

#### E4 COMPUTER ENGINEERING

				Welcome address (May 25th 8:30 Welcome address online (May 25th 8							2				
				May 25th 9:00-10:00 CEST, UTC+2, Room Nebbiolo): Prof R. Ver	rzicco "A l	MUL	TI-PHY	SICS COMPU	TATIONAL M	ODEL FOR TH	E HUMAN HEART" (Chair David R. Emerson)				
		Inv	vited Lecture	2 (May 25th 10:00-11:00 CEST, UTC+2, Room Nebbiolo): Prof (						AIRBONE INF	ECTION RISKS" (Chair Daniele Marchisio)				
					. ,		1:00-11:30 CEST, UTC+2) D-12:50 (Time zone: CEST, UTC+2)								
				Room Nebbiolo	y 23th 11		Room Dolcetto								
PS1.1	Cha	ir: F. Xavier Ti	rias	MS2 Part 1: HPC Algorithms for Exascale CFD			PS1.3	Cha	air: Amirul K	han MS4 Part 1: LBM for HPC					
Paper	Speaker			Title	Time		Paper	Speaker	•		Title	Time			
16	Herbert	Owen	In-Person	WIND ENERGY SIMULATIONS WITH ALYA TOWARDS EXASCALE	11:30		13	Anna	Wellmann	In-Person	COMMUNICATION HIDING FOR MULTIGPU-LBM ON REFINED GRIDS	11:30			
59	Stefano	Zaghi		EFFICIENT GPU PARALLELIZATION OF ADAPTIVE MESH REFINEMENT TECHNIQUE FOR HIGH-ORDER COMPRESSIBLE SOLVER WITH IMMERSED BOUNDARY	11:50		87	Ouadie	El Farouki	Virtual	PERFORMANCE PORTABILITY THROUGH SYCL: APPLICATION LBM SOLVERS FOR AERODYNAMICS	11:50			
81	Sangeeth	Simon	In-Person	A TASK-BASED PARALLELIZATION OF A FINITE VOLUME CODE FOR HYPERBOLIC CONSERVATION LAWS	12:10		108	Michael	Rennick	Virtual	SIMULATING A BIOINSPIRED LIQUID DIODE USING A MULTICOMPONENT LATTICE BOLTZMANN MODEL	12:10			
103	Adel	Alsalti-Balde	In-Person	STRATEGIES TO INCREASE THE ARITHMETIC INTENSITY OF THE LINEAR SOLVERS	12:30		113	Minh-Tuan	ho	Virtual	A HIGH PERFORMANCE SOLVER FOR RAREFIED GAS FLOWS IN POROUS MEDIA	12:30			
				Room Barbera							Room Arneis				
PS1.2		Guillaume Ho	uzeaux	MS1 Part 1: AI and HPC for CFD			PS1.4 Chair: Francesco L			arocca	Combustion 1				
Paper	Speaker	1		Title	Time	F	Paper	Speaker	1		Title	Time			
20	Ali Girayhan	Ozbay	In-Person	DEEP LEARNING FLOW RECONSTRUCTION AROUND ARBITRARY 2D OBJECTS FROM SPARSE SENSORS.	11:30		26	Daniel	Costero	Virtual	NOVEL DEVELOPMENTS FOR RAPID REACTIVE CFD SIMULATIONS OF DUAL-FUEL IC ENGINES	11:30			
24	Weishuo	Liu	Virtual	A APPLICATION PROGRAMMING INTERFACE FOR MACHINE- LEARNING ASSISTED FLUIDS SIMULATION	11:50		27	Federico	Ghioldi	In-Person	GPU-ACCELERATED SIMULATION OF SUPERSONIC COMBUSTION IN SCRAMJET ENGINES BY OPENFOAM	11:50			
36	Mathis	Bode	Virtual	ACCELERATION OF COMPLEX HIGH-PERFORMANCE COMPUTING ENSEMBLE SIMULATIONS WITH SUPER- RESOLUTION-BASED SUBFILTER MODELS	12:10		34	Han	Peng	In-Person	A THREE-DIMENSIONAL SOLVER FOR SIMULATING REACTIVE FLOW ON CURVILINEAR PARALLEL ADAPTIVE MESHES	12:10			
