

## FINAL PROGRAM

Program Overview					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Symposium Sessions	Symposium Sessions	Symposium Sessions	Symposium Sessions
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Symposium Sessions	Symposium Sessions	Symposium Sessions	Symposium Sessions
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20	Symposium Sessions	Symposium Sessions	Symposium Sessions	Symposium Sessions	Symposium Sessions
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45	Symposium Sessions	Symposium Sessions	5 min break Symposium Sessions 14:40 - 15:45	Symposium Sessions	Symposium Sessions
15:45 - 15:55	10 min break	10 min break	10 min break	10 min break	10 min break
15:55 - 17:00	Symposium Sessions	Symposium Sessions	Symposium Sessions	Symposium Sessions	Symposium Sessions
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Symposium poster sessions	Symposium poster sessions	Symposium poster sessions	Symposium ABCM/ poster EMBRAER sessions Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	





General Sessi	General Sessions		
Monday 22		Room 1	
Time	Title	Speakers	
08:30 - 09:40	Opening Session: Celebrating COBEM's 50th anniversary	Prof. Sergio L. Gagioni	
09:45 - 11:05	Conference speaker: Mechanical Engineering - Talloring the future Chair: Prof. Alvaro Tobes Prata, UFSC	Dr. Evaldo Ferreira Vilela, CNPq Dr. Pedro Wongtschowski, CNI/MEI	
13:30 - 14:20	Keynote speaker: Chair: Prof. Henrique Simas	Prof Helge Wundermann, UCL	
	Informative lecture 1: ABCM - Da Fundação à Consolidação (In Portuguese) Chair: Henrique Simas, UFSC	Prof. Sergio Viçosa Möller, UFRGS (ROOM 8)	
17:05 - 18:05	Informative lecture 2: The role of the Confea-CREA system in Brazilian society (In Portuguese) Chair: Milton Pereira, UFSC	Prof. Reginaldo Sousa, UFGD (ROOM 10)	
	Informative lecture 2: Department of Defense Science and Technology Opportunities Chair: Leonardo Santos De Brito Alves, UFF	Eng. Rosa L. Santoni, DoD (ROOM 11)	

## General Sessions

Tuesday 23 Room			
Time	Title	Speakers	
13:30 - 14:20	tor System Levelonment	Prof. Fernando Catalano, USP-SC Prof. Petter Krus, LiU	
	Keynote speaker: Engineering leadership by Innovation: a case of Tupy and Universities Relationship Chair: Eng. Humberto Pereira, Embraer	M.Sc. Cassio L. F. de Andrade, Tupy	

General Sessi	ons	
Wednesday	24	Room 1
Time	Code	Speakers
13:30 - 14:35	Round table: The mechanical engineer for the future Moderator: Prof. Sérgio L. Gargoni, UFSC	Prof. Andre L. T. Rezende, IME Prof. Elizabeth Keller, KTH M.Eng. Marcio L. Schissatti, Nidec
17:05 - 18:05	Keynote speaker: Electric Mobility: Technology trends, solutions and challenges Chair: Dr. José Eduardo Fiates, FIESC	Eng. Rodrigo Fumo, Weg
18:10 - 19:10	Leonardo Goldstein Prize	

<b>General Sessi</b>	ons	
Thursday 25	5	Room 1
Time	Code	Speakers
13:30 - 14:20	Keynote speaker: Industry 4.0 and Cyber Physical Systems – Actual Achievements, Challenges and Application Examples Chair: Prof. Ricardo J, Rabelo, UFSC	Prof. Klaus-Dieter Thoben, BIBA, Univ. of Bremen
17:05 - 18:05	ABCM - EMBRAER Prize	
18:10 - 19:10	ABCM Plenary	

General Sessio	ons	
Friday 26		Room 1
Time	Code	Presenter
13:30 - 14:20 t	Keynote speaker:Towards future mobility; safer and more sustainable transportation Chair: Prof. Milton Pereira, UFSC	Dr. Lisa Abom, Nira Dynamics
17:05 - 18:05		Prof. Sergio L. Gagioni, UFSC Prof. Henrique Simas, UFSC

Short Courses				
Tuesday 23				
Time	Title	Lecturer	Room	
	Basics of computational fluid dynamics and applications (Course in English)	Prof. Clovis R. Maliska, UFSC M.Sc. Tiago Faria, ESSS Mr. Luis Gonçalves Silva, ESSS	2	
07.20 00.20	Patent search methods and tools (Course in Portuguese)	Prof. Estevan Hideki Murai, UFSC	3	
07:30 - 08:30	System Simulation of Fluid and Mechatronic Systems (Course in English)	Prof. Petter Krus, LiU Dr. Robert Braun, LiU	4	
	Cubesat 101 (Course in Portuguese)	Prof. Talita S. Possamai, UFSC	5	

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07:30 - 08:30	System Simulation of Fluid and Mechatronic Systems (Course in English)	Prof. Petter Krus, LiU Dr. Robert Braun, LiU	4
	Cubesat 101 (Course in Portuguese)	Prof. Talita S. Possamai, UFSC	5

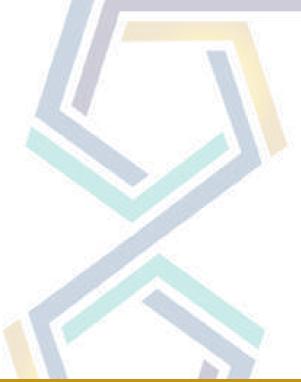
Short Courses	Short Courses			
Thursday 2	Thursday 25			
Time	Title	Lecturer	Room	
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Short Course	S		
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Time	Title	Lecturer	Room
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	Cubesat 101 (Course in Portuguese)	Prof. Talita S. Possamai, UFSC	5

ABCM Commi	ttee Meetings		
Monday 22			
Time	ABCM Committee	Chair	Room
	Combustion	Christian Coronato Rafael Catapan	3
	Design Engineering	Zilda de Castro Silveira Cristiano Vasconcellos Ferreira	6
	Fluid Mechanics	Roney Leon Thompson Jader Riso Barbosa Jr.	7
	Fracture, Fatigue, and Structural Integrity	Carlos Eduardo Chaves Eduardo Alberto Fancello	5
18:10 - 19:10	Mechatronics	Rogério Sales Gonçalves Daniel Martins	10
	Nano and Microfluidic and Microsystems	Elaine Maria Cardoso Diogo Nardelli Siebert	11
	Non-linear and Chaotic Phenomena	Americo da Cunha Junior Marcelo Krajnc Alves	2
	Refrigeration, Air-Conditioning, Heating, and Ventilation	Enio Pedone Bandarra Filho Christian Johann Losso Hermes	8
	Solid Mechanics	Volnei Tita Paulo de Tarso	4

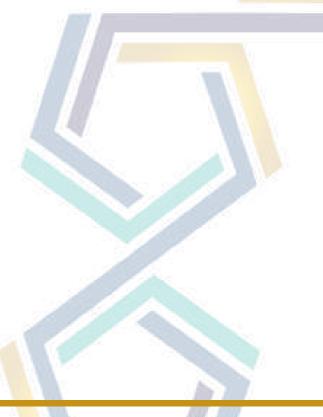
## ABCM Committee Meetings

Time	ABCM Committee	Chair	Room
	Aerospace Engineering	Elmer M. Gennaro	2
		Talita Possamai	4
	Bioengineering	Rodrigo Roesler	3
	bioengineening	Edson Capello Sousa	•
	Dynamics	Paulo Roberto G. Kurka	4
	Dynamics	Andre Fujarra	4
	Manufacturing Engineering	Pablo Deivid Valle	9
		Joao Carlos Espindola Ferreira	<b>&gt;</b>
18:10 - 19:10	Nuclear Engineering	Renato Machado Cotta	6
	Offelieure en el Defecteure En sie e sie s	Celso Morooka	40
	Offshore and Petroleum Engineering	Emilio Paladino	10
	Smart Materials and Structures	Marcelo Amorim Savi	8
	Smart Materials and Structures	Paulo Wendhausen	•
	Thermal Sciences	Felipe Roman Centeno	5
		Marcia Mantelli	•
	Uncertainty Quantification and Stachastia Madeling	Rubens Sampaio	11
	Uncertainty Quantification and Stochastic Modeling	Rafael Holdorf Lopez	



Program Overview and Aerospace Engineering						
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09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break	
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Aerospace Engineering	Aerospace Engineering	Aerospace Engineering		
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break	
11:15 - 12:20	Aerospace Engineering	Aerospace Engineering	Aerospace Engineering	Aerospace Engineering		
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch	
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker	
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break	
14:25 - 15:45	Aerospace Engineering	Aerospace Engineering	5 min break Aerospace Engineering	Aerospace Engineering		
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break	
15:55 - 17:00	Aerospace Engineering	Aerospace Engineering	Aerospace Engineering	Aerospace Engineering		
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break	
17:05 - 18:05	Aerospace Informative Engineering lectures	Aerospace Keynote Engineering speaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session	
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break		
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary		

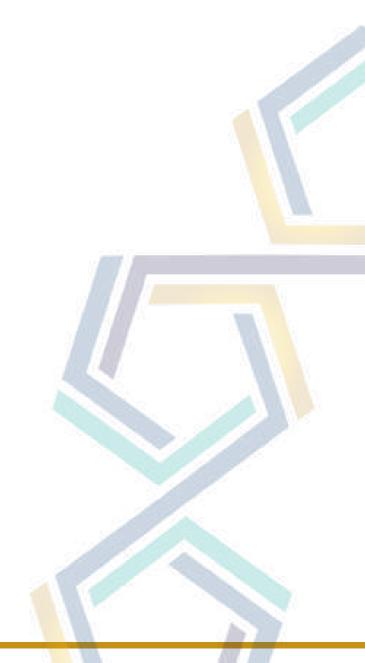




AERO	- Aeros	pace Engineering	
Mond	lay 22		Room 2
Time	Code	Title	Presenter
AERO	Mo1	Aerodynamics	Chair: William Wolf
11:15	0047	ANALYSIS AND MODELING OF AN AIRCRAFT TEST	Vinícius Leite de Morais Véras
11:30	0054	HIGH ORDER IMMERSED INTERFACE METHOD FOR COMPRESSIBLE TRANSONIC FLOWS	Ligia Velandia
11:45	0150	DESIGN AND CONSTRUCTION OF A DIDACTIC LOW-VELOCITY WIND TUNNEL	Arthur Queiroga
12:00	0167	A NUMERICAL STUDY ON THE EFFECTS OF MESH REFINEMENT, ARTIFICIAL DISSIPATION AND FREESTREAM TURBULENCE ON LAMINAR-TURBULENT TRANSITION PREDICTIONS	Aline Righi
AERO	Mo2	Aerodynamics	Chair: Renato Oba
14:25	0181	NUMERICAL SIMULATION OF IMPINGING SHOCK WAVE / BOUNDARY LAYER INTERACTION USING MACCORMACK TECHNIQUE	Ana Maria Pereira Lara
14:40	0332	AIRFOIL TRANSITION TO TURBULENCE PREDICTION USING A SIMPLIFIED ENVELOPE METHOD	Gustavo Padovany da Silva
14:55	0388	A COMPARISON OF LOW AND HIGH-ORDER METHODS FOR THE SIMULATION OF SUPERSONIC JET FLOWS	Diego Ferolla de Abreu
15:10	0535	A CFD ANALYSIS OF A MORPHING WING FOR AERONAUTIC APPLICATIONS	Nicolas Guimarães Ono
15:25	5 0572 COMPARATIVE ANALYSIS OF THE AEROTERMODYNAMIC PROPERTIES OF A GENERIC SCRAMJET DEMONSTRATOR		Luis Barreto
AERO	Mo3	Aerodynamics	Chair: Marcelo Zanetti
15:55	0586	A STUDY ON AIRFOIL OPTIMIZATION WITH GENETIC ALGORITHMS	Gustavo Fernandes
16:10	0705	A NUMERICAL STUDY OF ROTOR HOVER PERFORMANCE AT LOW REYNOLDS NUMBER FLOW.	Gabrieli Boni
16:25	0723	PREDICTION OF HYPERSONIC REACTIVE FLOWS DURING ATMOSPHERIC ENTRY PROCEDURE OF THE FIRE II SPACE CAPSULE	Farney Moreira
16:40	0801	FLYING WING SHAPE MULTI-OBJECTIVE OPTIMIZATION GENETIC ALGORITHMS AND AVL SOFTWARE	Petrus Fiore
AERO I	E-Postei	Aerodynamics & Aerospace Structures	Chair: Talita Possamai
	0959	BLADE ELEMENT MOMENTUM SIMULATIONS USING POLARS EXTRACTED FROM WIND-TURBINE-MODEL EXPERIMENTS	Pedro Trombini Rodr <mark>igue</mark> s
	1023	CFD STUDY AROUND TANDEM WINGS FOR APPLICATION IN EVTOL AIRCRAFT	Leonardo Breitenbach
	1666	NUMERICAL SIMULATION OF AN AERO DESIGN AIRCRAFT AERODYNAMIC CHARACTERISTICS	Caio Vinícius Schurgelie <mark>s de</mark> Sá
17:05	1940	AEROTERMODYNAMIC HEATING IN THE COMPRESSION SECTION OF A SCRAMJET DEMONSTRATOR UNDER BALLISTIC TRAJECTORY	Pedro Paulo Batista de Araújo
to 18:05	1973	COMPRESSIBLE DIRECT NUMERICAL SIMULATION OF TOLLMIEN- SCHLICHTING WAVES INTERACTING WITH A TWO-DIMENSIONAL ISOLATED ROUGHNESS	Ana Elisa Basilio
	0873	TOPOLOGY OPTIMIZATION OF AIRFOILS RIBS USING BIDIRECTIONAL EVOLUTIONARY ALGORITHM	Gustavo Corrêa Fazio
	1311	MULTIDISCIPLINARY PROCEDURE FOR LOADS AND STRESS ANALYSIS OF RPA WINGS	Ana Luiza de Souza Maran
	2048	STRUCTURAL PERFORMANCE ANALYSIS OF A THREAD IN AN ACADEMIC ROCKET MOTOR	Airton Felipe Soares

