

## Monday, 23 September 2024

8:00-9:15	<b>Registration</b>		
9:15-9:30	<b>Opening and institutional greetings</b>		
9:30-9:45	<b>Award</b>		
9:45-10:30	PLENARY INVITED TALK <b>ON THE MANY FACETS OF FLOW CONTROL</b> <b>Israel Wygnanski</b> <i>Chair: E. GUTMARK</i>		
10:30-11:00	Coffee Break		
	<i>11:00-12:40 - PARALLEL SESSIONS (ORAL PRESENTATIONS)</i>		
	<b>SALONE BRUNELLESCHI</b>		<b>SALONE POCCETTI</b>
	<b>SESSION M1: Passive and Active Flow Control #1</b> <i>Chair: I. Wygnanski</i>		<b>SESSION M2: Heat transfer</b> <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> <b>ID: 73</b>	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> <b>ID: 63</b>
11:20-11:40	M1.2	TRANSITION TO THE SUPER-CRITICAL REGIME AND NEAR WAKE DYNAMICS FOR TESSELLATED BLUFF BODIES <i>Elias Balaras</i> <b>ID: 62</b>	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> <b>ID: 83</b>
11:40-12:00	M1.3	HELICAL MODE FORMED IN THE INITIAL REGION OF A ROUND JET BY SYNTHETIC JETS <i>Akinori Muramatsu</i> <b>ID: 74</b>	M2.3 NUMERICAL INVESTIGATION OF FORWARD/BACKWARD COOLANT INJECTION FOR EFFUSION COOLING METHOD <i>Gamze Gulenc</i> <b>ID: 59</b>
12:00-12:20	M1.4	HEMODYNAMIC EFFECTS OF THE UNIQUE NETWORK TOPOLOGY OF HAWAIIAN FLIES' WING VEINS <i>Kazuki Sugiyama</i> <b>ID: 37</b>	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> <b>ID: 88</b>
12:20-12:40	M1.5	THRUST VECTOR CONTROL OF SUPERSONIC JET BY MOVABLE AND NON-MOVABLE COANDA NOZZLES <i>Shakouchi Toshihiko</i> <b>ID: 64</b>	M2.5 NUMERICAL PREDICTION OF THE HEAT LOADS ON A TURBINE VANE TEST CASE: ASSESSMENT OF RANS APPROACHES CAPABILITIES <i>Niccolò Castelli</i> <b>ID: 87</b>
12:40-14:00	Light Lunch		

14:00-14:45	<p style="text-align: center;">PLENARY LECTURE</p> <p style="text-align: center;"><b>NOVEL EXTRACTION METHODOLOGY BY LINEAR RESPONSE OF TURBULENCE AND ITS APPLICATIONS TO TURBULENT SHEAR FLOWS</b></p> <p style="text-align: center;"><b>Masaharu Matsubara</b> <i>Chair: Masaki FUCHIWAKI</i></p>			
14.45-15.00	Break/Transfer			
	<i>15:00-17:00 - PARALLEL SESSIONS (ORAL PRESENTATIONS)</i>			
	<b>SALONE BRUNELLESCHI</b>		<b>SALONE POCETTI</b>	
	<b>SESSION M3: Combustion and Detonation #1</b> <i>Chair: Andrea Gruber</i>		<b>SESSION M4: Free and confined jets #1</b> <i>Chair: E. Gutmark</i>	
15:00-15:20	M3.1	<p>DNS-RANS COMPARISON OF NON-PREMIXED HYDROGEN COMBUSTION IN AN ARGON/OXYGEN ENVIRONMENT</p> <p style="text-align: center;"><i>Nick Diepstraten</i> <b>ID: 45</b></p>	M4.1	<p>CONTROL OF HYDROGEN JET MIXING THROUGH USE OF COAXIAL AIR JET</p> <p style="text-align: center;"><i>Martin Östman</i> <b>ID: 73</b></p>