54	Sarath	Radhakrishn an	In-Person	DATA-DRIVEN WALL MODELING FOR LARGE EDDY SIMULATION OF NON-EQUILIBRIUM FLOWS: PRELIMINARY STUDIES	12:30		96	Muhammad	Omair	Virtual	ENHANCED THERMOPHYSICAL MODELS FOR SIMULATING COMBUSTION AT SUPERCRITICAL PRESSURES USING OPENFOAM	12:30			
				Lunch (Ma	ay 25th 12	:50-1	14:10 (	CEST, UTC+2)							





			Invi	ted Lecture 3 (May 25th 14:10-15:10 CEST, UTC+2): E. Floros "E	UROHPC	AND TH	HE FL	UTURE OF E	XASCALE CO	MPUTING IN 1	THE EU" (Chair Giorgio Amati)		
				Parallel Session 2: Ma	y 25th 15:	10-16:1	10 (T	ime zone: Cl	EST, UTC+2)				
				Room Nebbiolo							Room Dolcetto		
PS2.1	Cha	ir: David Eme	erson	HPC and Aerodynamics 1		PS2	PS2.3 Chair: Gianluca Boc			occardo	Particle Methods for HPC 1		
Paper	Speaker			Title	Time	Pap	per S	Speaker			Title	Time	
2	Ramesh	Agarwal	Virtual	EVALUATION OF VARIOUS TURBULENCE MODELS FOR RANS SIMULATION OF SEPARATED FLOW IN WING-BODY JUNCTURE	15:10	3	88 (	Graziano	Frungieri	Virtual	FRAGMENTATION AND STRESS STATISTICS OF INERTIAL PARTICLES IN HOMOGENEOUS ISOTROPIC TURBULENCE	15:10	
78	Maria Vittoria	Salvetti	In-Person	THE IMPORTANCE OF UPSTREAM-CORNER SHARPNESS IN LES OF THE FLOW AROUND RECTANGULAR CYLINDERS OF DIFFERENT ASPECT RATIOS	15:30	6	58 .	Chrysovalan tis	Tsigginos	In-Person	LUAMMAPS: A CONCURRENT COUPLING FRAMEWORK FOR DIRECT MODELING OF FLUID-PARTICLE SYSTEMS	15:30	
82	Neil	Ashton	In-Person	DEMONSTRATION OF CLOUD-BASED HPC FOR HYBRID RANS- LES SIMULATIONS OF THE DRIVAER AUTOMOTIVE MODEL AND THE NASA HIGH-LIFT COMMON RESEARCH MODEL	15:50	6	59 N	Vahid	Jafari		A STEP TOWARD PARALLEL COMPUTING FOR SUPER/HYPERSONIC FLOW USING A COUPLED DSMC/CFD METHOD	15:50	
				Room Barbera		Room Arneis							
PS2.2	Cha	ir: Davide Mo	desti	MS5 Part 1: Hypersonic flows		PS2	PS2.4 Chair: Roberto Verzicco			erzicco	Heat Transfer 1		
Paper	Speaker			Title	Time	Pap	per S	Speaker			Title	Time	
21	Jian	Fang	In-Person	DIRECT NUMERICAL SIMULATION OF HYPERSONIC SHOCK- WAVE/TURBULENT BOUNDARY LAYER INTERACTION AT MACH 5	15:10	1	.1	Luca	Banetta	In-Person	IMPACT OF TURBULENCE MODELING ON FLUID/SOLID HEAT TRANSFER INSIDE INDUSTRIAL AUTOCLAVES.	00:00	
46	Luca	Placco	In-Person	AERODYNAMIC INVESTIGATION OF THE UNSTEADY SUPERSONIC FLOW OF A MARS ENTRY CAPSULE USING LARGE EDDY SIMULATION	15:30	1	.2 E	Emanuele	Gallorini	In-Person	A CONTINUOUS ADJOINT METHOD FOR THE MULTI- OBJECTIVE OPTIMIZATION OF COUPLED FLUID-THERMAL PROBLEMS IN OPENFOAM	15:30	