AERO	- Aeros	pace Engineering	
	day 23		Room 2
Time	Code	Title	Presenter
AERO	<u>Tu1</u>	Aerodynamics	Chair: Rafael Cuenca
08:35 08:50	0874	EXPERIMENTAL AND NUMERICAL EVALUATION OF AN IN-FLIGHT ANGLE OF ATTACK MEASUREMENT SYSTEM FOR HIGH POWER MODEL ROCKETS	Caio Dias Fernandes
09:05	0930	A BRIEF REVIEW OF WALL SHEAR CORRELATIONS FOR HYPERSONIC FLOWS	Pedro Paulo Batista de Araújo
09:20	1008	ON THE USE OF NUMERICAL APPROXIMATE METHODS FOR PREDICTING THE HEAT TRANSFER DURING THE ATMOSPHERIC RE- ENTRY OF A BLUNT BODY	Filipe Silva
AERO <sup>-</sup>	Tu2	Aerodynamics	Chair: Talita Possamai
09:45	1010	FLIGHT SIMULATOR MODEL OF A SUBSCALE GENERIC FUTURE FIGHTER	Leonardo Nepomuceno
10:00	1089	MODELING AND STRUCTURAL ANALYSIS OF AN ACADEMIC SHOCK TUBE	William Henrique de Lima Fiuza
10:15	1129	HYPERSONIC RAREFIED GAS FLOWS OVER RAMP LIKE CAVITY	João Antonio Wendt Dreveck
10:30	1172	THERMOCHEMICAL NONEQUILIBRIUM COMPUTATION OF APOLLO CAPSULE DURING THE REENTRY PHASE	Fortunato Neto
10:45	1316	EQUILIBRIUM PROPERTIES OF HIGH-TEMPERATURE AIR AFTER NORMAL SHOCK WAVE	Ricardo Faria
AERO <sup>-</sup>	Tu3	Aerodynamics	Chair: Talita Possamai
11:15	1509	DIRECT NUMERICAL SIMULATION OF THE FLOW PAST SMALL CAVITY INSIDE LAMINAR BOUNDARY LAYER	Victor Barcelos Victorino
11:30	1531	ERROR PROPAGATION IN PARAMETRIZATION METHODS FOR NACA AIRFOILS	João Victor Barros dos Santos
11:45	1550	INTERPOLATION CURVE IMPACT IN A FREEFORM WING OPTIMIZATION	Diego Bandeira de Melo Akel Thomaz
12:00	1373	Session Speaker: HIGH-ORDER CONSERVATIVE INTERPOLATION FOR UNSTEADY AERODYNAMICS APPLICATIONS	Renan Santos
AERO <sup>-</sup>	Tu4	Aerodynamics	Chair: Antonio Dourado
14:25	1565	EXPERIMENTAL DRAG REDUCTION ON AHMED BODY BY USAGE OF THE TRIP WIRES AND BY ARRANGEMENTS WITH MICROSPHERE	Frederico Augusto Br <mark>aga</mark> da Silva
14:40	1590	COMPUTATIONAL FLUID-DYNAMICS MODELING OF PARAFOILS	João Pedro Leal Vieira
14:55	1639	AXISYMMETRIC RAREFIED FLOW AROUND A BLUNTED BODY: NUMERICAL AND EXPERIMENTAL COMPARISON	Ruan Passos
15:10	1661	OBLIQUE SHOCK WAVE FOR AIR AT HIGH TEMPERATURE	Vinícius Lamas von Sohste <mark>n</mark>
15:25	1901	THERMODYNAMIC ANALYSIS OF THE HYPERSONIC FLOW OVER A SCRAMJET DEMONSTRATOR CONSIDERING DIFFERENT GAS MODELS	Ramon Carneiro
AERO <sup>-</sup>	Tu5	Aerodynamics & Aerospace Structures	Chair: Alysson Nunes Diógenes
	1070		Pedro Henrique Rosa dos
15:55	1978	COMPRESSIBLE LAMINAR BOUNDARY LAYERS	Santos
	2265	EXPERIMENTAL STUDY OF THE TRANSIENT RESPONSE OF A LAMINAR SEPARATION BUBBLE	omar elias horna pinedo
16:10		EXPERIMENTAL STUDY OF THE TRANSIENT RESPONSE OF A LAMINAR SEPARATION BUBBLE NUMERICAL NON-LINEAR STRUCTURAL ANALYSIS OF A ROTARY BLADE UNDER AERODYNAMIC LOAD	7
16:10 16:25 16:40	2265 0478 0519	EXPERIMENTAL STUDY OF THE TRANSIENT RESPONSE OF A LAMINAR SEPARATION BUBBLE NUMERICAL NON-LINEAR STRUCTURAL ANALYSIS OF A ROTARY BLADE UNDER AERODYNAMIC LOAD APPLICATION OF ARTIFICIAL NEURAL NETWORKS IN DAMAGE DETECTION	omar elias horna pinedo André Florentino Ribeiro Matheus Janczkowski Fogaça
16:10 16:25 16:40	2265 0478 0519 <b>E-Poster</b>	EXPERIMENTAL STUDY OF THE TRANSIENT RESPONSE OF A LAMINAR SEPARATION BUBBLE NUMERICAL NON-LINEAR STRUCTURAL ANALYSIS OF A ROTARY BLADE UNDER AERODYNAMIC LOAD APPLICATION OF ARTIFICIAL NEURAL NETWORKS IN DAMAGE DETECTION Flight Dynamics & Propulsion	omar elias horna pinedo André Florentino Ribeiro Matheus Janczkowski Fogaça Chair: Antonio Dourado
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15:55 16:10 16:25 16:40 AERO I 17:05 to	2265 0478 0519 <b>E-Poster</b> 0158	EXPERIMENTAL STUDY OF THE TRANSIENT RESPONSE OF A LAMINAR SEPARATION BUBBLE NUMERICAL NON-LINEAR STRUCTURAL ANALYSIS OF A ROTARY BLADE UNDER AERODYNAMIC LOAD APPLICATION OF ARTIFICIAL NEURAL NETWORKS IN DAMAGE DETECTION Flight Dynamics & Propulsion OPTIMAL TIME-FIXED EARTH-MOON TRAJECTORIES SEMI-ANALYTIC FIRST-ORDER SOLUTION FOR OPTIMAL LOW- THRUST TRAJECTORIES AROUND MOON MODELING, SIMULATION AND CONTROL OF QUADROTOR FOR	omar elias horna pinedo André Florentino Ribeiro Matheus Janczkowski Fogaça Chair: Antonio Dourado Luiz Arthur Gagg Filho
16:10 16:25 16:40 AERO I 17:05	2265 0478 0519 <b>E-Poster</b> 0158 0159 0598	EXPERIMENTAL STUDY OF THE TRANSIENT RESPONSE OF A LAMINAR SEPARATION BUBBLE NUMERICAL NON-LINEAR STRUCTURAL ANALYSIS OF A ROTARY BLADE UNDER AERODYNAMIC LOAD APPLICATION OF ARTIFICIAL NEURAL NETWORKS IN DAMAGE DETECTION Flight Dynamics & Propulsion OPTIMAL TIME-FIXED EARTH-MOON TRAJECTORIES SEMI-ANALYTIC FIRST-ORDER SOLUTION FOR OPTIMAL LOW- THRUST TRAJECTORIES AROUND MOON	omar elias horna pinedo André Florentino Ribeiro Matheus Janczkowski Fogaça Chair: Antonio Dourado Luiz Arthur Gagg Filho Sandro da Silva Fernandes

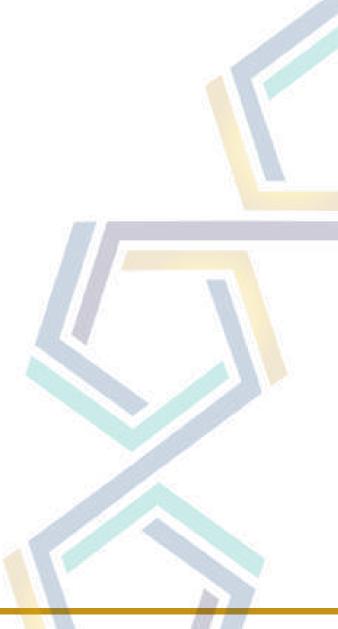
17:05 to	0883	MEASUREMENT OF THE REGRESSION RATE IN A LAB-SCALE HYBRID ROCKET MOTOR BY ACQUIRING THE HELMHOLTZ FREQUENCY IN THE COMBUSTION CHAMBER	Isabel Matos
18:05		COMPARATIVE ANALYSIS OF THE FLOW INSIDE A SUPERSONIC COMBUSTION TEST BENCH USING TWO DIFFERENT LENGTHS FOR THEIR VICIATED AIR GENERATOR	Taiana Cortes