15:20-15:40	M3.2	<p>Numerical study of the effect of ambient air oxygen concentration on the combustion behaviour of fuel films</p> <p style="text-align: center;"><i>Fujio Akagi</i> <b>ID: 79</b></p>	M4.2	<p>INVESTIGATION OF THE FLOW FIELD MORPHOLOGY OF FILM COOLING IN SUPERSONIC FLOW</p> <p style="text-align: center;"><i>Umberto Sandri</i> <b>ID: 80</b></p>
15:40-16:00	M3.3	<p>ON EFFECT OF CELL BASE WIDTH ON THRUST PERFORMANCE OF A SCRAMJET EXTERNAL NOZZLE</p> <p style="text-align: center;"><i>Tatsushi Isono</i> <b>ID: 18</b></p>	M4.3	<p>NUMERICAL ANALYSIS OF COMBUSTOR BURN-THROUGH REPRESENTATIVE JET</p> <p style="text-align: center;"><i>Lorenzo Pinelli</i> <b>ID: 61</b></p>
	<b>SESSION M5: Wake flows #1</b> <i>Chair: Masaki Fuchiwaki</i>		<b>SESSION M6: Free and confined jets #2</b> <i>Chair: M. Mihaescu</i>	
16:00-16:20	M5.1	<p>EVOLUTION OF FLOW AROUND A FINITE CIRCULAR CYLINDER IN THE CRITICAL TRANSITION RANGE</p> <p style="text-align: center;"><i>Jiun-Jih Miau</i> <b>ID: 20</b></p>	M6.1	<p>FLOW AND ACOUSTICS BY SHOCK-TURBULENCE INTERACTION IN TWIN-JETS CONFIGURATION</p> <p style="text-align: center;"><i>Ephraim Gutmark</i> <b>ID: 50</b></p>
16:20-16:40	M5.2	<p>STATISTICAL ANALYSIS OF FLOW FIELD PATTERNS IN CRITICAL TRANSITION OF A FINITE CYLINDER USING AN ADAPTIVE THRESHOLD METHOD</p> <p style="text-align: center;"><i>YuHsiang Chen</i> <b>ID: 19</b></p>	M6.2	<p>MIXING PHENOMENON OF MULTIPLE JETS ARRANGED IN THE CIRCULAR ARRAY OF 5 ROWS</p> <p style="text-align: center;"><i>Inagaki Ayumu</i> <b>ID: 28</b></p>
16:40-17:00	M5.3	<p>ANALYSIS ON EVOLUTION OF THE ENERGY CONTRIBUTION FOR COHERENT STRUCTURE IN CYLINDRICAL NEAR-WAKE FLOW USING PROPER ORTHOGONAL DECOMPOSITION</p> <p style="text-align: center;"><i>Keh-Chin Chang</i> <b>ID: 17</b></p>	M6.3	<p>QUANTITATIVE FLOW VISUALIZATION OF SUPERSONIC JETS FROM AN AXISYMMETRIC LAVAL NOZZLE BY MZI</p> <p style="text-align: center;"><i>Hiromu Ueno</i> <b>ID: 51</b></p>
17:15-18:00	<b>Welcome reception</b>			
18:00-19:00	<b>Guided tour at "Museo degli Innocenti"</b>			

## Tuesday, 24 September 2024

8:00-9:00	<b>Registration</b>			
8:45-9:30	PLENARY LECTURE <b>DIRECT NUMERICAL SIMULATION IN FUNDAMENTAL AND APPLIED COMBUSTION RESEARCH: CHALLENGES AND OPPORTUNITIES</b> <b>Andrea Gruber</b> <i>Chair: C. O. PASCHEREIT</i>			
9:30-9:40	Break/Transfer			
9:40-10:40	PARALLEL SESSIONS (ORAL PRESENTATIONS)			
	<b>SALONE BRUNELLESCHI</b>		<b>SALONE POCSETTI</b>	
	<b>SESSION T1: Combustion and Detonation #2</b> <i>Chair: M. Bellenoue</i>		<b>SESSION T2: Free and confined jets #3</b> <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> <b>ID: 65</b>	T2.1	VORTICITY AND ENSTROPY TRANSPORT IN RECTANGULAR SUPERSONIC JETS  <i>Kalyani Bhide</i> <b>ID: 49</b>
