

PROGRAM

Monday, 23 September 2024

8:00-09:15	Registration			
9:15-09:30	Opening and institutional greetings			
9:30-09:45	Award			
9:45-10:30	PLENARY LECTURE ON THE MANY FACETS OF FLOW CONTROL - Israel Wygnanski <i>Chair: E. GUTMARK</i>			
10:30-11:00	Coffee Break			
<i>11:00-12:40 - PARALLEL SESSIONS (ORAL PRESENTATIONS)</i>				
SALONE BRUNELLESCHI			SALONE POCETTI	
SESSION M1: Passive and Active Flow Control #1 <i>Chair:</i>			SESSION M2: Heat transfer <i>Chair: B. Facchini</i>	
11:00-11:20	M1.1	LOSS REDUCTION IN THE FLOW THROUGH AN ELBOW TUBE WITH SHARP-EDGED CORNER BY USING A WEIR-SHAPED OBSTACLE <i>Toshitake Ando</i> ID: 73	M2.1	HEAT TRANSFER STUDY OF OBLIQUELY IMPINGING JET COOLING A HOT SURFACE BY USING GREEN SPECTRUM BASED TEMPERATURE SENSITIVE PAINT <i>Haricharan Pippari</i> ID: 63
11:20-11:40	M1.2	TRANSITION TO THE SUPER-CRITICAL REGIME AND NEAR WAKE DYNAMICS FOR TESSELLATED BLUFF BODIES <i>Elias Balaras</i> ID: 62	M2.2	EXPERIMENTAL CHARACTERIZATION OF AIR THERMAL MIXING BETWEEN COLD INCLINED JET IN HOT CROSS FLOW BY MEASUREMENT OF 2D INSTANTANEOUS TEMPERATURE FROM ZNO PHOSPHORESCENCE. <i>Gildas Lalizel</i> ID: 83
11:40-12:00	M1.3	HELICAL MODE FORMED IN THE INITIAL REGION OF A ROUND JET BY SYNTHETIC JETS <i>Akinori Muramatsu</i> ID: 74	M2.3	NUMERICAL INVESTIGATION OF FORWARD/BACKWARD COOLANT INJECTION FOR EFFUSION COOLING METHOD <i>Gamze Gulenc</i> ID: 59
12:00-12:20	M1.4	HEMODYNAMIC EFFECTS OF THE UNIQUE NETWORK TOPOLOGY OF HAWAIIAN FLIES' WING VEINS <i>Kazuki Sugiyama</i> ID: 37	M2.4	HEAT TRANSFER COEFFICIENT AND ADIABATIC EFFECTIVENESS MEASUREMENTS ON A NOZZLE GUIDE VANE WITH A DOUBLE ROW OF CYLINDRICAL HOLES <i>Sofia Galeotti</i> ID: 88
12:20-12:40	M1.5	ACTIVE FLOW CONTROL OF A 2:1 RECTANGULAR JET USING DIELECTRIC BARRIER DISCHARGE PLASMA ACTUATORS <i>Naoki Kajitani</i> ID: 93	M2.5	NUMERICAL PREDICTION OF THE HEAT LOADS ON A TURBINE VANE TEST CASE: ASSESSMENT OF RANS APPROACHES CAPABILITIES <i>Niccolò Castelli</i> ID: 87
12:40-14:00	Light Lunch			
14:00-14:45	PLENARY LECTURE NOVEL EXTRACTION METHODOLOGY BY LINEAR RESPONSE OF TURBULENCE AND ITS APPLICATIONS TO TURBULENT SHEAR FLOWS Masaharu Matsubara <i>Chair: Masaki FUCHIWAKI / Toshihiko SHAKOUCHI</i>			
14.45-15.00	Break/Transfer			
<i>15:00-17:00 - PARALLEL SESSIONS (ORAL PRESENTATIONS)</i>				
SALONE BRUNELLESCHI			SALONE POCETTI	
SESSION M3: Combustion and Detonation #1 <i>Chair: Andrea Gruber</i>			SESSION M4: Free and confined jets #1 <i>Chair:</i>	