56	Pushpender Kumar	Sharma	In-Person	TRANSPIRATION COOLING OF HYPERSONIC FLOW PAST A FLAT PLATE WITH POROUS INJECTION	15:50	10	06 1	Niyazi	Senol	Virtual	A MORE ROBUST SCHEME FOR TOPOLOGY OPTIMIZATION OF THERMAL-FLUID PROBLEMS IN OPENFOAM	15:50	
				Coffee Break	(May 25th	16:10-	-16:4	0 CEST, UTC	:+2)				





				Parallel Session 3: Ma	y 25th 16	40-1	8:00 (	Time zone: Cl	EST, UTC+2)				
				Room Nebbiolo							Room Dolcetto		
PS3.1	Ch	air: Marco Va	nni	Multiphase Flows		1	PS3.3	Chair:	Andreas Lint	erman MS1 Part 2: AI and HPC for CFD			
Paper	Speaker	-		Title	Time	F	Paper	Speaker			Title	Time	
6	Darsh	Nathawani	Virtual	DROPLET FORMATION SIMULATIONS USING A MIXED FINITE ELEMENT METHOD	16:40		5	Michele	Buzzicotti	In-Person	INFERRING TURBULENT PARAMETERS VIA MACHINE LEARNING	16:40	
14	Simon	Santoso	In-Person	A PARALLEL PARTICLE-GRID METHOD FOR THE STUDY OF DIFFERENTIAL DIFFUSION IN TURBULENT FLOWS	17:00		35	Agnese	Marcato	In-Person	STRUCTURE INTERPRETATION VIA NEURAL NETWORKS: AN APPLICATION TO FLOW AND TRANSPORT IN POROUS MEDIA	17:00	
18	Manjil	Ray	In-Person	CFD SIMULATION OF BUBBLE COALESCENCE AND ITS EFFECT ON CURRENT DENSITY AND GAS PRODCUTION IN ELECTROLYSERS	17:20		67	Daniel	Hilger	Virtual	PARAMETERIZED PHYSICS-INFORMED NEURAL NETWORKS AS SURROGATE MODEL IN SHAPE OPTIMIZATION	17:20	
115	Shahbozbek	Abdunabiev	In-Person	MICROPHYSICAL TIME SCALES AT A WARM CLOUD TOP BOUNDARY	17:40		70	Xinfeng	Gao	Virtual	INTEGRATION OF CFD AND DATA ASSIMILATION WITH DEEP LEARNING FOR IMPROVING MODEL-PARAMETER ESTIMATION	17:40	
				Room Barbera			Room Arneis						
PS3.2	Cha	iir: Rupak Bisv	was	HPC and Multiphysics 1		1	PS3.4 Chair: Elisabetta De						
Paper	Speaker			Title	Session	F	Paper	Speaker			Title	Session	
4	luan Carlos	Cajas Garcia	In-Person	ASPECT RATIO INFLUENCE ON THE VORTEX INDUCED VIBRATIONS OF A PIVOTED FINITE HEIGHT CYLINDER AT LOW REYNOLDS NUMBER.	16:40		22	Radouan	Boukharfan e	Virtual	AN EFFICIENT PARALLEL SOLVER FOR LES-DEM SIMULATION OF FLUIDIZED BED	16:40	
76	Stephen	Longshaw	In-Person	GENERAL CODE COUPLING FOR FLUID DYNAMICS AT THE EXASCALE: A COMPARATIVE OVERVIEW	17:00		29	Antoine	Stock	In-Person	DIFFUSION BASED LOAD-BALANCING METHOD FOR MASSIVELY PARALLEL EULER-LAGRANGE SIMULATIONS ON UNSTRUCTURED MESHES (DOB-EL)	17:00	
107	Mohsen	Shiea	In-Person	CFD-PBM SIMULATION OF NICKEL-MANGANESE-COBALT HYDROXIDE CO-PRECIPITATION in CSTR	17:20		80	Miguel	Uh Zapata	In-Person	TWO-PHASE FLOW PARALLEL SIMULATIONS FOR SEDIMENT RELEASES INTO HOMOGENEOUS WATER	17:20	
