XXXII A.I.VE.LA.
ANNUAL NATIONAL MEETING

Forlì, 19-20 December 2024

FINAL PROGRAMME

THURSDAY, 19th DECEMBER

12.15 *REGISTRATION*

12.45 *WELCOME*

13.00 **TECHNICAL SESSION #1**

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

"Vision-Guided Cobot-Assisted Adaptive Metal Sheet Bending", *A. Pacini, R. Chelli, F. Lupi, F. Giacomelli, M. Lanzetta, University of Pisa*

"DIC uncertainty due to shadow variability in outdoor testing: Effects and mitigation actions", *M. Hajjar, E. Zappa, G. Bolzon, Politecnico di Milano*

"Validation of an energy-based material selection algorithm for fruit bruising and impact damage reduction in trunk shaker harvesting", *A. Annessi, V. Medici, F. Belluccini, S. Forlano, V. Giorgi, E. M. Lodolini, M. Martarelli, P. Castellini, D. Neri, Polytechnc University of Marche*

14.00 **TECHNICAL SESSION #2**

Chairman: Prof. T. Pagliaroli, Niccolò Cusano University

"Improvement of oil film interferometry for wall shear stress measurement with deep learning", *M. Mehdizadeh Youshanlouei , M.Rossi, University of Bologna*

"Applying Distributed Acoustic Sensing (DAS) approaches to monitor debris flow events: a preliminary analysis", *N. Poursalimi, L. Sarno, L. Schenato, L. Palmieri, A. Galtarossa, P. R. Tecca, A. Pasuto, M. C. Mandaglio, G. Viccione, University of Salerno*

"Spectroscopy for experimental assessment of burning regimes in hydrogen-enriched swirled combustors from 1 to 4 bar", *G. Troiani, M. Marrocco, S. Scaccia, A. Assettati, G. Guidarelli, E. Giacomazzi, ENEA C.R. Casaccia*

15.00 **INVITED LECTURE**

"Interferometric eyes to watch MEMS dancing", *Prof. Sabina Merlo, University of Pavia*

15.30 *COFFEE BREAK*

16.00 **TECHNICAL SESSION #3**

Chairman: Prof. R. Camussi, Roma Tre University

"Aeroacoustic Interference: Analytical and Experimental Investigation of Noise Generated by Tandem Rotors", *T. Pagliaroli, P. Candeloro, F. Del Duchetto, K.-S. Rossignol, J. Yin, Niccolò Cusano University*

"Aerodynamic and Aeroacustic Interactional Effects for a UAV", *G. Longobardo, G. Fasulo, T. Astarita, F. De Gregorio, C.I.R.A. - Italian Aerospace Research Centre*

"Interaction between propellers operating in forward flight", *P. Comunian, S. Montagner, J. Serpieri, G. Cafiero, Polytechnic University of Turin*

17.00 **INVITED LECTURE**

"Research facilities at the Italian Aerospace Research Center: 40 years of history and the future?", *Dr Stefania Cantoni, C.I.R.A. - Italian Aerospace*

17.30 **TECHNICAL SESSION #4**

Chairman: Dr G. Troiani, ENEA C.R. Casaccia

"Thermographic image-based analysis of fluid-structure interaction in aerodynamic testing: identification turbulent regime areas", *T.Truffarelli, G.Tribbiani, R.Marsili, G.Rossi, University of Perugia*

"Experimental investigation of the isothermal flow field in an air staged multiswirl 100% hydrogen burner", *F. Iapaolo, F. Cozzi, Politecnico di Milano*

"Prototype validation of a low invasive Fiber Bragg Grating based temperature and strain sensor for aerospace systems monitoring", *A. Aimasso, M. Bertone, C. G. Ferro, P. Maggiore, M. D. L. Dalla Vedova, Polytechnic University of Turin*

"Heat transfer analysis of the turbine blades by using finite element method", *M. Cavacece, University of Cassino and Southern Latium*

18.50 VISIT to CICLoPE – Centre for International Cooperation in Long Pipe Experiments

20.30 *GALA DINNER*

FRIDAY, 20th DECEMBER

08.45 *REGISTRATION*

09.00 **TECHNICAL SESSION #5**

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

"Optical analysis of the deposition and detachment phenomena experienced by an airfoil leading edge", *A. Suman, N. Zanini, M. Piovan, F. Bosi, M. Pinelli, University of Ferrara*

"Characterisation of two-phase flow behaviour within horizontal and vertical ducts", *A. Amoresano, G. Quaremba. M. Barrasso, University of Naples "Federico II"*

"A harmonic analysis of surface fluctuations in chute flows of dry granular media", *L. Sarno, L. Ramaglia, G. Viccione, M. N. Papa, University of Salerno*

10.00 **TECHNICAL SESSION #6**

Chairman: Prof. F. Cozzi, Politecnico di Milano

"Suboff Propeller installation effects in steady drift conditions", *M. Felli, S. Meloni, Institute of Marine Engineering (INM)*

"Improvement of a Free-wake Model by using PIV Measurements for the Analysis of a Small-scale Propeller with Dissimilar Blade Geometries", *M. Iannotta, A. Visingardi, D. Quagliarella, F. De Gregorio, M. Barbarino, A. Zanotti, C.I.R.A. - Italian Aerospace Research Centre*

"Towards plasma-based swirling jets", *M. Zannone, E. Amico, G. Cafiero, G. Iuso, J. Serpieri, Polytechnic University of Turin*

11.00 *COFFEE BREAK*

11.20 **INVITED LECTURE**

"3D Lagrangian Particle Tracking and Data Assimilation in Fluid Mechanics – Resolving a wide range of flow scales by STB and FlowFit", *Prof. Andreas Schröder, German Aerospace Center (DLR) and Brandenburg Technical University (BTU), Germany*

11.50 **MANUFACTURERS' PRESENTATIONS**

12.20 **MEMBERS GENERAL ASSEMBLY**

13.00 *LUNCH*

13.50 **"Giulio Guj" DEGREE PRIZE - Award Ceremony & Presentation by the Winning Candidate**

14.20 **TECHNICAL SESSION #7**

Chairman: Dr F. Di Felice, CNR-INM

"Fast and Low-Cost Robotic Hand-eye Calibration of Point Laser Sensor", *F. Lupi, M. Mastropaolo, A. Pacini, M. Lanzetta, University of Pisa*

"Wavepacket signatures in the pressure near-field of compressible subsonic jets", *R. Camussi, M. Mancinelli, E. De Paola, Roma Tre University*

15.00 **LATEST NEWS ABOUT CEEES**

15.20 **TECHNICAL SESSION #8**

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

"Optical analysis of composite materials: metrological issues", *L. Chiominto, G. D'Emilia, E. Natale, F.Tiberi, University of L'Aquila*

"Flow field and thermal performance of a U-shaped mini-channel sink", *G. Moscato, G. P. Romano, Sapienza University of Rome*

"Characterization of mixed convection in microfluidic channels with Defocus Particle Tracking ", *F. Azzini, M. Tondini, B. Pulvirenti, G.L. Morini, M. Rossi, University of Bologna*

16.30 END of MEETING

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