15:00-15:20	M3.1	DNS-RANS COMPARISON OF NON-PREMIXED HYDROGEN COMBUSTION IN AN ARGON/OXYGEN ENVIRONMENT <i>Nick Diepstraten</i> ID: 45	M4.1	CONTROL OF HYDROGEN JET MIXING THROUGH USE OF COAXIAL AIR JET <i>Martin Östman</i> ID: 73
15:20-15:40	M3.2	Numerical study of the effect of ambient air oxygen concentration on the combustion behaviour of fuel films <i>Fujio Akagi</i> ID: 79	M4.2	INVESTIGATION OF THE FLOW FIELD MORPHOLOGY OF FILM COOLING IN SUPERSONIC FLOW <i>Umberto Sandri</i> ID: 80
15:40-16:00	M3.3	ON EFFECT OF CELL BASE WIDTH ON THRUST PERFORMANCE OF A SCRAMJET EXTERNAL NOZZLE <i>Tatsushi Isono</i> ID: 18	M4.3	NUMERICAL ANALYSIS OF COMBUSTOR BURN-THROUGH REPRESENTATIVE JET <i>Lorenzo Pinelli</i> ID: 61
		SESSION M5: Wake flows #1 <i>Chair:</i>	SESSION M6: Passive and Active Flow Control #2 <i>Chair:</i>	
16:00-16:20	M5.1	EVOLUTION OF FLOW AROUND A FINITE CIRCULAR CYLINDER IN THE CRITICAL TRANSITION RANGE <i>Jiun-Jih Miao</i> ID: 20	M6.1	EFFECT OF ELECTRODE AMPLITUDE ON FLOW SEPARATION SUPPRESSION BY MULTI-WAVY PLASMA ACTUATOR <i>Yusuke Marukawa</i> ID: 85
16:20-16:40	M5.2	STATISTICAL ANALYSIS OF FLOW FIELD PATTERNS IN CRITICAL TRANSITION OF A FINITE CYLINDER USING AN ADAPTIVE THRESHOLD METHOD <i>YuHsiang Chen</i> ID: 19	M6.2	THRUST VECTOR CONTROL OF SUPERSONIC JET BY MOVABLE COANDA NOZZLE <i>Shakouchi Toshihiko</i> ID: 64
16:40-17:00	M5.3	ANALYSIS ON EVOLUTION OF THE ENERGY CONTRIBUTION FOR COHERENT STRUCTURE IN CYLINDRICAL NEAR-WAKE FLOW USING PROPER ORTHOGONAL DECOMPOSITION <i>Keh-Chin Chang</i> ID: 17	M6.3	FLOW VISUALIZATION ON CURVED WALL SYNTHETIC JET <i>Takaya Hiruma</i> ID: 36
17:15-18:00	Welcome reception			
17:15-18:00	Guided tour at "Museo degli Innocenti"			

Tuesday, 24 September 2024

8:00-09:00	Registration			
8:45-9:30	PLENARY LECTURE Andrea Gruber <i>Chair: C. O. PASCHEREIT</i>			
9:30-9:40	Break/Transfer			
9:40-10:40	PARALLEL SESSIONS (ORAL PRESENTATIONS)			
	SALONE BRUNELLESCHI		SALONE POCSETTI	
	SESSION T1: Combustion and Detonation #2 <i>Chair: M. Bellenoue</i>		SESSION T2: Free and confined jets #2 <i>Chair: M. Mihaescu</i>	
10:00-10:20	T1.1	EXPERIMENTAL ANALYSIS OF END-GAS TEMPERATURE EFFECT ON SPONTANEOUS DETONATION DEVELOPMENT MECHANISMS FOR A HYDROGEN/N-DECANE MIXTURE <i>Roseline Ezekwesili</i> ID: 65	T2.1	FLOW AND ACOUSTICS BY SHOCK-TURBULENCE INTERACTION IN TWIN-JETS CONFIGURATION <i>Ephraim Gutmark</i> ID: 50
10:20-10:40	T1.2	HIGH-SPEED RDC DATA AVERAGING THROUGH DYNAMIC TIME WARPING <i>Mauro Tagliaferri</i> ID: 72	T2.2	MELT DAMAGE TO GAS NOZZLE TIP IN CLOSE-COUPLED GAS ATOMIZATION <i>Nazuku Kato</i> ID: 73
10:40-11:00	T1.3	EXPERIMENTAL ANALYSIS OF BOUNDARY CONDITION EFFECTS ON THE PRESSURE FIELD WITHIN AN RDC <i>Hongyi Wei</i> ID: 69	T2.3	LARGE EDDY SIMULATION OF UNDEREXPANDED MICROJETS FROM A SQUARE SUPERSONIC NOZZLE <i>Ryuki Nishi</i> ID: 56
10:40-11:10	Coffee Break			
	11:10-12:30 - PARALLEL SESSIONS (ORAL PRESENTATIONS)			
	SALONE BRUNELLESCHI		SALONE POCSETTI	
	SESSION T3: Vortex flows <i>Chair: TBD</i>		SESSION T4: Wake flows #2 <i>Chair: TBD</i>	
11:10-11:30	T3.1	FLOW FIELD FOR MERGING OF FOUR VORTEX RINGS IN A ROUND JET ACOUSTICALLY EXCITED BY A SINUSOIDAL WAVE <i>Akinori Muramatsu</i> ID: 71	T4.1	NUMERICAL MODELLING OF NAVIER-STOKES EQUATION FOR ATMOSPHERIC AND WIND FARM TURBULENCE <i>Jagdeep Singh</i> ID: 40
11:30-11:50	T3.2	REYNOLDS NUMBER EFFECTS ON THE VORTEX STATE SWITCH OF AN UCAV MODEL <i>Yu-Hsin Chen</i> ID: 39	T4.2	FLOW OVER A 5:1 RECTANGULAR CYLINDER AT MODERATE REYNOLDS NUMBERS: COMPARISON BETWEEN DNS, LES, AND EXPERIMENTS <i>Mario Morello</i> ID: 46
11:50-12:10	T3.3	TURBULENT COHERENT STRUCTURES AROUND AN ARRAY OF BLOCKS <i>Takenobu Michioka</i> ID: 33	T4.3	IMPACT OF UNSTEADY INFLOW ON THE FLOW FEATURES OF ELONGATED RECTANGULAR CYLINDERS <i>Alessandro Mariotti</i> ID: 38
12:10-12:30	T3.4	NUMERICAL STUDY OF COMPRESSIBILITY EFFECTS IN THE FLOW PAST A CYLINDER <i>Paola Cinnella</i> ID: 75	T4.4	CHARACTERIZATION OF THE TURBULENCE INTENSITY GENERATED BY PASSIVE GRIDS IN COMPRESSIBLE FLOWS <i>Tommaso Bacci</i> ID: 90
12:30-14:00	Light Lunch			
14:00-14:45	PLENARY LECTURE K. Oberleithner			