10:20-10:40	T1.2	HIGH-SPEED RDC DATA AVERAGING THROUGH DYNAMIC TIME WARPING  <i>Mauro Tagliaferri</i> <b>ID: 72</b>	T2.2	MELT DAMAGE TO GAS NOZZLE TIP IN CLOSE-COUPLED GAS ATOMIZATION  Nazuku Kato <b>ID: 73</b>
10:40-11:00	T1.3	EXPERIMENTAL ANALYSIS OF BOUNDARY CONDITION EFFECTS ON THE PRESSURE FIELD WITHIN AN RDC  <i>Hongyi Wei</i> <b>ID: 69</b>	T2.3	LARGE EDDY SIMULATION OF UNDEREXPANDED MICROJETS FROM A SQUARE SUPERSONIC NOZZLE  Ryuki Nishi <b>ID: 56</b>
10:40-11:10	Coffee Break			
	11:10-12:30 - PARALLEL SESSIONS (ORAL PRESENTATIONS)			
	<b>SALONE BRUNELLESCHI</b>		<b>SALONE POCSETTI</b>	
	<b>SESSION T3: Vortex flows</b> <i>Chair: S. Camarri</i>		<b>SESSION T4: Swirling, shear and wake flows</b> <i>Chair: K. Oberleithner</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> <b>ID: 71</b>	T4.1	ANALYSIS OF THE SHEAR LAYER INSTABILITY PROCESS OF A LAMINAR SEPARATION BUBBLE BY MEANS OF DYNAMIC MODE DECOMPOSITION TECHNIQUE  <i>Matteo Dellacasagrande</i> <b>ID: 78</b>
11:30-11:50	T3.2	REYNOLDS NUMBER EFFECTS ON THE VORTEX STATE SWITCH OF AN UCAV MODEL  <i>Yu-Hsin Chen</i> <b>ID: 39</b>	T4.2	FLOW OVER A 5:1 RECTANGULAR CYLINDER AT MODERATE REYNOLDS NUMBERS: COMPARISON BETWEEN DNS, LES, AND EXPERIMENTS  <i>Mario Morello</i> <b>ID: 46</b>
11:50-12:10	T3.3	TURBULENT COHERENT STRUCTURES AROUND AN ARRAY OF BLOCKS  <i>Takenobu Michioka</i> <b>ID: 33</b>	T4.3	IMPACT OF UNSTEADY INFLOW ON THE FLOW FEATURES OF ELONGATED RECTANGULAR CYLINDERS  <i>Alessandro Mariotti</i> <b>ID: 38</b>
12:10-12:30	T3.4	NUMERICAL STUDY OF COMPRESSIBILITY EFFECTS IN THE FLOW PAST A CYLINDER  <i>Paola Cinnella</i> <b>ID: 75</b>	T4.4	RECONSTRUCTION OF A CONTINUOUS FLOW FIELD FROM DISCRETE EXPERIMENTAL DATA POINTS USING PHYSICS-INFORMED NEURAL NETWORKS  <i>Mattias E. G. Eck</i> <b>ID: 76</b>
12:30-14:00	Light Lunch			

14:00-14:45	<p style="text-align: center;">PLENARY LECTURE</p> <p style="text-align: center;"><b>FROM CHAOS TO CONTROL: PHYSICS-BASED MODELING OF COHERENT STRUCTURES IN TURBULENT FLOWS</b></p> <p style="text-align: center;"><b>K. Oberleithner</b></p> <p style="text-align: center;"><i>Chair: A. ANDREINI</i></p>			
14:45-15:00	Break/Transfer			
	15:00-16:00 - PARALLEL SESSIONS (ORAL PRESENTATIONS)			
	<b>SALONE BRUNELLESCHI</b>		<b>SALONE POCSETTI</b>	
	<b>SESSION T5: Fluid-structure interaction</b> <i>Chair: L. Pinelli</i>		<b>SESSION T6: Passive and Active Flow Control #2</b> <i>Chair: Shakouchi Toshihiko</i>	
15:00-15:20	T5.1	<p>NUMERICAL INVESTIGATION OF SLIDING MOTION AND FLOW FIELD CHANGES IN SNOW ACCRETION ON WIRE USING PARTICLE-BASED METHOD</p> <p style="text-align: center;"><i>Mutian Wu</i></p> <p style="text-align: center;"><b>ID: 77</b></p>	T6.1	<p>INFLUENCE OF SPANWISE VELOCITY DISTRIBUTION ON FLOW INSTABILITY IN INWARD SWIRLING FLOW</p> <p style="text-align: center;"><i>Ryuichi Sato</i></p> <p style="text-align: center;"><b>ID: 42</b></p>
