LA. and CEEES joint event

08.40 REGISTRATION

08.50 WELCOME

09.00 TECHNICAL SESSION #5

Chairman: Dr F. De Gregorio, C.I.R.A. - Italian Aerospace Research Centre

"Adaptation of DIC technique for simplified applications in experimental mechanics", N.P. Thatikonda, D. Baraldi, G. Boscato, J.

Baldelli, A. Cecchi, Iuav University of Venice

"DIC vibration measurement through Smartphone devices", S. Occhipinti, D. Botto, C.M. Firrone, P. Neri, University of Pisa

"Preliminary design and performance evaluation of optical fiber-based load sensor for aerospace systems", A. Aimasso, M. Bertone,

M. D. L. Dalla Vedova, P. Maggiore, Polytechnic University of Turin

10.00 INVITED LECTURE

"Microphone Array Measurements for Acoustic Source Mapping", Prof. Gianmarco Battista, University of Parma

10.35 COFFEE BREAK

10.50 TECHNICAL SESSION #6

Chairman: Prof. M.D.L. Dalla Vedova, Polytechnic University of Turin

"Flow Field and Acoustic Assessment of Twin Rotors in Hover Condition", F. De Gregorio, P. Candeloro, G. Ceglia, T. Pagliaroli, CIRA

"Experimental investigation of drone propeller through Particle Image Velocimetry (PIV) in different operative conditions", A. Grava,

L. Bernardos, J. Serpieri, G. Cafiero, Polytechnic University of Turin

11.30 SESSION CEEES

Chairman: Prof. G. D'Emilia, University of L'Aquila

"CEEES: a scientific and technical partner for applications in environmental engineering", Prof. G. D'Emilia, University of L'Aquila,

Italy, CEEES President

"Laboratory comparison test for shock and vibration testing"

Presenter: M. Haider, AIT Austrian Institute of Technology GmbH, Austria

Author: M. Staufer, TÜV AUSTRIA TVFA

"Nondestructive defect density measurement at atomic level – New opportunities using non-radioactive positron generators", J.-M.

REY and P. Bregeault, POSITHOT, France

"Solar tests in the field vs lab test conditions, and the product lifetime is.....", M. van Doesburg , Eurofins | EAG Laboratories, The Netherlands

12.30 **INVITED LECTURE**

"Non contact measurement of turbomachine blade vibration in working conditions by blade tip timing technique", Prof. Gianluca Rossi, University of Perugia

13.00 **TECHNICAL SESSION #7**

Chairman: Prof. E.P. Tomasini, President of A.I.VE.LA.

"Application of the tomographic BOS technique to a H₂-air premixed flame", F. Iapaolo, F. Cozzi, M. Orlando, Politecnico di Milano

"Towards plasma-induced swirling jets", S. Buselli, P.J. Comunian, G. Cafiero, G. Iuso, J. Serpieri, Polytechnic University of Turin

13.40 **LUNCH**

14.40 Visit to the **WIND TUNNEL of the DEPARTMENT of MECHANICS of POLITECNICO di MILANO**

15.45 **END of MEETING**

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