118	Gabriele	Ottino	In-Person	COUPLING 0D/1D-3D NUMERICAL APPROACHES: A FMI STANDARD-BASED CO-SIMULATION STRATEGY FOR MONITORING INDOOR AIR QUALITY	17:40								





	In	vited Lecture	4 (May 26th	8:30-9:30 CEST, UTC+2): Prof K. Fukagata "APPLICATIONS OF (	ONVOLUT		EURAL NETV	ORK AUTOEN	ICODER FOR I	LUID FLOW ANALYSIS" (Chair Maria Vittoria Salvetti)				
				Parallel Session 4: M	ay 26th 9:3	0-10:30	(Time zone: (	CEST, UTC+2)						
				Room Nebbiolo			Room Dolcetto							
PS4.1	Cha	ir: Jianping N	leng	MS4 Part 2: LBM for HPC		PS4.	PS4.3 Chair: Aimee Morgans Flow C			Flow Controls				
Paper	Speaker			Title	Time	Раре	r Speaker			Title	Time			
42	Hijiri	Adachi	Virtual	A COMPARATIVE STUDY OF VIRTUAL FLUX METHOD AND IMMERSED BOUNDARY METHOD FOR INTTERFACE EVALUATION BY LATTICE BOLTZMANN METHOD	09:30	1	Haroon	Ahmad	Virtual	TURBULENT DRAG REDUCTION USING TRAVELLING WAVES OF WALL-NORMAL VELOCITY	09:30			
49	Tomohiro	Fukui	Virtual	PARTICLE SUSPENSION FLOW SIMULATIONS IN A NARROW CHANNEL BY PARALLEL COMPUTING	09:50	74	Nick	Janssens		A PARALLEL-IN-TIME MULTIPLE SHOOTING ALGORITHM FOR OPTIMAL CONTROL PROBLEMS GOVERNED BY THE 3D NAVIER-STOKES EQUATIONS	09:50			
50	Mikael	Grondeau	In-Person	AN ADAPTIVE PARALLEL LBM SOLVER FOR HIGH- RESOLUTION AERODYNAMICS AND AEROACOUSTIC	10:10	117	Dania	Ahmed	In-Person	FEEDBACK CONTROL OF THE BI-MODAL FLOW BEHIND A BLUNT BLUFF BODY	10:10			
				Room Barbera			Room Arneis							
PS4.2	Chair: N	Aaria Vittoria	Salvetti	UQ and CFD		PS4.	PS4.4 Chair: Jian Fan			MS5 Part 2: Hypersonic flows				
Paper	Speaker			Title	Time	Раре	r Speaker			Title	Time			
60	Deniz	Acar	Virtual	SPEEDUP OF CFD SOLVERS USING DEEP LEARNING BASED INITIAL CONDITIONING	09:30	19	Mario	Di Renzo	In-Person	WALL-PRESSURE SPECTRA IN SHOCK WAVE/TURBULENT BOUNDARY LAYER INTERACTIONS WITH A CROSSFLOW	09:30			
63	Alessandro	Mariotti	In-Person	NUMERICAL SIMULATIONS AND UNCERTAINTY QUANTIFICATION TO INVESTIGATE AORTA COARTACTIONS	09:50	55	Chay	Atkins	Virtual	A TWO-DIMENSIONAL PARALLEL STRAND/CAMR SOLVER FOR HYPERSONIC FLOW SIMULATIONS	09:50			
										REYNOLDS NUMBER EFFECTS IN SHOCK-WAVE/TURBULENT				
65	Jun	Chen	Virtual	DEVELOPING A 2d PARALLEL SOLVER FOR FLEXIBLE COMBINATIONS OF MANY REMESHING METHODS	10:10	102	Luis	Laguarda	In-Person	BOUNDARY-LAYER INTERACTIONS	10:10			





				Parallel Session 5: Ma	y 26th 11:	00-12:4	0 (Tim	ie zone: CE	ST, UTC+2)			
				Room Nebbiolo							Room Dolcetto	
PS5.1		ir: Mario Di R	enzo	MS5 Part 3: Hypersonic flows		PS			ir: Giorgio A	nati	MS3: HPC Solutions	