Wedn	lesday	24	Room 2
Time	Code	Title	Presenter
AERO N	We1	Aerospace Structures	Chair: Rafael Cuenca
08:35	0558	FLUID-STRUCTURE INTERACTION ANALYSIS OF A FLEXIBLE WING USING THE LIFTING-LINE THEORY AND THE EULER-BERNOULLI BEAM MODEL VIA A FINITE ELEMENT APPROACH	Murilo Caetano da Silva
08:50	0615	DEVELOPMENT OF A STRUCTURAL METAMODEL IN MDO FOR WIND BLADES BASED ON NEURAL NETWORK	Júlia da Silva Maschietto
09:05	0825	REDUCED ORDER MODELING OF HIGHLY FLEXIBLE STRUCTURES	Arthur Veronese
09:20	0381	Session Speaker: ANALYSIS OF THE STRUCTURAL CHARACTERISTICS OF 4- AND 5-DIGIT NACA AIRFOILS FROM A MDO PERSPECTIVE	Murilo Sartorato
AERO \	We2	Aerospace Structures	Chair: Renato Oba
09:45	1329	NON-LINEAR FINITE ELEMENT METHOD ANALYSIS APPLIED TO FUNCTIONALLY GRADED TIMOSHENKO BEAMS	Marcos Antonio Riquetto Ezequiel
10:00	1534	A HIERARCHICAL FINITE ELEMENT MODEL FOR MODAL ANALYSIS OF AIRCRAFT STRUCTURES	Eduardo Westphal da Cunha
10:15	1572	ANALYSIS AND IMPROVEMENT OF THE STRUCTURAL REPAIR PROCESS IN COMPOSITE PANELS	Thullio Campos Russo Oliveira
10:30	1706	PASSIVE THERMAL PROTECTION MATERIALS FOR HYPERSONIC AIRBREATHING FLIGHT VEHICLES	Raysa Cristiano Paulino Pereira
10:45	1749	STRUCTURAL ANALYSIS OF A FILAMENT WOUND ROCKET MOTOR CASING UNDER INTERNAL PRESSURE	Erika Tomita
AERO \	We3	Aerospace Structures & Control Systems and Aeroelasticity	Chair: Talita Possamai
11:15	1830	COMPARISON BETWEEN QUAD AND DOUBLE-DOUBLE LAMINATES IN THE BUCKLING DESIGN OF A CARBON/EPOXY WING STRUT	Marília Attoni
11:30	1879	FABRICATION AND CHARACTERIZATION OF HONEYCOMB PANELS WITH PRINTED CIRCUIT BOARD FACES	Pedro Alves
11:45	0295	NONLINEAR ENERGY SINKS AS A PASSIVE CONTROL APPROACH TO SUPPRESS AIRFOIL FLUTTER	Adolfo Esteves Ribeiro
12:00	0685	UNSTEADY TIME-DOMAIN ANALYSIS OF FINITE WINGS USING THE LIFTING-LINE THEORY VIA A FINITE ELEMENT APPROACH	Guilherme Bueno
AERO \	We4	Control Systems and Aeroelasticity	Chair: Talita Possam <mark>ai</mark>
14:40	0826	AEROELASTIC MODEL IDENTIFICATION OF AN ARFOIL	Pedro Fernandes R. Bonnas
14:55	0899	EDUCATIONAL ATTITUDE DETERMINATION CONTROL SYSTEM PROTOTYPE FOR CUBESATS	Álef Dias
15:10	0976	NUMERICAL AEROELASTIC ANALYSIS PROCEDURE FOR SAE AERODESING COMPETITION AIRCRAFT	gilberto de sousa
15:25	1011	EVALUATION OF CONTROL ALLOCATION METHODS FOR MULTIROTOR AERIAL VEHICLES	José Agnelo Bezerra
AERO N	We5	Control Systems and Aeroelasticity	Chair: Edemar Morsch Filho
15:55	1016	LYAPUNOV-BASED CONTROL DESIGN FOR A FULLY-ACTUATED NON- PLANAR HEXA-ROTOR AERIAL VEHICLE	José Agnelo Bezerra
16:10	1541	AIRCRAFT PILOT MODELING DURING NOSE WHEEL STEERING	Pablo Milheiro Novaes de Araujo
16:25	1791	STABILIZATION AND CONTROL OF A QUADCOPTER IN PHYSICAL AND SIMULATION SYSTEMS	Huascar Mirko Montecinos Cortez
16:40	1829	PARAMETER-DEPENDENT SURFACE-TO-AIR MISSILE AUTOPILOT DESIGN	Yuri Marchetti Tavares

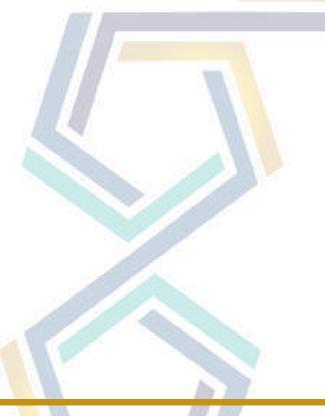
AERO	- Aeros	pace Engineering	
Thurs	day 2	5	Room 2
Time	Code	Title	Presenter
AERO 1		Control Systems and Aeroelasticity	Chair: Rafale Cuenca
08:35	2033	PARAMETER IDENTIFICATION BY UPDATING THE FINITE ELEMENT MODEL FOR A FLEXIBLE WING	Thiago Rosado de Paula
08:50	2324	ON THE USE OF PZT TRANSDUCERS FOR ACTIVE FLUTTER SUPPRESSION	Frederico Ribeiro
09:05	2326	ITERATIVE METHOD TO PREDICT LIMIT CYCLES IN AEROELASTIC SYSTEMS WITH FREEPLAY AND COULOMB FRICTION VIA DESCRIBING FUNCTIONS	Larissa Drews Wayhs Lopes
09:20	2349	FLUTTER STABILITY ANALYSIS OF A PLATE LIKE WING SYSTEM IN THE PRESENCE OF PARAMETRIC UNCERTAINTY	Marcelo Araújo Delgado Filho
AERO 1	rh2	Flight Dynamics	Chair: Antonio Dourado
09:45	0036	DEVELOPMENT OF A TOOL FOR PILOT INDUCED OSCILLATIONS (PIO) TESTING IN FLIGHT SIMULATOR	Jorge H Bidinotto
10:00	0060	TAKEOFF SPEEDS DETERMINATION USING A MULTIDISCIPLINARY	Carolina Barbosa Coimbra
10:15	0179	MODEL BASED AIRFLOW ANGLE ESTIMATION USING GPS/INS SENSOR FUSION AND APPLICATION TO UNMANNED AIRCRAFT VEHICLE	Lucas Moraes Santos
10:30	0307	A HISTORICAL REVIEW OF PILOT INDUCED OSCILLATIONS (PIO) OCCURENCE	Jorge H Bidinotto
10:45	0833	Session Speaker: A UNIFIED APPROACH FOR THE DYNAMICS OF FLEXIBLE TETHERED WINGS	Olaf Palmer Val Pinheiro
AERO 1	Th3	Flight Dynamics & Propulsion	Chair: Diego Fernando Moro
11:15	0858	NEURAL NETWORKS FOR AERODYNAMIC MODELING IN FLIGHT	Victor Hugo Araújo Diniz
11:30	2163	SYNTHETIC ESTIMATION OF ANGLE OF ATTACK AND SIDESLIP USING A MANEUVER RECONSTRUCTION METHOD FOR FLIGHT TESTING OF AN UAV	Andrew Gomes Pereira Sarmento
11:45	0074	DEVELOPMENT OF THE 3D PRINTED FUEL GRAIN FOR A SOLID- FUEL RAMJET ENGINE	Danielle Lima Bezerra
12:00	0322	SCRAMJET DESIGN FOR ATMOSPHERIC FLIGHT FROM 23 KM TO 30 KM	Guilherme Melo Cha <mark>ves</mark>
AERO 1	Th4	Propulsion	Chair: Alysson Nunes
14:25			
14:40	0497	DEVELOPMENT AND COMPARISON OF PLANAR AND CONICAL SCRAMJET VEHICLE INLET	Luiz Henrique Silva Marques Soares
14:55	0521	CONVERGENT AND DIVERGENT ANGLES OF A SOLID-FUEL ROCKET NOZZLE AND ITS INFLUENCES ON THE MOTOR'S THRUST CURVE	Gabriel de Andrade Janen <mark>e</mark> Gonini
15:10	1065	IMPACT OF THE CHORD/DIAMETER DISTRIBUTION ON PROPELLERS EFFICIENCY USING THE LIFTING-LINE THEORY	Felipe Leme
15:25	1183	REVIEW OF FUEL INJECTION FOR HYPERSONIC AIRBREATHING PROPULSION	Pedro Paulo Batista de Araújo
AERO 1	Th5	Propulsion	Chair: Oswaldo Barbos Loureda
15:55			
16:10	1411	SIMULATION AND PERFORMANCE ANALYSIS OF A HYBRID ROCKET ENGINE WITH SELF-PRESSURIZING OXIDIZER	Alexandre Costa Goulart
16:25	1435	PRELIMINARY SIZING METHOD FOR HYBRID-ELECTRIC POWERTRAIN/PROPULSION SYSTEMS OF EVTOL AIRCRAFTS	Yan Silva
16:40	2105	CHARACTERISTIC LENGTHS OF LIQUID PROPELLANT ROCKET ENGINES AND THE INFLUENCE OF CHEMICAL REACTIONS	Maurício Sá Gontijo

AERO	AERO - Aerospace Engineering						
Friday 26			Room 2				
Time	Code	Title	Presenter				
AERO P	Fr1	Propulsion	Chair: Diego Fernando Moro				
08:35	2274	ASSESSMENT OF FOULING FORMED BY THERMO-OXIDATIVE DEGRADATION OF JET FUEL IN TURBULENT FLOW IN ACAPILLARY TUBE	Mariana Tessmann Martins				
08:50	1361	A HYBRID ANALYTICAL-NUMERICAL MODEL FROM THE PROPELLANT TANK UP TO THE THRUSTER OF THE LOW-PRESSURE MICRO-RESISTOJET	Igor Guimarães				
09:05	10495	MODELING, IMPLEMENTATION AND APPLICATION OF A TOOL FOR PRELIMINARY HYPERSONIC AIRBREATHING VEHICLE DESIGN	Luiz Henrique Silva Marques Soares				
09:20							



Program Overview and Bioengineering							
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26		
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses		
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break		
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Bioengineering					
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break		
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Bioengineering					
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break		
11:15 - 12:20	Bioengineering	Bioengineering					
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch		
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker		
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break		
14:25 - 15:45	Bioengineering	Bioengineering	5 min break				
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break		
15:55 - 17:00	Bioengineering	Bioengineering					
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break		
17:05 - 18:05	Bioeng. Informative lectures	Bioeng. Keynote speaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session		
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break			
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary			