	<i>Chair: A. ANDREINI</i>			
14:45-15:00	Break/Transfer			
	<i>15:00-16:00 - PARALLEL SESSIONS (ORAL PRESENTATIONS)</i>			
	SALONE BRUNELLESCHI		SALONE POCCETTI	
	SESSION T5: Fluid-structure interaction <i>Chair: TBD</i>		SESSION T6: Passive and Active Flow Control #3 <i>Chair: TBD</i>	
15:00-15:20	T5.1	NUMERICAL INVESTIGATION OF SLIDING MOTION AND FLOW FIELD CHANGES IN SNOW ACCRETION ON WIRE USING PARTICLE-BASED METHOD <i>Mutian Wu</i> ID: 77	T6.1	INFLUENCE OF SPANWISE VELOCITY DISTRIBUTION ON FLOW INSTABILITY IN INWARD SWIRLING FLOW <i>Ryuichi Sato</i> ID: 42
15:20-15:40	T5.2	DYNAMIC RESPONSE OF AN INVERTED FLAG SUBJECTED TO A CYLINDER WAKE <i>Seiichiro Izawa</i> ID: 86	T6.2	PERFORMANCE AND OPERATIONAL STABILITY OF AXIAL-FLOW FAN WITH UPSTREAM FILTER <i>Shun Osnao</i> ID: 43
15:40-16:00	T5.3	DYNAMIC BEHAVIOR OF VORTEX RINGS AND CHARACTERISTICS OF DYNAMIC FORCES FORMED BY ELASTIC BUTTERFLY WING <i>Haishi Sei</i> ID: 84	T6.3	FEASIBILITY STUDY ON DEVELOPMENT OF RETURN GUIDE VANE USING JET FLOW <i>Toshihiro Fujii</i> ID: 35
16:00-16:30	Coffee Break			
	<i>16:30-17:30 - PARALLEL SESSIONS (ORAL PRESENTATIONS)</i>			
	SALONE BRUNELLESCHI		SALONE POCCETTI	
	SESSION T7: Fluid machinery and aeroacoustics <i>Chair: R. Pacciani</i>		SESSION T8: Multiphase flows <i>Chair: TBD</i>	
16:30-16:50	T7.1	MODELLING LEADING EDGE EROSION OF WIND TURBINE BLADES <i>Bernhard Semlitsch</i> ID: 52	T8.1	HYDROACOUSTIC ANALYSIS OF A FULL-SCALE MARINE VESSEL: NUMERICAL PREDICTION OF CAVITATION-INDUCED UNDERWATER RADIATED NOISE <i>Peter Oshkai</i> ID: 91
16:50-17:10	T7.2	NUMERICAL STUDY OF FISH SCALES STRUCTURE ON THE FLOW LOSS REDUCTION IN COMPRESSOR CASCADE <i>Jin-Long Shen</i> ID: 30	T8.2	VISUALIZATION AND MEASUREMENT OF HIGH-TEMPERATURE AND HIGH-SPEED GAS-SOLID TWO-PHASE JET <i>Mitsuru Yokohama</i> ID: 44
17:10-17:30	T7.3	ANALYSIS OF THE VORTICITY CONTRIBUTIONS FOR A SWIRLING, SUPERSONIC AEROSPIKE NOZZLE JET <i>Thomas Golliard</i> ID: 60	T8.3	NUMERICAL PREDICTION OF FLOW INDUCED VIBRATIONS IN UNDERFLOW SLUICE GATES <i>Bernhard Semlitsch</i> ID: 25