Paper	Speaker	1		Title	Time	Pa	er Spe	eaker			Title	Time
25	Giacomo	Della Posta	In-Person	HIGH-FIDELITY SIMULATION OF THE AEROACOUSTICS AT LIFT-OFF OF A SPACE LAUNCHER	11:00	-	Fat	brizio	Magugliani	In-Person	HETEROGENEOUS WORKFLOWS FOR EXASCALE-CLASS CFD	11:00
31	Michele	Cogo	In-Person	DNS OF SUPERSONIC AND HYPERSONIC TURBULENT BOUNDARY LAYERS AT MODERATE-HIGH REYNOLDS NUMBERS WITH HEAT TRANSFER	11:20	6	2 Ma	athieu	Gontier	In-Person	AMDS JOURNEY TO EXASCALE FOR CFD APPLICATIONS	11:20
45	Davide	Modesti	In-Person	DIRECT NUMERICAL SIMULATION OF SUPERSONIC TURBULENT FLOWS OVER DISTRIBUTED STRUCTURED ROUGHNESS	11:40	9	3 Sin	none	Bna	Virtual	IN-SITU VISUALIZATION FOR HIGH-FIDELITY CFD - CASE STUDIES	11:40
64	Raynold	Tan	Virtual	DNS OF COMPRESSIBLE FLOW OVER ROUGH SURFACES WITH AN ADAPTIVE WENO/CD SCHEME	12:00	9	8 Jak	kub	Sistek	In-Person	GPU ACCELERATION OF A PARALLEL DOMAIN DECOMPOSITION SOLVER	12:00
						9	9 Ale	ex	Grant	In-Person	DEVELOPING A C++ BLOCK-STRUCTURED AMR MULTIPHYSICS CFD FRAMEWORK USING AMREX	12:20
				Room Barbera							Room Arneis	
PS5.2	Chair:	Xavier Álvare	z-Farré	MS2 Part 2: HPC Algorithms for Exascale CFD		PS	5.4	Cha	ir: Sylvain La	izet	MS6: Finite Difference for HPC	
	Chair: Speaker	Xavier Álvare	z-Farré		Time		5.4 er Spe		ir: Sylvain La	izet	MS6: Finite Difference for HPC Title	Time
Paper		Xavier Álvare Liu	z-Farré Virtual	MS2 Part 2: HPC Algorithms for Exascale CFD	Time 11:00		er Spe	eaker	ir: Sylvain La Fang	izet In-Person	MS6: Finite Difference for HPC	Time 11:00
Paper 52	Speaker			MS2 Part 2: HPC Algorithms for Exascale CFD Title A FLUID-STRUCTURE INTERACTION PARTITIONED		Pa	er Spe 7 Jiai	eaker	,		MS6: Finite Difference for HPC Title A COMPACT LOW-DISSIPATION MONOTONICITY- PRESERVING SCHEME FOR SIMULATIONS OF	
Paper 52 90	Speaker Wendi	Liu	Virtual	MS2 Part 2: HPC Algorithms for Exascale CFD Title A FLUID-STRUCTURE INTERACTION PARTITIONED FRAMEWORK TARGETTING PRE-EXASCALE SURFACE AND VOLUME COUPLINGS FOR CONJUGATE HEAT	11:00	Pa 3 3	er Spe 7 Jiai	eaker n drew	Fang	In-Person	MS6: Finite Difference for HPC Title A COMPACT LOW-DISSIPATION MONOTONICITY- PRESERVING SCHEME FOR SIMULATIONS OF COMPRESSIBLE FLOW	11:00