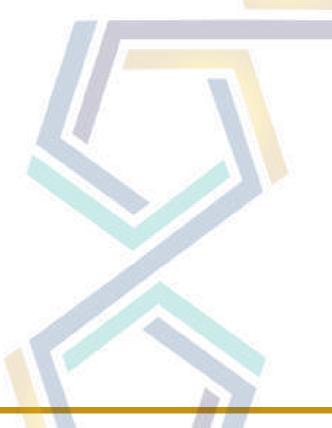




BIOE -	Bioeng	ineering	-	
Mond	ay 22		Room 3	
Time	Code	Title	Presenter	
BIOE M	101	Biofluids Dynamics e Bioheat Transfer	Chair: Carlos Rodrigo de Mello Roesler	
11:15	IN SILICO STUDY		Jonhattan Ferreira Rangel	
<b>11:30</b> 1275		HEMODYNAMICS STUDY OF BLOOD AND SENSITIVITY ANALYSIS IN BIOLOGICAL STRUCTURE FOR CASES OF ISCHEMIC STROKE	Tarik Hazem Ashmawi	
11:45	1459	EVALUATION OF HEMOLYTIC POTENTIAL BY EULERIAN APPROACH IN CENTRAL VENOUS ACCESS FOR HEMODIALYSIS	Matheus Costa	
12:00	1582	ESTIMATION OF THE BRAIN TEMPERATURE IN DEEP BRAIN STIMULATION APPLICATION WITH THE PARTICLE FILTER METHOD	Lucas Jardim	
BIOE M	1o2	Biofluids Dynamics e Bioheat Transfer	Chair: Prof. Daniel Ponce	
14:25	1747	NUMERICAL ANALYSIS OF THERMAL CONTRAST AND THERMAL DAMAGE DURING HYPERTHERMIA IN BREAST CANCER CASES.	Tarcio Cardoso	
14:40	1910	VERIFICATION OF NUMERICAL MODELS OF HEMOLYTIC INDEX BASED ON EULERIAN AND LAGRANGIAN APPROACHES IN FDA (FOOD AND DRUG ADMINISTRATION) BENCHMARKS	Mirella Gibson	
14:55	2217	NUMERICAL AND ANALYTICAL ANALYSES OF THE PLATELET LYSIS INDEX AND HEMOLYSIS FOR EFFICIENCY EVALUATION OF CENTRAL VENOUS CATHETERS	Raphael Machado Cezar	
15:10				
15:25				
BIOE M	1o3	Biomechanics	Chair: Profa. Patrícia Ortega	
15:55	1759	APPLICATION OF THE SOLUTION BLOW SPINNING TECHNIQUE FOR NON-WOVEN FIBER PRODUCTION USING PVA	Paulo Moreira	
16:10	2154	COMPARATIVE STUDY OF BIOGENIC AND CHEMICAL SYNTHESIZED HYDROXYAPATITE FOR BIOMEDICAL APPLICATIONS	Marla Horta	
16:25	0273	A DEVICE FOR EXPERIMENTAL CHARACTERIZATION OF BREATHING AND COUGHING	Marco Ceccarelli	
16:40	0451	ON THE INFLUENCE OF THE WALL THICKNESS HETEROGENEITY IN THE MECHANICS OF INTRACRANIAL ANEURYSMS	lago Lessa de Oliveira	
BIOE E	-Poster	Biofluids Dynamics e Bioheat Transfer & Biomaterials and Biotribology & Biorobotics and Artificial Intelligence	Chair: Prof. Eduardo Guy Perpétuo Bock	
	0879	FLUID DYNAMIC STUDY IN A FLEXIBLE ARTERIOVENOUS FISTULA MODEL	Everton Guedes de Lima	
	0884	ANALYSIS OF THE PRESSURE FIELD IN RIGID ARTERIOVENOUS FISTULA WITH VARIATION IN THE AREA OF THE ANASTOMOSIS	Alexsandra Tomé dos Santos	
	1378	MODELING AND SIMULATION OF AQUEOUS HUMOUR FLOW IN THE HUMAN EYE	Caio Vinícius Schurgelies de Sá	
17:05	1388	HEMODYNAMICS ALTERATIONS INDUCED BY CENTRAL VENOUS CATHETER IN VASCULAR ACCESS FOR HEMODIALYSIS	Saulo Gonçalves	
to 18:05	0421	MECHANICAL AND BIOLOGICAL EVALUATION OF THE GRAPHENE / NANOHYDROXYAPATITE COMPOSITE FOR APPLICATION IN BONE TISSUE ENGINEERING	José Victor Passos Santiago	
	0876	MICROALGAE BIOPOLYMERS: A REVIEW	Pedro Siqueira Zatta	
	2346	FORMATION OF TIO2 NANOSTRUCTURE BY PLASMA ELECTROLYTIC OXIDATION	Cristian Cley Paterniani Rita	
	0192	EMG-DRIVEN HUMAN-EXOSKELETON INTERACTION MODEL FOR KNEE FLEXION AND EXTENSION REHABILITATION	Luca Borgonovi	
	0560	ANALYSIS OF PRESSURE DROP IN ARTERIOVENOUS FISTULA WITH VARIATION OF THE ANGLE OF ANASTOMOSE - IN VITRO STUDY	Willyam Brito de Almeida Santos	

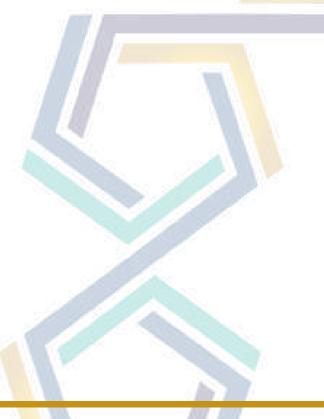
Tues	day 22		Boom 3	
	day 23		Room 3	
Гime	Code	Title	Presenter	
BIOE T	'u1	Biomechanics	Chair: Prof. Jakson Manfredin	
)8:35	0979	HEART RHYTHMS DRIVEN BY CHAOTIC PACEMAKER RESPONSES	Augusto Luiz Cheffer de Melo	
08:50	0983	RANDOM MATRIX THEORY APPLIED TO HEART DYNAMICS	Augusto Luiz Cheffer de Melo	
9:05	1002	DEVELOPMENT OF A SYSTEM FOR BIOMECHANICAL ASSESSMENT OF HUMAN GAIT IN CLINICAL SETTINGS	Claysson Vimieiro	
9:20	1122	VISCOELASTIC MODELING OF PORCINE LIGAMENTS	Bruno Mello Silveira	
			Chair: Prof. Jakson Manfredini	
BIOE T	uz	Biomechanics & Biorobotics and Artificial Intelligence		
09:45	1244	ON FIXED-STRESS AND FIXED-STRAIN SOLUTION SCHEMES FOR LARGE STRAIN POROELASTICITY APPLIED TO SOFT BIOLOGICAL TISSUES	José Luís Medeiros Thiesen	
10:00	1604	A NUMERICAL STUDY ON A TRANSVERSELY ISOTROPIC PERMEABILITY MODEL APPLIED TO SOFT TISSUES	Bruno Klahr	
10:15	2225	DEVELOPMENT OF AN AUTONOMOUS ROBOT FISH TO STUDY SWIM PATTERN HYDRODYNAMICS	Miguel Angel Garcia	
10:30				
10:45			Chair: Prof. Daniel Ponce	
BIOE T	<b>u</b> 3	Biorobotics and Artificial Intelligence		
11:15	0553	EVALUATION OF THE USE OF PARALLEL KINEMATIC MECHANISMS FOR ROBOTIC HUMAN WRIST	Thales Travaglini Galanti	
11:30	0570	A NOVEL DESIGN OF ROBOTIC HAND WITH LINEAR MOTORS	Daniel Pascotto Costa	
11:45	2180	DEVELOPMENT OF A BIOMECHANICALLY ACCURATE KINEMATIC MODEL FOR THE HUMAN ARM AND HAND	Leonardo de la Roca	
12:00	1052	Session Speaker: PILOT: ARTIFICIAL INTELLIGENCE APPLIED TO THE IDENTIFICATION OF BONE CHANGES IN CANINE PELVIC RADIOGRAPHIES	Barbara Emmanuelle Sanches Silva	
BIOE T	u4	Implants, Orthoses and Prostheses	Chair: Prof. Daniel Ponce	
14:25	1037	ELBOW MODULE VALIDATION OF A ROBOTIC ORTHOSIS FOR STROKE REHABILITATION	Guilherme de Paula <mark>Rúb</mark> io	
14:40	1282	MYOELECTRIC HAND PROSTHESIS CONTROL CONSIDERING INTERPHALANGEAL STIFFNESS	Jean Mendes Nascime <mark>nto</mark>	
14:55	1989	USE OF METALLIC FUNCTIONALLY GRADED MATERIAL FOR TOTAL HIP ARTHROPLASTY TO REDUCE BONE REABSORPTION DUE TO THE EFFECT OF STRESS SHIELDING	ALEXANDRE ZANNI HUBINGER	
15:10 15:25				
			Chair: Prof. Daniel Ponce	
BIOE T	<b>u</b> 5	Biomechanics	Ondir. 1 Tor. Damer 1 Onec	
15:55	1142	DEVELOPMENT OF AN AUTOMATIC ACTUATOR AS EMERGENCY AUXILIARY EQUIPMENT FOR MECHANICAL RESPIRATORS USED IN INTENSIVE TREATMENT UNITS (UTIS)	Vitor Brabo dos Santos	
16:10	1514	AN ALTERNATIVE VENTILATOR PROTOTYPE FOR THE EMERGENCY SITUATION DUE TO COVID-19 PANDEMIC	João Paulo Fonseca	
16:25	1786	DEFINING A META-MODEL FOR A COMMERCIAL PULMONARY MECHANICAL VENTILATOR	João Paulo Fonseca	
16:40	0544	Session Speaker: A METHODOLOGY FOR DYNAMIC CALIBRATION OF AN INERTIAL DYNAMOMETER FOR WHEELCHAIR	Carlos Eduardo de Souza	
BIOE E	-Poster	Biomechanics & Implants, Orthoses and Prostheses & Medical Devices	Chair: Profa. Patrícia Ortega	
	0050	ACTIVE KNEE ORTHOSIS ADAPTIVE IMPEDANCE CONTROL BASED ON THE HUMAN IMPEDANCE DETERMINED BY POLYNOMIAL METHOD	Denis César Mosconi Pereira	
	0113	DEVELOPMENT, DESIGN AND BUILT OF AN ISOINERTIAL EQUIPMENT FOR PHYSIOTHERAPY APPLICATION	Marcos Alves Rabelo	
	0131	FINITE ELEMENT SIMULATION AND PERFORMANCE ANALYSIS OF A NOVEL BIOABSORBABLE STENT FOR THE TREATMENT OF AORTIC COARCTATION	Flávio Santos	

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	0234	EXPERIMENTAL PROCEDURE FOR ESTIMATION OF POISSON	João Carlos Andrade de Deus
		FUNCTION OF HIPERELASTIC ANISOTROPIC MATERIAL	Filho
	0554	STRUCTURAL ANALYSIS OF A THREE WHEELED FRAME FOR RACE RUNNING (PETRA) USING FINITE ELEMENT METHOD	Frederico Sousa Santos
	1114	EXPERIMENTAL CHARACTERIZATION OF PORCINE LIGAMENTS	Rodrigo Ribeiro Pinho Rodarte
	1653	BIOMIMETICS INSERTION IN ENGINEERING: A LITERATURE REVIEW	Pedro Bottlender
17:05 to	0456	PARAMETRIC ANALYSIS OF A UNITARY DENTAL PROSTHESIS OVER- IMPLANT USING FINITE ELEMENT MODELS	Matheus Andrade
18:05	0473	INLFUENCE OF SPIF PARAMETERS ON DRY INCREMENTAL FORMING OF TITANIUM SHEETS FOR BIOMEDICAL APPLICATIONS AND SURFACE COMPARISON AGAINST COMMERCIAL HIP IMPLANT	Felipe dos Anjos Rodrigues Campos
	1213	CABLE-DRIVEN ACTIVE ARM ORTHOSIS FOR REHABILITATION OF THE UPPER LIMB	Eduardo Antonio Fragoso Dias
	1504	INFLUENCE OF YB-FIBER LASER PROCESSING PARAMETERS ON THE SURFACE TEXTURING OF BIOGLASS-INFILTRATED ZIRCONIA SAMPLES FOR BIOMEDICAL APPLICATIONS	Luiza De Bortoli
	1764	MECHANICAL FEASIBILITY STUDY USING FINITE ELEMENT METHODS IN AN OPEN SOURCE HAND PROSTHESIS	Rodrigo Romero
	1765	BIONIC PROSTHESIS HAND: A REVIEW AND FUTURE PERSPECTIVES	Kliftom Amorim Costa
	0805	MATHEMATICAL MODELING AND SIMULATION OF A MECHANICAL VENTILATOR WITH HEATING AND AIR HUMIDIFICATION FOR INTENSIVE CARE UNITS	Francisco Kleber Regis Castro
	0641	THE PARAMETERS THAT INFLUENCE THE EFFECTIVE FIT OF A TRANSTIBIAL PROSTHESIS: STATE-OF-THE-ART REVIEW	Walesca Marques Dias