18:30-20:00	Guided tour through Florence Heritage historic centre
20:00-22.30	Gala dinner at restaurant "Le serre Torrigiani"

Wednesday, 25 September 2024

8:00-8:45	Registration			
8:45-9:30	PLENARY LECTURE Yoshiyuki Tsuji <i>Chair: TBD</i>			
9:30-9:40	Break/Transfer			
<i>9:40-10:40 - PARALLEL SESSIONS (ORAL PRESENTATIONS)</i>				
SALONE BRUNELLESCHI			SALONE POCSETTI	
SESSION W1: Swirling and Shear flows <i>Chair: K. Oberlethneir</i>				
9:40-10:00	W1.1	ANALYSIS OF THE SHEAR LAYER INSTABILITY PROCESS OF A LAMINAR SEPARATION BUBBLE BY MEANS OF DYNAMIC MODE DECOMPOSITION TECHNIQUE <i>Virginia Bologna</i> ID: 78	W4.1	VORTICITY AND ENSTROPY TRANSPORT IN RECTANGULAR SUPERSONIC JETS <i>Kalyani Bhide</i> ID: 49
10:00-10:20	W1.2	RECONSTRUCTION OF A CONTINUOUS FLOW FIELD FROM DISCRETE EXPERIMENTAL DATA POINTS USING PHYSICS-INFORMED NEURAL NETWORKS <i>Mattias E. G. Eck</i> ID: 76	W4.2	MIXING PHENOMENON OF MULTIPLE JETS ARRANGED IN THE CIRCULAR ARRAY OF 5 ROWS <i>Inagaki Ayumu</i> ID: 28
10:20-10:40		-	W4.3	QUANTITATIVE FLOW VISUALIZATION OF SUPERSONIC JETS FROM AN AXISYMMETRIC LAVAL NOZZLE BY MZI <i>Hiromu Ueno</i> ID: 51
10:40-11:10	Coffee Break			
<i>11:10-12:30 - SESSIONS (ORAL PRESENTATIONS)</i>				
SALONE BRUNELLESCHI				
SESSION W3: Compressible flows #2 <i>Chair: TBD</i>				
11:10-11:30	W3.1	PIV ON CAVITY FLAME HOLDER IN SUPERSONIC FLOW <i>Ho-Tse Huang</i> ID: 29		
11:30-11:50	W3.2	REDUCTION OF TWO-DIMENSIONAL CAVITY FLOW OSCILLATIONS AT SUPERSONIC SPEED BY CURVING ITS REAR FACE <i>Soumya Ranjan Nanda</i> ID: 34		
11:50-12:10	W3.3	QUANTITATIVE FLOW VISUALIZATION OF A SQUARE UNDEREXPANDED MICROJET BY RST <i>Itsuki Morita</i> ID: 55		
12:10-12:30	W3.4	QUANTITATIVE FLOW VISUALIZATION OF AN ELLIPTIC UNDEREXPANDED SONIC JET BY RST <i>Takumi Sakashita</i> ID: 54		
12:30-14:00	Light Lunch			
14:00-14:45	PLENARY LECTURE ANALYSIS AND CONTROL OF HYDRODINAMIC INSTABILITIES IN WAKES USING ADJOINT METHODS S. Camarri <i>Chair: M. MARCONCINI</i>			
14:45-15:00	Break/Transfer			

	<i>15:00-16:20 - SESSION (ORAL PRESENTATIONS)</i>	
	SALONE BRUNELLESCHI	
	SESSION W5: Combustion and Detonation #3	
	<i>Chair:</i>	
15:00-15:20	W5.1	CYCLIC RE-IGNITION PHENOMENA IN CONSTANT VOLUME COMBUSTORS <i>Choomanee Runno</i> ID: 89
15:20-15:40	W5.2	HIGH-FIDELITY INVESTIGATIONS OF ROTATING DETONATION COMBUSTORS USING AN OPTIMIZED CHEMISTRY MODEL <i>Shreyas Ramanagar Sridhara</i> ID: 82
15:40-16:00	W5.3	NUMERICAL INVESTIGATION OF NON-PREMIXED OBLIQUE DETONATION OPERATIONS IN SCRAMJET COMBUSTOR <i>Ashish Vashishtha</i> ID: 48
16:00-16:20	W5.4	BEHAVIOR OF CHEMICALLY ACTIVE SPECIES IN PREMIX BURNER USING DBD PLASMA ACTUATOR <i>Motoaki Kimura</i> ID: 24
16:20-16:30	Closing ceremony	