Paper           52           90           95	Speaker Wendi Guillaume Harshavard hana	Liu Houzeaux	Virtual In-Person	MS2 Part 2: HPC Algorithms for Exascale CFD Title A FLUID-STRUCTURE INTERACTION PARTITIONED FRAMEWORK TARGETTING PRE-EXASCALE SURFACE AND VOLUME COUPLINGS FOR CONJUGATE HEAT TRANSFER PROBLEMS MATRIX-BASED FORMULATION OF CHEMICAL KINETICS FOR ACCELERATING REACTING FLOW SIMULATIONS ON MANY-	11:00 11:20	Pa 3 3	er Spo 7 Jian 9 And 0 Tia	eaker n drew in	Fang Wheeler	In-Person In-Person	MS6: Finite Difference for HPC Title A COMPACT LOW-DISSIPATION MONOTONICITY- PRESERVING SCHEME FOR SIMULATIONS OF COMPRESSIBLE FLOW HIGH FIDELITY SIMULATION OF DENSE VAPOUR FLOWS A FIFTH-ORDER VERY-LOW-DISSIPATION TENO SCHEME FOR	11:00 11:20
Paper           52           90           95           100	Speaker Wendi Guillaume Harshavard hana	Liu Houzeaux Uranakara Allvarez-	Virtual In-Person In-Person	MS2 Part 2: HPC Algorithms for Exascale CFD Title A FLUID-STRUCTURE INTERACTION PARTITIONED FRAMEWORK TARGETTING PRE-EXASCALE SURFACE AND VOLUME COUPLINGS FOR CONJUGATE HEAT TRANSFER PROBLEMS MATRIX-BASED FORMULATION OF CHEMICAL KINETICS FOR ACCELERATING REACTING FLOW SIMULATIONS ON MANY- CORE GPU HARDWARE ON THE BENEFITS AND APPLICATIONS OF SPARSE MATRIX-	11:00 11:20 11:40	Pa 3 3 4	er Spo 7 Jiai 9 And 0 Tia	eaker n drew in	Fang Wheeler Liang	In-Person In-Person Virtual	MS6: Finite Difference for HPC Title A COMPACT LOW-DISSIPATION MONOTONICITY- PRESERVING SCHEME FOR SIMULATIONS OF COMPRESSIBLE FLOW HIGH FIDELITY SIMULATION OF DENSE VAPOUR FLOWS A FIFTH-ORDER VERY-LOW-DISSIPATION TENO SCHEME FOR HYPERBOLIC CONSERVATION LAWS TURBULENT STRATIFIED MIXTURE COMBUSTION WITH NUMERICALLY FORCED BIMODAL MIXTURE	11:00 11:20 11:40





			Invi	ited Lecture 5 (May 26th 14:00-15:00 CEST, UTC+2): Prof A. S.							ABILITY" (Chair Hasan U Akay)	
				Parallel Session 6: Ma	iy 26th 15:	:00-16	5:20 (	lime zone: C	EST, UTC+2)		Barris Balantia	
				Room Nebbiolo		_		Room Dolcetto Chair: Neil Ashton HPC and Aerodynamics 2				
PS6.1		nair: Sylvain La	izet	Numerical Methods for HPC			PS6.3		hair: Nell Ash	ton	HPC and Aerodynamics 2	
'aper	Speaker			Title	Time	Р	aper	Speaker	1		Title	Time
30	Liu	Yang	Virtual	A PYTHON-BASED UNSTRUCTURED FINITE VOLUME FRAMEWORK FOR TURBULENT FLOW SIMULATIONS WITH GENERATED GPU KERNELS	15:00		23	Ruggero	Poletto	Virtual	OPTIMISATION OF A FAN IMPELLER THROUGH A DESIGN OF EXPERIMENT	15:00
84	Pedro	Costa	In-Person	A FAST MULTI-BLOCK NAVIER-STOKES SOLVER	15:20		28	Zhao	Qiuying	Virtual	HYBRID RANS/LES SIMULATIONS OF VISCOUS FLOWS INSIDE TURBINE VANES	15:20
91	Ali	Karakus	Virtual	A GPU ACCELERATED NODAL DISCONTINUOUS GALERKIN SOLVER FOR THE SOLUTION OF LATTICE-BOLTZMANN EQUATIONS ON UNSTRUCTURED MESHES	15:40		61	Nikolaos	Bempedelis	In-Person	UNMANNED AERIAL VEHICLE FLOW DYNAMICS USING A HIGH-FIDELITY LES-ALM-IBM FRAMEWORK	15:40