15:20-15:40	T5.2	<p>DYNAMIC RESPONSE OF AN INVERTED FLAG SUBJECTED TO A CYLINDER WAKE</p> <p style="text-align: center;"><i>Seiichiro Izawa</i></p> <p style="text-align: center;"><b>ID: 86</b></p>	T6.2	<p>PERFORMANCE AND OPERATIONAL STABILITY OF AXIAL-FLOW FAN WITH UPSTREAM FILTER</p> <p style="text-align: center;"><i>Shun Osano</i></p> <p style="text-align: center;"><b>ID: 43</b></p>
15:40-16:00	T5.3	<p>DYNAMIC BEHAVIOR OF VORTEX RINGS AND CHARACTERISTICS OF DYNAMIC FORCES FORMED BY ELASTIC BUTTERFLY WING</p> <p style="text-align: center;"><i>Haishi Sei</i></p> <p style="text-align: center;"><b>ID: 84</b></p>	T6.3	<p>FEASIBILITY STUDY ON DEVELOPMENT OF RETURN GUIDE VANE USING JET FLOW</p> <p style="text-align: center;"><i>Toshihiro Fujii</i></p> <p style="text-align: center;"><b>ID: 35</b></p>
16:00-16:30	Coffee Break			
	16:30-17:30 - PARALLEL SESSIONS (ORAL PRESENTATIONS)			
	<b>SALONE BRUNELLESCHI</b>		<b>SALONE POCSETTI</b>	
	<b>SESSION T7: Fluid machinery and aeroacoustics</b> <i>Chair: R. Pacciani</i>		<b>SESSION T8: Multiphase flows</b> <i>Chair: A. Andreini</i>	
16:30-16:50	T7.1	<p>MODELLING LEADING EDGE EROSION OF WIND TURBINE BLADES</p> <p style="text-align: center;"><i>Bernhard Semlitsch</i></p> <p style="text-align: center;"><b>ID: 52</b></p>	T8.1	<p>HIGH-FIDELITY ANALYSIS OF PROPELLER-RUDDER SYSTEM ACOUSTIC SIGNATURES IN A FULL-SCALE MARINE VESSEL: UNDERWATER RADIATED NOISE SPECTRA FROM WAKE STRUCTURES AND CAVITATION</p> <p style="text-align: center;"><i>Peter Oshkai</i></p> <p style="text-align: center;"><b>ID: 91</b></p>
16:50-17:10	T7.2	<p>NUMERICAL STUDY OF FISH SCALES STRUCTURE ON THE FLOW LOSS REDUCTION IN COMPRESSOR CASCADE</p> <p style="text-align: center;"><i>Szu-I Yeh</i></p> <p style="text-align: center;"><b>ID: 30</b></p>	T8.2	<p>VISUALIZATION AND MEASUREMENT OF HIGH-TEMPERATURE AND HIGH-SPEED GAS-SOLID TWO-PHASE JET</p> <p style="text-align: center;"><i>Mitsuru Yokohama</i></p> <p style="text-align: center;"><b>ID: 44</b></p>
17:10-17:30	T7.3	<p>ANALYSIS OF THE VORTICITY CONTRIBUTIONS FOR A SWIRLING, SUPERSONIC AEROSPIKE NOZZLE JET</p> <p style="text-align: center;"><i>Thomas Golliard</i></p> <p style="text-align: center;"><b>ID: 60</b></p>	T8.3	<p>NUMERICAL PREDICTION OF FLOW INDUCED VIBRATIONS IN UNDERFLOW SLUICE GATES</p> <p style="text-align: center;"><i>Bernhard Semlitsch</i></p> <p style="text-align: center;"><b>ID: 25</b></p>
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 <b>UNIVERSALITY OF VELOCITY PDF IN HIGH REYNOLDS NUMBER WALL-BOUNDED FLOW</b> <b>Yoshiyuki Tsuji</b> <i>Chair: Toshihiko SHAKOUCHI</i>	