Program Overview and Combustion						
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26	
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses	
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break	
08:35 - 09:40	Celebrating COBEM's 50th anniversary		Combustion	Combustion		
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break	
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future		Combustion	Combustion		
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break	
11:15 - 12:20			Combustion	Combustion		
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch	
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker	
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break	
14:25 - 15:45			5 min break	Combustion		
			Combustion			
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break	
15:55 - 17:00			Combustion			
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break	
17:05 - 18:05	Informative lectures	Keynote speaker	Combustion Keynote	ABCM/ EMBRAER Prize	Closing session	
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break		
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary		





		pustion	-
Wedn	esday		Room 3
Time	Code	Title	Presenter
сомв	We1	Chemical Kinetics and Modeling	Chair: Leonel Rincon Cancino
08:35	0331	SOLAR-DRIVEN DRY REFORMING OF METHANE ON THE OPEN-CELL FOAM TO IMPROVE THE ENERGY STORAGE EFFICIENCY IN A THERMOCHEMICAL FLUIDIZED BED MEMBRANE REFORMER: A COMPUTER SIMULATION APPROACH	Paulo Costa
08:50	0411	PARTICLE FRAGMENTATION EFFECT ON THE SOLID FUEL COMBUSTION MODELING IN A DROP TUBE FURNACE	Vítor Lumertz
09:05	0494	AUTOMATIC REDUCTION FOR CHEMICAL KINETICS MECHANISM THROUGH LAMINAR FLAME SPEED SENSITIVITY ANALYSIS USING CANTERA.	Alvaro Cesar Garcia
09:20	1185	THE FORMATION OF NITRIC OXIDE IN FLAMES: A NUMERICAL ASSESSMENT USING DETAILED CHEMICAL KINETICS	Vinicius Rugeri Borges Bonini
СОМВ	We2	Chemical Kinetics and Modeling & Turbulent Flames	Chair: Loreto Pizzuti
09:45			
0:00	1197	NEGATIVE TEMPERATURE COEFFICIENT - THE INFLUENCE ON FUEL SURROGATE FORMULATION	Moisés Sousa
10:15	1251	REDUCED KINETICS MODELS FOR GASOLINE SURROGATES	Kathleen Mayara Balestrin
10:30	2088	USE OF VIRTUAL KINETICS CHEMISTRY FOR IGNITION DELAY TIMES PREDICTION FOR HIGH TEMPERATURE AND NTC BEHAVIORS	Augusto Pacheco
10:45	0080	Session Speaker: NON-PREMIXED TURBULENT COMBUSTION MODELLING OF A BLUFF-BODY FLAME USING A FLAMELET PROGRESS VARIABLE APPROACH	Javier Manrique De la Cruz
СОМВ	We3	Combustion, Pyrolisis and Gasification of Solids and Liquids	Chair: Flavia Zinani
11:15	0173	EULERIAN-EULERIAN CFD SIMULATION OF BIOMASS DEVOLATILIZATION IN FLUIDIZED BED REACTOR FOR GASIFICATION	Vitor Alberto Lemes Monteiro
11:30	0216	THERMODYNAMIC EQUILIBRIUM MODELING OF BIOMASS GASIFICATION: OPTIMIZATION OF OPERATING CONDITIONS IN THE CO-GASIFICATION OF MUNICIPAL SOLID WASTE	Roberto Vinicius Fiuza
11:45	0938	HYBRIDIZATION OF ENERGY SOURCES AS AN ENERGY ALTERNATIVE	Fernanda Couto Costa
12:00	1430	EFFECT OF THE CARBON DIOXIDE CONCENTRATION AND THE PREHEATING OF REACTANTS ON THE COMBUSTION OF LOW CALORIFC VALUE BIOGAS MIXTURES	José Alexandre de Ca <mark>mpo</mark> s
сомв	We4	Combustion, Pyrolisis and Gasification of Solids and Liquids	Chair: PAULO ROBERTO
14:40	2065	SIMULATION OF AIR-STEAM GASIFICATION OF GLYCEROL USING ASPEN HYSYS	Jesús David Rhenals Julio
14:55	2114	TORREFACTION OF EUCALYPTUS SPP SAWDUST UNDER NITROGEN AND CARBON DIOXIDE ATMOSPHERES	Claudinei Henrique Ferreira Rodrigues
15:10	2160	CATALYTIC PYROLYSIS OF SUGARCANE BAGASSE USING CAO AND MGO	Bruna Machado
15:25	2307	DRY TORREFACTION OF SUGARCANE BAGASSE USING CARBON DIOXIDE AS GAS CARRIER	Juan Pablo Arteaga
сомв	We5	Emissions & Fire Science and Technology	Chair: Fernando Marcelo Pereira
15:55	1299	FUGITIVE EMISSIONS IN MOBILE SOURCES - AN EXPERIMENTAL ANALYSIS IN DIESEL-POWERED VEHICLES REGULATED BY THE EURO V STANDARD	Daniel Ferreira da Silva
16:10	1673	STUDY OF EMISSIONS IN COMBUSTION SIMULATION OF OXYGENATED FUEL MIXTURES	Deliene Costa Guimarães Barros
16:25	1768	LIFE CYCLE ANALYSIS AND EXPERIMENTAL TESTS ON DYNAMOMETER BENCH USING HVO COMPARED TO DIESEL.	Luis Filipe de Almeida Roque
16:40	1605	CFD ESTIMATION OF SAFETY DISTANCES FROM POOL FIRES	Marcelo André Cordeiro da Silva
СОМВ	E-Poster	Spray, Droplet, and Supercritical Combustion & Internal Combustion Engines & Turbulent Flames & Emissions & Chemical Kinetics and Modeling & Combustion, Pyrolisis and Gasification of Solids and Liquids	Chair: Roberto Wolf Francisco Junior
	1084	OIL SLUDGE ACTIVATION ENERGY ANALYSIS FOR TERMO-	Letícia Colletta

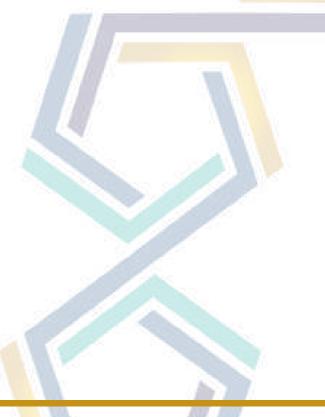
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	1111	ENERGETIC CHARACTERIZATION OF LIGNOCELLULOSIC BIOMASS: MACAUBA (ACROCOMIA ACULEATA)	Laura Sousa
	1060	PERFORMANCE AND EMISSIONS ANALYSIS OF A COMPRESSION IGNITION ENGINE USING VARIOUS PROPORTIONS OF BIODIESEL	Ludmila Martins de Araújo
	0334	INTERNAL COMBUSTION RECIPROCATING ENGINES PERFORMANCE AND EMISSIONS SIMULATION IN PYTHON	Ramon Eduardo Pereira Silva
17:05 to 18:05	0500	ANALYSIS OF THE CONCEPT OF FUEL INJECTION IN DUCTS - DFI WITH DIFFERENT STAND-OFF DISTANCES IN A DIESEL CYCLE RESEARCH ENGINE.	Fábio Dias
	1414	EXPERIMENTAL STUDY WITH DIFFERENT STRATEGIES AND AIR- DILUTION USING OPTICAL SI ENGINE FUELED WITH HYDRATED ETHANOL	Maycon Silva
	0439	VELOCITY MEASUREMENT OF LIQUID/GEL DROPLETS USING SHADOW IMAGES	Gabriel Dias
	0438	COMPARISON BETWEEN MIXTURE FRACTION AND SPECIES TRANSPORT COMBUSTION APPROACHES THROUGH RADIATIVE TRANSFER ANALYSIS IN TURBULENT FLAMES	Amanda Gonçalves de Figueiredo



COMB	- Comb	oustion	
Thurs	day 2	5	Room 3
	Code	Title	Presenter
COMB		Internal Combustion Engines	Chair: Robson Leal da Silva
08:35	0052	DETERMINATION OF A SIMPLE AND ROBUST METHOD TO CALCULATE IGNITION DELAY IN COMPRESSION IGNITION ENGINES: APPLICATION TO DIESEL-BIODIESEL-ETHANOL BLENDS	Paul Bret
08:50	0079	DETECTION AND ANALYSIS OF ADULTERATED FUELS IN INTERNAL COMBUSTION ENGINES: DEVELOPMENT OF A PROTOTYPE	Breno Mendonça
09:05	0574	EXERGETIC ANALYSIS OF AN INTERNAL COMBUSTION ENGINE RUNNING ON E22 AND E100	Fernando Fusco Rovai
09:20	1113	Session Speaker: NUMERICAL STUDY OF WATER ADDITION ON THE COMBUSTION CHARACTERISTICS IN AN HCCI ETHANOL ENGINE	Giovani Dambros Telli
COMB	Th2	Internal Combustion Engines & Laminar Flames	Chair: Maria Luiza Sperb Indrusiak
09:45	2270	TEMPERATURE AND PRESSURE SENSITIVITY OF THE LAMINAR FLAME SPEED OF DIISOBUTYLENE/AIR MIXTURES	Christian de Araújo
10:00	1763	EXPERIMENTAL INVESTIGATION OF DIESEL-ETHANOL DUAL-FUEL COMBUSTION FOR AGRICULTURAL TRACTORS APPLICATION	Ana Júlia Antunes Cintra Rosa
10:15	0706	SPRAY AND COMBUSTION BEHAVIOR IN A LOCOMOTIVE ENGINE USING DIESEL/ETHANOL BLENDS: A CRFD ANALYSIS	Daniel do V Rotter
10:30		Symposium Speaker: Combustion experiments on going in ISS and solid material flammability in reduced gravity	Prof. Osamu Fujita
10:45		Symposium Speaker: Combustion experiments on going in ISS and solid material flammability in reduced gravity	Prof. Osamu Fujita
COMB	Th3	Laminar Flames	Chair: Andres Mendiburu
11:15	0061	SOOT PRECURSORS ANALYSYS USING DETAILED CHEMICAL KINETIC MECHANISMS IN AN ETHYLENE/AIR LAMINAR DIFFUSION FLAME	Sebastian Ruiz
11:30	0110	THE INFLUENCE OF THE LEARNING DATA ON THE REDUCED ORDER MODEL OF LAMINAR NON-PREMIXED FLAMES	Nicole Lopes M. B. Junqueira
11:45	0283	STUDY OF FLAME ACCELERATION IN CLOSED AND HALF-OPEN DUCTS	Rafael Quines
12:00	2210	Session Speaker: EFFECTS OF HYDRODYNAMIC AND THERMO- DIFFUSIVE INSTABILITIES IN THE LOCAL BURNING RATE OF LEAN PREMIXED HYDROGEN/AIR LAMINAR FLAMES	Rafael Meier
СОМВ	Th4	Solid Fuel Combustion & Soot, Nanomaterials, and Large Molecules & Stationary Combustion Systems and Control of Greenhouse Gas Emissions	Chair: Fernando Sacom <mark>ano</mark>
14:25	0343	EXPERIMENTAL AND NUMERICAL STUDY OF COAL AND BIOMASS CO-FIRING IN A DROP TUBE FURNACE	Amanda Tavares de Olivei <mark>ra</mark>
14:40	1040	ASSESSMENT OF THE FISH SCALES AND COAL BLENDS COMBUSTION IN A DROP TUBE FURNACE (DTF)	Arthur Vinicius Sousa Silva
14:55	1225	EFFECTS OF CORROSION INCIDENCE ON A BIOMASS STEAM	Fabiana de Marqui Mantovan
15:10	2004	FIRST-ORDER CONSTRUCT OF A MINERAL CARBONATION SYSTEM FOR POST-COMBUSTION CARBON CAPTURE	Claudia Luiza Manfredi Gasparovic
15:25	0065	Session Speaker: APPLICATION OF A SOOT FORMATION MODEL BASED ON AN INTERPOLATIVE CLOSURE METHOD OF MOMENTS TO A TURBULENT NON-PREMIXED FLAME	René Sebastian Valencia Ramírez