120	Ram	Cherukuri	Virtual	ACCELERATING CFD SIMULATIONS WITH PHYSICS-ML MODELS USING MODULUS	16:00		119	Harriet	Jones	In-Person	MODELLING AIRFLOW AND CARBON DIOXIDE DISPERSION IN DOMESTIC AND OFFICE SETTINGS USING CODE_SATURNE	16:00
				Room Barbera							Room Arneis	
PS6.2	Chair:	Guillaume Ho	ouzeaux	MS1 Part 3: AI and HPC for CFD		F	PS6.4 Chair: David Emerson			rson	Combustion 2	
Paper	Speaker			Title	Time	P	aper	Speaker			Title	Time
8	Rakesh	Sarma	In-Person	PARALLEL AND SCALABLE DEEP LEARNING TO RECONSTRUCT ACTUATED TURBULENT BOUNDARY LAYER FLOWS. PART I: INVESTIGATION OF AUTOENCODER-BASED	15:00		51	Umair	Ahmed	Virtual	PERFORMANCE OF WALL FUNCTIONS IN PREMIXED FLAME- WALL INTERACTION WITHIN TURBULENT BOUNDARY LAYERS	15:00
10	Eray	Inanc	Virtual	PARALLEL AND SCALABLE DEEP LEARNING TO RECONSTRUCT ACTUATED TURBULENT BOUNDARY LAYER FLOWS. PART II: AUTOENCODER TRAINING ON HPC	15:20		57	Chiara	Galletti	In-Person	NUMERICAL SIMULATIONS OF INTERACTING FLAMES ISSUING FROM A CYLINDRICAL PERFORATED BURNER	15:20
48	Davide	Oberto	In-Person	A DATA-DRIVEN APPROACH TO CLOSE AND INCREASE ACCURACY OF RANS EQUATIONS BY MODELLING THE DIVERGENCE OF THE REYNOLDS STRESS TENSOR	15:40		79	Rachele	Lamioni	In-Person	MODELING FLASHBACK OF H2-ENRICHED FLAMES IN PERFORATED BURNERS	15:40
104	Reza	Hassanian	Virtual	LAGRANGIAN PARTICLE TRACKING DATA OF A STRAINING TURBULENT FLOW ASSESSED USING MACHINE LEARNING AND PARALLEL COMPUTING	16:00		116	Nicholas	Abel	In-Person	DISTRIBUTED TABULATION OF FLAMELET LOOKUP TABLES	16:00
				Coffee Break	(May 26th	n 16:2	0-17:	15 CEST, UTC	(+2)			
Eve	ening Lectu	ire @ Fonta	nafredda (	May 26th 18:00-19:00 CEST, UTC+2): Dr. R. Biswas "H	ERDING S Daniele				TS: A NASA	PERSPECTI	/E OF QUANTUM COMPUTING" (Chairs David Emerso	n and



#### E4 COMPUTER ENGINEERING

				Parallel Session 7: M	ay 27th 9:3	0-10:50	Time zone: Cl	EST, UTC+2)					
				Room Nebbiolo						Room Dolcetto			
PS7.1	Chair	: Andreas Linte	ermann	MS1 Part 4: AI and HPC for CFD		PS7.3	3 C	hair: Pedro Co	sta	Aerodynamics and Optimisation			
Paper	Speaker			Title	Time	Paper	Speaker			Title	Time		
9	Kazuto	Ando	Virtual	IMPROVEMENT OF REDUCTION PERFORMANCE OF MODE DECOMPOSITION FOR 3-DIMENSIONAL FLOW FILED USING FUGAKU	09:30	53	Andrea	Zappatore	In-Person	VALIDATION OF RANS, DES, AND LES MODELS OF AN ISOTHERMAL SINGLE JET USING STAR-CCM+	09:30		
32	Anass	Serhani	In-Person	HIGH-PERFORMANCE HYBRID COUPLING OF A CFD SOLVER TO DEEP NEURAL NETWORKS	09:50	73	Kaan	Yutuk	Virtual	ADJOINT-BASED AERODYNAMIC OPTIMIZATION OF A STRAKE-DELTA WING CONFIGURATION	09:50		