9:30-9:40	Break/Transfer	
<i>9:40-10:40 - SESSIONS (ORAL PRESENTATIONS)</i>		
<b>SALONE BRUNELLESCHI</b>		
<b>SESSION W1: Passive and Active Flow Control #3</b> <i>Chair: Muramatsu Akinori</i>		
9:40-10:00	W1.1	EFFECT OF ELECTRODE AMPLITUDE ON FLOW SEPARATION SUPPRESSION BY MULTI-WAVY PLASMA ACTUATOR <i>Yusuke Marukawa</i> <b>ID: 85</b>
10:00-10:20	W1.2	ACTIVE FLOW CONTROL OF A 2:1 RECTANGULAR JET USING DIELECTRIC BARRIER DISCHARGE PLASMA ACTUATORS <i>Naoki Kajitani</i> <b>ID: 93</b>
10:20-10:40	W1.3	FLOW VISUALIZATION ON CURVED WALL SYNTHETIC JET <i>Takaya Hiruma</i> <b>ID: 36</b>
10:40-11:10	Coffee Break	
<i>11:10-12:30 - SESSIONS (ORAL PRESENTATIONS)</i>		
<b>SALONE BRUNELLESCHI</b>		
<b>SESSION W2: Combustion and Detonation #3</b> <i>Chair: C. O. Paschereit</i>		
11:10-11:30	W2.1	CYCLIC RE-IGNITION PHENOMENA IN CONSTANT VOLUME COMBUSTORS <i>Choomanee Runno</i> <b>ID: 89</b>
11:30-11:50	W2.2	THE EFFECT OF COMPOUND ANGLED HOLES ON A FILM COOLED ROTATING DETONATION COMBUSTOR <i>Shreyas Ramanagar Sridhara</i> <b>ID: 82</b>
11:50-12:10	W2.3	NUMERICAL INVESTIGATION OF NON-PREMIXED OBLIQUE DETONATION OPERATIONS IN SCRAMJET COMBUSTOR <i>Ashish Vashishtha</i> <b>ID: 48</b>
12:10-12:30	W2.4	BEHAVIOR OF CHEMICALLY ACTIVE SPECIES IN PREMIX BURNER USING DBD PLASMA ACTUATOR <i>Motoaki Kimura</i> <b>ID: 24</b>
12:30-14:00	Light Lunch	

14:00-14:45	<p style="text-align: center;">PLENARY LECTURE  <b>ANALYSIS AND CONTROL OF HYDRODINAMIC INSTABILITIES IN WAKES USING ADJOINT METHODS</b>  <b>S. Camarri</b>  <i>Chair: M. MARCONCINI</i></p>	
14:45-15:00	Break/Transfer	
	<i>15:00-16:40 - SESSION (ORAL PRESENTATIONS)</i>	
	<b>SALONE BRUNELLESCHI</b>	
	<b>SESSION W3: Compressible flows #2</b> <i>Chair: Alessandro Mariotti</i>	
15:00-15:20	W3.1	<p style="text-align: center;">PIV ON CAVITY FLAME HOLDER IN SUPERSONIC FLOW  <i>Ho-Tse Huang</i>  <b>ID: 29</b></p>
15:20-15:40	W3.2	<p style="text-align: center;">REDUCTION OF TWO-DIMENSIONAL CAVITY FLOW OSCILLATIONS AT SUPERSONIC SPEED BY CURVING ITS REAR FACE  <i>Jacob Cohen</i>  <b>ID: 34</b></p>
15:40-16:00	W3.3	<p style="text-align: center;">QUANTITATIVE FLOW VISUALIZATION OF A SQUARE UNDEREXPANDED MICROJET BY RST  <i>Itsuki Morita</i>  <b>ID: 55</b></p>
16:00-16:20	W3.4	<p style="text-align: center;">QUANTITATIVE FLOW VISUALIZATION OF AN ELLIPTIC UNDEREXPANDED SONIC JET BY RST  <i>Takumi Sakashita</i>  <b>ID: 54</b></p>
16:20-16:40	W3.5	<p style="text-align: center;">CHARACTERIZATION OF THE TURBULENCE INTENSITY GENERATED BY PASSIVE GRIDS IN COMPRESSIBLE FLOWS  <i>Tommaso Bacci</i>  <b>ID: 90</b></p>
16:40-17:00	Closing ceremony	