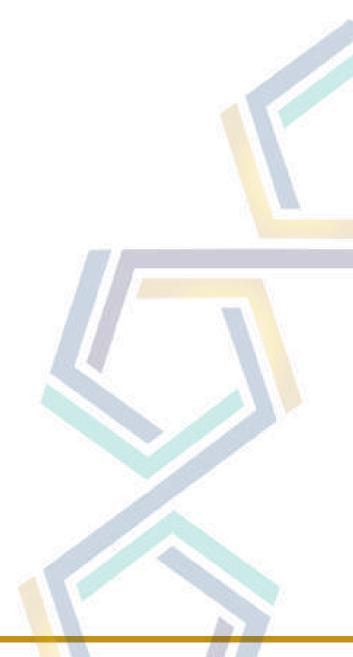
Program	Program Overview and Dynamics, Control, Vibrations, and Acoustics						
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26		
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses		
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break		
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics		
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break		
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics		
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break		
11:15 - 12:20	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics			
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch		
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker		
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break		
14:25 - 15:45	Dynamics, Control,	Dynamics, Control,	5 min break	Dynamics, Control,			
	Vibrations, and Acoustics	Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Vibrations, and Acoustics			
15:45 - 15:55	10 min break	Vibrations, and Acoustics		• • •	10 min break		
<mark>15:45 - 15:55</mark> 15:55 - 17:00	,	·		Vibrations, and Acoustics	10 min break		
	10 min break Dynamics, Control,	10 min break Dynamics, Control,	Vibrations, and Acoustics Dynamics, Control,	Vibrations, and Acoustics 10 min break Dynamics, Control,	10 min break 5 min break		
15:55 - 17:00	10 min break Dynamics, Control, Vibrations, and Acoustics	10 min break Dynamics, Control, Vibrations, and Acoustics	Vibrations, and Acoustics Dynamics, Control, Vibrations, and Acoustics	Vibrations, and Acoustics 10 min break Dynamics, Control, Vibrations, and Acoustics			
15:55 - 17:00 17:00 - 17:05	10 min break Dynamics, Control, Vibrations, and Acoustics 5 min break Dynamics, Cont., Vib.,	10 min break Dynamics, Control, Vibrations, and Acoustics 5 min break Dynamics, Cont., Vib., Keynote	Vibrations, and Acoustics Dynamics, Control, Vibrations, and Acoustics 5 min break Keynote	Vibrations, and Acoustics 10 min break Dynamics, Control, Vibrations, and Acoustics 5 min break ABCM/ EMBRAER	5 min break		





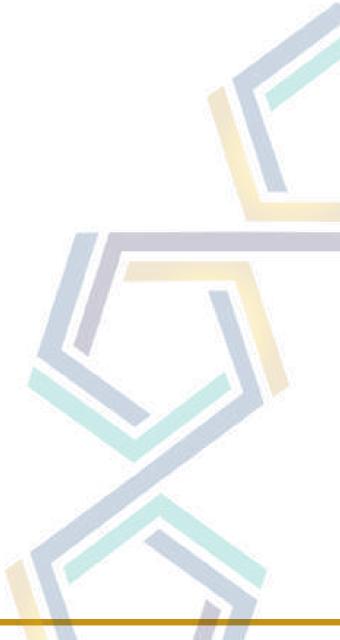
DCVA	- Dynan	nics, Control, Vibrations, and Acoustics	
Monc	day 22		Room 4
Time			Presenter
DCVAI	•		Chair: José Maria (FEM/UNICAMP)
11:15	0197	LOW-FREQUENCY SOUND ABSORPTION WITH BANDWIDTH	Erasmo Felipe Vergara
11:30	0980	EVALUATION OF ESTABLISHED AND NOVEL METHODS USED IN COMPLEX VIBRO-ACOUSTICS ANALYSIS	Thiago Morhy
11:45		DIFFERENTIAL EVOLUTION OPTIMIZATION OF PERIODIC MICRO- PERFORATED CHAMBER MUFFLERS FOR LOW-FREQUENCY SOUND ATTENUATION	Adriano Goto
12:00	1087	TRANSMISSION INDEX PREDICTION	Eriberto Oliveira do Nascimento
DCVA I	Mo2		Chair: José Roberto Arruda (FEM/UNICAMP)
14:25	T		
14:40	1343	COMPARISON	Pedro Cerântola
14:55		BOUNDARY LAYER AND WALL PRESSURE SPECTRUM	Jose Rendón-Arredondo
15:10	1934	PROPELLER VIA A LATTICE-BOLTZMANN LES	Mateus Grassano Lattari
15:25	2323	Session Speaker: AN EXPERIMENTAL INVESTIGATION OF THE INFLUENCE OF EXCITATION, DAMPING, AND SOUND INSULATION ON SOUND RADIATION AND TRANSMISSION	Luisa Piccolo Serafim
DCVAI	Mo3		Chair: Tiago Machado (FEM/UNICAMP)
15:55	0026		Alexandre de Macêdo Wahrhaftig
16:10	0297	A ROBUST STRATEGY TO STABILIZE AIRCRAFT LANDING GEAR SHIMMY UNDER STRUCTURAL UNCERTAINTIES	Luis Eduardo Prado P <mark>erei</mark> ra
16:25	0601	OPTIMAL CONTROL BASED ON THE REDUCED-ORDER MODEL OF A	Fernanda Thaís Colomb <mark>o</mark>
16:40	0652	CO-DESIGN OF THE PLANT AND CONTROLLER OF ACTIVE SUSPENSION SYSTEM USING SEQUENTIAL, ITERATIVE AND NESTED OPTIMIZATION STRATEGIES	Alexandro Brito
DCVA	E-Poster	and vibrations	Chair: Tiago Machado
	0742	PERITBIELIANT BITMBETTEINIA ABTIELANT KIELIBAT KIETWIADKE AL	Tobias Anderson Guimarães
	0796	PARAMETRIC STUDY OF HELMHOLTZ RESONATORS IN ACOUSTIC CAVITIES	Derick Fernandes
		LEARNING	Eriberto Oliveira do Nascimento
	0144	MULTIBODY MODELING AND OPTIMIZATION OF A DYNAMIC VEHICLE SUSPENSION SYSTEM	Jefferson Souza
	0543	LQR-BACKSTEPPING HYBRID CONTROLLER FOR FLIGHT STABILIZATION FOR AUTONOMOUS QUADRIROTOR	Douglas Arena
17:05	11074 1	PERFORMANCE AND ROBUSTNESS COMPARISON OF FUZZY TYPE-2 AND OPTIMAL CONTROLLERS IN ROBOTIC JOINT POSITIONING	Renato Aguiar
to 18:05	2006	THE DESTRUCTIVE POWER OF UNBALANCE ON ROTATING MACHINES - CASE STUDY AND EXPERIMENTAL APPLICATIONS	Marcelo dos Reis Farias
		DIFFERENTIAL EVOLUTION METHOD APPLIED IN PARAMETER IDENTIFICATION AND MODEL UPDATING OF FLEXIBLE PLATE FEM MODEL	Yuri Martins

0882	PARAMETER IDENTIFICATION AND MODEL UPDATING OF THIN PLATE STRUCTURE WITH RECTANGULAR CUT BASED ON ITERATIVE METHODS AND OPTIMIZATION	Gabriel Kozikoski
2322	ANALYSIS OF LOW FREQUENCY VIBRATIONS IN HERMETIC COMPRESSORS	Pedro Motta Nunes
1119	APPLICATION OF MEMS ACCELEROMETERS FOR MONITORING THE STATE AND OPERATIONS OF VEHICLES.	Vinícius de Araújo Salmazo



		nics, Control, Vibrations, and Acoustics	Deem 4
	day 23		Room 4
ime		Title	Presenter
CVA	lu1	Control of Mechanical Systems DISTURBANCE OBSERVER OF AN UAV WITH A SUSPENDED	Chair: Ely Paiva
8:35	0702	PAYLOAD	Renan Silva
)8:50	0713	ELECTROMAGNETIC ACTUATORS	Beatriz Marangoni
09:05	1632	DESIGN OPTIMIZATION FOR BASE EXCITATION PROBLEM OF A CANTILEVERED BEAM COUPLED WITH SHUNT CIRCUIT ON FATIGUE ANALYSIS	João Pedro Sena
9:20	0994	Session Speaker: FORMATION GUIDANCE OF FULLY ACTUATED MULTIROTOR AERIAL VEHICLES USING GLOBAL SLIDING MODES	Jorge Antonio Ricardo Junior
OCVA	Tu2	Control of Mechanical Systems & Dynamics of Mechanical Systems	Chair: Ely Paiva
9:45	1808	SYSTEM IDENTIFICATION AND CONTROLLER DESIGN FOR THE HIGH- DYNAMIC DOUBLE-CRYSTAL MONOCHROMATOR AT SIRIUS	Niederauer Mastelari
0:00	2177	STUDY OF ACCELERATIONS RESTRICTIONS ON A ROLLER COASTER	Karoline Raymundo
10:15	0089	SOFTWARE DEVELOPMENT TO THE DESIGN OF FOUR-BAR LINKAGES WITH PYTHON	Claysson Vimieiro
10:30	0102	SIMULATION OF AIRFOIL MODEL WITH TWO DEGREES OF FREEDOM AND FLUTTER ANALYSIS BASED ON STEADY AND QUASISTEADY THEORIES	Gabriel Lapa
10:45	0190	EXPERIMENTAL MODAL ANALYSIS APPLIED TO A FOUNDATION STRUCTURE	Leonardo Gusmão
DCVA	Tu3	Dynamics of Mechanical Systems	Chair: Ludmila Alkmin
11:15	0429	VIBRATION ANALYSIS OF THE QUADCOPTER CARRYING A PAYLOAD	Renan Geronel
1:30	0447	DEVELOPMENT OF A PASSIVE DAMPER FOR MILLING TOOLS BASED ON SMART MATERIALS	João Henrique Schiavon Mota
11:45	0468	OPTIMAL PRELIMINARY SIZING AND ANALYSIS OF ELECTROMECHANICAL ACTUATOR WITH BOND GRAPH	Caio Paes
12:00	0542	COMPARATIVE STUDY BETWEEN FRONT CABIN SUSPENSION GEOMETRIES AND THEIR VIBRATION ABSORPTION CAPABILITIES.	Marcelo Mol
DCVA	Tu4	Dynamics of Mechanical Systems	Chair: Ludmila Alkmin
4:25	0891	STATIC EQUILIBRIUM ANALYSIS OF A DISTRIBUTION LINE RIDING ROBOT WITH PASSIVE BALANCING SYSTEM	Gustavo Fernandes
4:40	1681	ENGINE GENERATOR	Lucas da Silva Rigobello
14:55	1756	DIGITAL PROCESSING AND STATISTICAL ANALYSIS OF AUDIO SIGNALS MEASURED THROUGH SMARTPHONE DEVICES FOR THE APPLICATION IN TOOL WEAR MONITORING	Ana Carolina Porto
15:10	1832	VIBRATION CHARACTERIZATION OF BEAMS RIVETED LAP JOINT USING SPECTRAL ELEMENT METHOD	Amanda Aryda Silva Rodrigues de Sousa
15:25	914	Session Speaker: STATIC EQUILIBRIUM ANALYSIS OF A DISTRIBUTION LINE RIDING ROBOT WITH ACTIVE BALANCING SYSTEM	Gustavo Fernandes
DCVA	Tu5	Dynamics of Mechanical Systems & Multibody systems & Nonlinear dynamics	Chair: Tárcio Barros
15:55	1875	MODELING OF AN EXPERIMENTAL SETUP OF AN ELECTROMECHANICAL SYSTEM THROUGH LINEAR AND NONLINEAR SYSTEM IDENTIFICATION	Leonardo Dias Pereira
16:10	2036	SPECTRAL MODEL AND VIBRATION ANALYSIS OF BEAMS	Jefferson Coelho
6:25	998	PARAMETRIC POD-BASED MODEL ORDER REDUCTION OF MULTIBODY SYSTEM DYNAMICS BASED ON THE ABSOLUTE NODAL COORDINATE FORMULATION	Matheus Basílio Rodrigues Fernandes
16:40	0395	APPLICATION OF SDRE CONTROL TO HYBRID REMOTELY OPERATED VEHICLE	Allan Oliveira
DCVA	E-Poster	Structural dynamics and vibrations & Vehicle dynamics	Chair: Tárcio Barros
	1357	NUMERICAL STUDY OF THE DYNAMIC RESPONSE IN MULTI-DOFS STRUCTURES FROM THE SEISMIC EXCITATION	Patricia Grezelle