47	Laurent	Andre	Virtual	GENERATIVE ADVERSARIAL NETWORKS WITH LATTICE- BOLTZMANN LOSSES FOR THE PREDICTION OF UNSTEADY FLOWS	10:10	77	Etienne	Muller	In-Person	A MASSIVELY-PARALLEL IMPLEMENTATION OF THE ACTUATOR LINE METHOD FOR HIGH-FIDELITY LARGE EDDY SIMULATION	10:10		
85	Lianfa	Wang	In-Person	IMPROVING CONFIDENCE ON CFD BY DEEP LEARNING	10:30	101	Andrea	Perrone	In-Person	MACHINE LEARNING ALGORITHMS FOR ROTOR37 AERODYNAMIC OPTIMIZATION	10:30		
				Room Barbera		Room Arneis							
PS7.2		nair: Antonio B	uffo	Heat Transfer 2		PS7.4		: Gianluca Bo	ccardo	Multiphysics 2			
Paper	Speaker			Title	Time	Paper	Speaker	-		Title	Time		
86	Shiu-Wu	Chau	Virtual	UNSTEADY MODELING OF THREE-DIMENSIONAL FLOW OF									
			VIILUAI	DIRECT CURRENT PLASMA TORCH OPERATING WITH AIR	09:30	3	Massimo	Germano	In-Person	MIXED AVERAGING PROCEDURES	09:30		
88	Gregory	Cartland- Glover	In-Person	DIRECT CURRENT PLASMA TORCH OPERATING WITH AIR MODELLING MASS AND CONJUGATE HEAT TRANSFER IN TARGET STATION 2 OF THE ISIS MUON AND NEUTRON SOURCE	09:30	3	Massimo Omar	Germano Mahfoze	In-Person In-Person	MIXED AVERAGING PROCEDURES SCALABILITY STUDY OF THE PARALLEL PARTITIONED MULTI- PHYSICS SIMULATION FRAMEWORK	09:30 09:50		
88 89	Gregory Wei			MODELLING MASS AND CONJUGATE HEAT TRANSFER IN TARGET STATION 2 OF THE ISIS MUON AND NEUTRON						SCALABILITY STUDY OF THE PARALLEL PARTITIONED MULTI-			
89		Glover	In-Person	MODELLING MASS AND CONJUGATE HEAT TRANSFER IN TARGET STATION 2 OF THE ISIS MUON AND NEUTRON SOURCE NUMERICAL SIMULATION OF THERMAL MIXING OF LIQUID	09:50	33	Omar	Mahfoze	In-Person	SCALABILITY STUDY OF THE PARALLEL PARTITIONED MULTI- PHYSICS SIMULATION FRAMEWORK COMPUTATIONAL AIRFLOW SIMULATION TO ASSESS AIRWAY RESISTANCE BY CONSIDERING BIFURCATION	09:50		
89	Wei	Glover Wang	In-Person In-Person	MODELLING MASS AND CONJUGATE HEAT TRANSFER IN TARGET STATION 2 OF THE ISIS MUON AND NEUTRON SOURCE NUMERICAL SIMULATION OF THERMAL MIXING OF LIQUID SODIUM IN A Y-JUNCTION MODELING SOLID FOAMS: GEOMETRY GENERATION AND MOMENTUM AND MASS TRANSPORT CFD SIMULATIONS	09:50 10:10 10:30	333 44 58	Omar Misa	Mahfoze Kawaguchi Fukamizu	In-Person Virtual	SCALABILITY STUDY OF THE PARALLEL PARTITIONED MULTI- PHYSICS SIMULATION FRAMEWORK COMPUTATIONAL AIRFLOW SIMULATION TO ASSESS AIRWAY RESISTANCE BY CONSIDERING BIFURCATION GEOMETRY PREDICTION OF TURBINE BLADE CONDITION USING SUPERVISED MACHINE LEARNING TRAINED BY DIGITAL-	09:50		