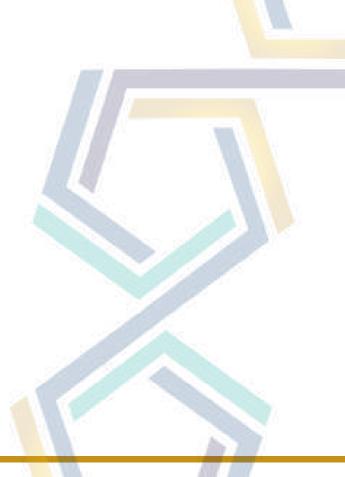
	2325	ON THE FREQUENCIES FOR STRUCTURAL HEALTH MONITORING IN PLATES WITH SYMMETRICAL DAMAGE: AN ANALYTICAL APPROACH	Kayc Wayhs Lopes
17:05	2330	QUARTER-WAVELENGTH RESONATOR METAMATERIAL MODELING VIA WAVE FINITE ELEMENT METHOD	BRENNO VICTOR LIMA CAMPOS
to 18:05	0017	VTR4 X 4 THREE-DIMENSIONAL MATHEMATICAL MODEL WITH INDEPENDENT SUSPENSIONS AND MAGNETORREOLOGICAL SHOCK ABSORBERS	Vilson Wenis Santos Belle
	0516	DYNAMIC LOADS ANALYSIS FOR SPRING BRAKE PADS APPLIED ON COMMERCIAL VEHICLES	Luciano Rodrigues Maia
	0674	LONGITUDINAL DYNAMICS OF AN OFF-ROAD VEHICLE WITH DIFFERENTS DRIVETRAIN CONFIGURATIONS	Lucas Alves Torres
	1735	DYNAMIC MODEL OF HYBRID ARTICULATED TRUCK FOR ENERGY MANAGEMENT	Thiales Barbosa Madalena



DCVA	- Dynan	nics, Control, Vibrations, and Acoustics	
Wedn	esday	24	Room 4
Time	Code	Title	Presenter
DCVA	We1	Nonlinear dynamics & Rotordynamics	Chair:
08:35			
08:50	1624	ANALYTICAL STUDY OF ROTOR-STATOR RUBBING PHENONOMEN	Tamer Elsayed
09:05	1980	THE INFLUENCE OF A NON-CONSTANT INERTIA IN TORSIONAL VIBRATION OF A RECIPROCATING COMPRESSOR	Nícolas da Silva Dias
09:20	454	Session Speaker: A JULIA CODE FOR COMPUTING BASINS OF ATTRACTION OF ONE-DEGREE-OF-FREEDOM SYSTEMS	Vitor Schwenck Franco Maciel
DCVA	We2	Rotordynamics	Chair: Hélio Castro
09:45	0067	ROTOR VIBRATION CONTROL USING HYDRODYNAMIC BEARING WITH ACTIVE PADS	Heitor Antônio Pereira da Silva
10:00	0068	DYNAMICS OF A ROTOR WITH GEOMETRIC NON-LINEARITY	Luís Fernando dos Anjos
10:15	0069	OPTIMIZATION OF BAND GAP FORMATION IN PERIODIC ROTORS	Patrick Bueno Lamas
10:30	0308	SIGNATURE OF OIL STARVATION FAULTS IN ROTORS SUPPORTED BY HYDRODYNAMIC BEARINGS	Marcus Vinícius Medeiros Oliveira
10:45	0358	EVALUATION OF SURROGATE MODELS FOR HYDRODYNAMIC FORCES IN JOURNAL BEARINGS	lago Almeida
DCVA	We3	Rotordynamics	Chair: Hélio Castro
11:15	0434	TIME DOMAIN IDENTIFICATION OF DYNAMIC PARAMETERS OF MAGNETIC BEARINGS USING STATISTICAL LEARNING METHODS	Felipe Vieira
11:30	0594	FAULT ANALYSIS IN A ROTOR SUPPORTED BY ROLLER BEARINGS USING CLUSTERING TECHNIQUES	Nathali Dreher
11:45	0634	MACHINE LEARNING TECHNIQUES TO FAULT DETECTION IN ROTATING MACHINES	Luís Otávio Garavaso
12:00	0639	DETECTION AND IDENTIFICATION OF OVALIZATION FAULT IN HYDRODYNAMIC BEARINGS	Matheus Victor Inacio
DCVA	We4	Rotordynamics	Chair: Katia Dedini
14:40	0757	TRANSVERSE VIBRATIONS OF A TURBOJET ROTOR SUBJECTED TO CRUISE MISSILE FLIGHT MANEUVERS	Sâmela Fernandes Pereira de Lima
14:55	0791	INFLUENCE OF MESH STIFFNESS MODELING ON THE DYNAMIC RESPONSE OF GEARED ROTORS	Laís Bittencourt Visnadi
15:10	0820	DYNAMIC ANALYSIS OF ROTATING SYSTEMS WITH VIBRATION ABSORBERS	João Henrique dos Santos de Pontes
15:25	1253	PHYSICS INFORMED NEURAL NETWORKS TO IDENTIFY UNBALANCE PARAMETERS IN ROTATING SYSTEM	Lucas Garpelli
DCVA \	We5	Rotordynamics & Smart structures	Chair: Katia Dedini
15:55	1751	A DYNAMIC ANALYSIS AND CONTROL OF AN ACTIVE MAGNETIC BEARING	Jefferson Coelho
16:10	0200	ACTIVE CONTROL OF OSCILLATIONS IN A BEAM USING ACTUATION BY MACRO FIBER COMPOSITES AND OPTIMAL CONTROL	Lucas Zanovello Tahara
16:25	703	CHOAS CONTROL OF AN SMA TWO-BAR TRUSS WITH CONSTRAINED THERMAL ACTUATION	Dimitri Danulussi Alves Costa
16:40	0716	Session Speaker: ROBUST DESIGN OF ENERGY HARVESTING RESONANT DEVICES BY MULTI-OBJECTIVE OPTIMIZATION TECHNIQUES AND POLYNOMIAL CHAOS EXPANSIONS	Paulo Martins

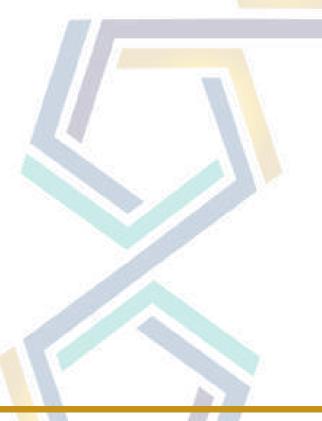
DCVA	- Dynan	nics, Control, Vibrations, and Acoustics	
	day 2		Room 4
Time	Code	Title	Presenter
DCVA 1		Smart structures & Structural dynamics and vibrations	Chair: Marcelo Savi
08:35	1837	EFFECT OF SEGMENTED ELECTRODES ON PIEZOELECTRIC ENERGY HARVESTING PERFORMANCE FROM A GRADED METASTRUCTURE	Camila Schimidt
08:50	0013	MECHANICAL VIBRATION EFFECTS IN THE BIOSPECKLE LASER TECHNIQUE FOR PORTABLE EQUIPMENT APPLICATION	Daniel Bernardes de Castro
09:05	0120	SIMULATION AND ANALYSIS OF A HORIZONTAL AXIS WIND TURBINE SUBJECT TO A TURBULENT WIND FIELD	Layse Freitas Boere de Moraes
09:20	0225	INVESTIGATION OF SOME EFFECTS OF VISCOUS DAMPING ON ACCURACY OF MODAL PARAMETERS ESTIMATION USING ERA	João Morais da Silva Neto
DCVA 1	Гh2	Structural dynamics and vibrations	Chair: Marcelo Savi
09:45	0299	INSTRUMENTATION OF A PARALLEL MANIPULATOR WITH FLEXIBLE LINKS: A NEURAL NETWORK APPLICATION	Fabio Felix
10:00	0392	DYNAMIC CHARACTERIZATION OF YOUNG AND SHEAR MODULUS OF THE BAMBOO	Leonardo Rodrigues da Silva
10:15	0692	STRUCTURAL DYNAMIC RESPONSE MEASUREMENT DEVICE: CONCEPTUAL DESIGN AND TESTING	Gabriel Klein Lunkes
10:30	0793	EXPERIMENTAL EVALUATION OF A LOW-COST VIBRATION SENSOR FOR MODAL TESTING APPLICATIONS	Rafael Melo
10:45	1019	OPTIMIZATION OF VIBRATION BANDGAPS IN THREE-DIMENSIONAL LATTICE STRUCTURES	Rubens Gonçalves Salsa Junior
DCVA 1	ГhЗ	Structural dynamics and vibrations	Chair: Roberta Lima
11:15	1029	TRANSIENT RESPONSE OF SOIL-FOUNDATION SYSTEMS BY UPDATED STRUCTURAL MODAL QUANTITIES	Amauri Coelho Ferraz
11:30	1642	DYNAMICS STABILITY OF A CANTILEVERED VISCOELASTIC BEAM WITH INTERNAL FLUID	Lenin Lee Huaman Valdivia
11:45	2070	FATIGUE LIFE PREDICTION OF A STRUCTURE SUBJECTED TO RANDOM LOADS AND STATISTICAL DURABILITY TESTS	Vinicius Lugli
12:00	1038	Session Speaker: DISPERSION ANALYSIS OF STRONGLY NONLINEAR MAGNETOELASTIC PERIODIC STRUCTURES USING HBM-AFT METHOD	Matheus Basílio Rodrigues Fernandes
DCVA 1	Гh4	Structural dynamics and vibrations	Chair: Rodrigo Nicoletti
14:25	2329	BEAM CORRUGATED WITH MACRO FIBER COMPOSITE PATCHES FOR ACTIVE BAND GAP FORMATION	Rodrigo Nicoletti
14:40	2332	WAVE PROPAGATION IN A RAINBOW METAMATERIAL BEAM	Fábio Oliveira
14:55	2333	SMART BEAM COUPLED TO PIEZOELECTRIC RESONANT SHUNT VIBRATION CHARACTERISATION, CONTROL AND BANDGAP GENERATION	Braion Barbosa
15:10	2334	ON THE POTENTIAL OF INJECTION MOULDING FOR THE PRODUCTION OF LOCALLY RESONANT METAMATERIALS	Kristof Steijvers
15:25	2335	DYNAMIC BEHAVIOR OF TWO-DIMENSIONAL QUASIPERIODIC PLATES: ACHIEVING HIGH-ORDER WAVE DIRECTIONALITY	Danilo Beli
DCVA 1	۲h5	Structural dynamics and vibrations & Vehicle dynamics	Chair: Rodrigo Nicoletti
15:55	2336	ELASTIC WAVE BAND GAPS IN 2D FRACTAL PHONONIC CRYSTALS	Victor Gustavo Ramos Co <mark>sta</mark> Dos Santos
16:10	2338	PREDICTING ATTENUATION CHARACTERISTICS ON FINITE PERIODIC PINNED SUPPORTED BEAM STRUCTURES	Jean Paulo Carneiro Junior
16:25	0011	INFLUENCE OF LUBRICATING OIL VISCOSITY AND CHEMICAL PROPERTIES IN THE VIBRATION LEVEL OF AN INTERNAL COMBUSTION ENGINE	Claudio Santana
16:40	2337	ANALYSIS OF WAVE PROPAGATION IN ORIGAMI-LIKE STRUCTURES	Edilson Dantas Nóbrega

DCVA	- Dynar	nics, Control, Vibrations, and Acoustics	
Frida	y 26		Room 4
Time	Code	Title	Presenter
DCVA	Fr1	Vehicle dynamics	Chair: Armando Laganá
08:35	0187	INFLUENCE OF GASOLINE AND ETHANOL COMBUSTION PROCESS ON THE BLOCK VIBRATION LEVEL OF OTTO CYCLE ENGINE	Claudio Santana
08:50	1220	VEHICLES TRAFFIC SIMULATION USING THE SOCIAL FORCES MODEL	Felipe Fauez Wahbe Murad
09:05	1730	USE OF LATERAL DYNAMICS AND THE LEVENBERG MARQUARDT METHOD TO ESTIMATE PARAMETERS OF A PICKUP TRUCK	Adrián Eduardo Simioni
09:20	0111	Session Speaker: EVALUATION OF PLATOONING CONTROL MODEL TOWARDS SAFETY OF INTENDED FUNCTIONALITY WITH BASIS ON OPERATIONAL DESIGN DOMAIN	Vinicius Marini
DCVA	Fr2	Vehicle dynamics & Smart structures	Chair: Armando Laganá
09:45	2131	ANALYSIS OF DAMPER FREQUENCY RESPONSE THROUGHOUT IT LIFESPAN	Gabriel Barbosa dos Santos
10:00	2234	AN ELASTIC METAMATERIAL BEAM LEVERAGING UNEVENLY TUNED LOCALLY RESONATING SYSTEMS FOR VIBRATION ATTENUATION	Vagner Candido de Sousa
10:15			
10:30			
10:45			



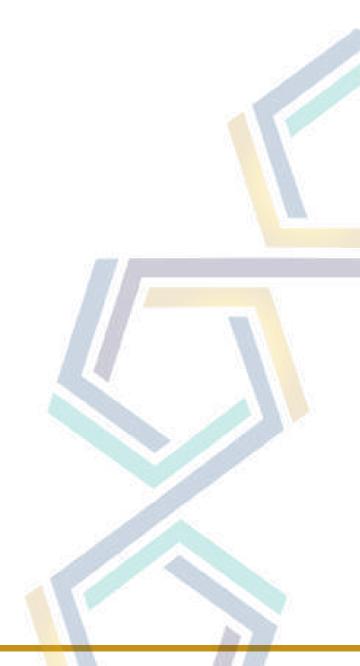
Program Overview and Energy and Thermal Sciences					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Energy and Thermal Sciences (two rooms)	Energy and Thermal Sciences	Energy and Thermal Sciences	Energy and Thermal Sciences
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Energy and Thermal Sciences (two rooms)	Energy and Thermal Sciences	Energy and Thermal Sciences	Energy and Thermal Sciences
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20	Energy and Thermal Sciences (two rooms)	Energy and Thermal Sciences	Energy and Thermal Sciences	Energy and Thermal Sciences	Energy and Thermal Sciences
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45	Energy and Thermal	Energy and Thermal			
	Sciences (two rooms)	Sciences	5 min break Energy and Thermal Sciences	Energy and Thermal Sciences	Energy and Thermal Sciences
15:45 - 15:55	Sciences (two rooms) 10 min break	~~	Energy and Thermal	••	
<mark>15:45 - 15:55</mark> 15:55 - 17:00	, ,	Sciences	Energy and Thermal	Sciences	Sciences
	10 min break Energy and Thermal	Sciences 10 min break Energy and Thermal	Energy and Thermal Sciences Energy and Thermal	Sciences 10 min break Energy and Thermal	Sciences 10 min break Energy and Thermal
15:55 - 17:00	10 min break Energy and Thermal Sciences (two rooms)	Sciences 10 min break Energy and Thermal Sciences	Energy and Thermal Sciences Energy and Thermal Sciences	Sciences 10 min break Energy and Thermal Sciences	Sciences 10 min break Energy and Thermal Sciences
15:55 - 17:00 17:00 - 17:05	10 min break Energy and Thermal Sciences (two rooms) 5 min break Energy and Thermal Sciences	Sciences 10 min break Energy and Thermal Sciences 5 min break Energy and Thermal Reynote spin block	Energy and Thermal Sciences Energy and Thermal Sciences 5 min break Energy and Thermal	Sciences 10 min break Energy and Thermal Sciences 5 min break ABCM/ EMBRAER	Sciences 10 min break Energy and Thermal Sciences 5 min break





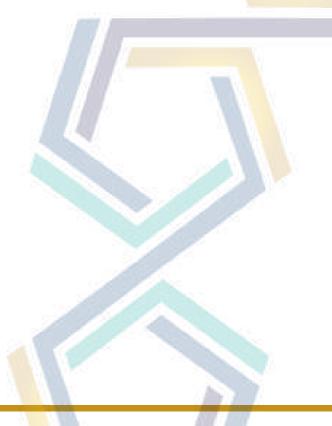
		y and Thermal Sciences		
Timer	day 22		Room 5	
ime	Code	Title	Presenter	
		Applied Heat and Mass Transfer	Chair: Marcia Mantelli	
11:15	0585	A WIDE-BAND FORMULATION FOR THE WEIGHTED-SUM-OF-GRAY- GASES MODEL APPLIED TO NON-ISOTHERMAL PARTICIPATING MEDIA	Roberta Juliana Collet da Fonseca	
11:30	0707	ON THE USE OF GAS RECIRCULATION TO INCREASE THE ADSORPTION CAPACITY IN THE NATURAL GAS STORAGE SYSTEMS	Bruno Chieregatti	
11:45	0786	DURING THE QUENCHING PROCESS	Kássio Nogueira Cançado	
12:00	0941	EFFICIENCY ESTIMATION OF A CAPACITIVE DISCHARGE WELDING PROCESS IN THERMOCOUPLES	Fabio Faria	
ENTS N	Mo2	Applied Heat and Mass Transfer	Chair: Marcia Mantelli	
14:25	0109	DEVELOPMENT OF ROCKET MOTOR TRANSIENT THERMAL ANALYSIS SOFTWARE	Andres Gilberto Machado da Silva Benoit	
14:40	0269	THERMAL RADIATION SHIELDING APPLIED TO POLYMERIC REPAIR	Robson Silva	
14:55	0288	EVALUATING FINITE DIFFERENCE METHODS SOLVING COUPLED HEAT AND MASS TRANSFER EQUATIONS APPLIED FOR WOOD DRYING	Edgar De Oliveira Cabral Filho	
15:10	1446	ACCESSING THE THERMAL PERFORMANCE OF EARTH-AIR HEAT EXCHANGERS BY ADDING GALVANIZED BRIDGES TO THE SOIL	Nibia Navarro	
15:25	1647	CFD EVALUATION OF THE OIL COOLING SYSTEM IN A MOBILE POWER TRANSFORMER	Luciene Martins Moura Rodrigues	
ENTS M	Mo3	Applied Heat and Mass Transfer	Chair: Marcia Mantelli	
5:55	1556	FLOW BOILING OF R1336MZZ(Z) IN OPEN MICROCHANNELS WITH DIVERGING MANIFOLD	Debora Carneiro Moreira	
16:10	0988	COMSOL WITH MODIFIED NONLINEAR FUNCTION SPECIFICATION AND TEMPERATURE MOVING SENSOR TO ESTIMATE HEAT RATE IN A TIG WELDING PROCESS	Rodrigo Gustavo Dourado da Silva	
16:25	1228	THERMAL PERFORMANCE ANALYSIS OF AN ULTRA-THIN LOOP HEAT PIPE FOR ELECTRONIC COOLING APPLICATION	Kelvin Guessi Domiciano	
16:40	1229	Session Speaker: THERMAL PERFORMANCE OF A FLAT PLATE PULSATING HEAT PIPE WITH ULTRA-SHARP LATERAL GROOVES		
ENTS E	E-Poster	Applied Heat and Mass Transfer & Heat and Mass Transfer Fundamentals & Nuclear Energy & Numerical Heat Transfer	Chair: Kleber Lisboa	
	1205	THEORETICAL ANALYSIS AND DETERMINATION OF HYDRODYNAMIC AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE	Marinaldo Medeiros	
	1205 1239	AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED	Marinaldo Medeiros Massoxi Cuiêca	
		AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD) THERMAL ANALYSIS OF BRAKE DISCS OF A BAJA SAE PROTOTYPE	Massoxi Cuiêca Jéssica Santos de Oliveira	
	1239	AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD)	Massoxi Cuiêca Jéssica Santos de Oliveira	
	1239 1454	AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD) THERMAL ANALYSIS OF BRAKE DISCS OF A BAJA SAE PROTOTYPE IDENTIFICATION OF CONTACT FAILURES IN COMPOSITE MATERIALS	Massoxi Cuiêca Jéssica Santos de Oliveira	
17-05	1239 1454 1986	AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD) THERMAL ANALYSIS OF BRAKE DISCS OF A BAJA SAE PROTOTYPE IDENTIFICATION OF CONTACT FAILURES IN COMPOSITE MATERIALS VIA BAYESIAN INFERENCE AND REDUCED MODELS NUMERICAL SIMULATION OF THE INFLUENCE OF THERMAL	Massoxi Cuiêca Jéssica Santos de Oliveira Luiz A. S. Abreu	
o	1239 1454 1986 2054	AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD) THERMAL ANALYSIS OF BRAKE DISCS OF A BAJA SAE PROTOTYPE IDENTIFICATION OF CONTACT FAILURES IN COMPOSITE MATERIALS VIA BAYESIAN INFERENCE AND REDUCED MODELS NUMERICAL SIMULATION OF THE INFLUENCE OF THERMAL SOURCE ON THERMAL ABLATION PROGRESS OF THE ENHANCED CONDUCTIVITY FUELS USING U02-	Massoxi Cuiêca Jéssica Santos de Oliveira Luiz A. S. Abreu Lucas Gouveia Bontempo	
o	1239 1454 1986 2054 1203	AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD) THERMAL ANALYSIS OF BRAKE DISCS OF A BAJA SAE PROTOTYPE IDENTIFICATION OF CONTACT FAILURES IN COMPOSITE MATERIALS VIA BAYESIAN INFERENCE AND REDUCED MODELS NUMERICAL SIMULATION OF THE INFLUENCE OF THERMAL SOURCE ON THERMAL ABLATION PROGRESS OF THE ENHANCED CONDUCTIVITY FUELS USING U02- GRAPHENE ASSESSMENT OF ADVANCED FERRITIC ALLOYS USED AS CLADDING MATERIALS IN NUCLEAR POWER REACTORS PERFORMANCE OF THORIUM BASED FUEL UNDER REGULAR	Massoxi Cuiêca Jéssica Santos de Oliveira Luiz A. S. Abreu Lucas Gouveia Bontempo daniel de souza gomes	
17:05 :o 18:05	1239 1454 1986 2054 1203 1315	AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD) THERMAL ANALYSIS OF BRAKE DISCS OF A BAJA SAE PROTOTYPE IDENTIFICATION OF CONTACT FAILURES IN COMPOSITE MATERIALS VIA BAYESIAN INFERENCE AND REDUCED MODELS NUMERICAL SIMULATION OF THE INFLUENCE OF THERMAL SOURCE ON THERMAL ABLATION PROGRESS OF THE ENHANCED CONDUCTIVITY FUELS USING U02- GRAPHENE ASSESSMENT OF ADVANCED FERRITIC ALLOYS USED AS CLADDING MATERIALS IN NUCLEAR POWER REACTORS PERFORMANCE OF THORIUM BASED FUEL UNDER REGULAR CONDITIONS AND ACCIDENT SCENARIOS IN POWER REACTORS THERMAL NUMERICAL ANALYSIS OF AN AIRCRAFT WING USING AN	Massoxi Cuiêca Jéssica Santos de Oliveira Luiz A. S. Abreu Lucas Gouveia Bontempo daniel de souza gomes daniel de souza gomes daniel de souza gomes Durval Marques de Queiroz	
o	1239 1454 1986 2054 1203 1315 1332	AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD) THERMAL ANALYSIS OF BRAKE DISCS OF A BAJA SAE PROTOTYPE IDENTIFICATION OF CONTACT FAILURES IN COMPOSITE MATERIALS VIA BAYESIAN INFERENCE AND REDUCED MODELS NUMERICAL SIMULATION OF THE INFLUENCE OF THERMAL SOURCE ON THERMAL ABLATION PROGRESS OF THE ENHANCED CONDUCTIVITY FUELS USING U02- GRAPHENE ASSESSMENT OF ADVANCED FERRITIC ALLOYS USED AS CLADDING MATERIALS IN NUCLEAR POWER REACTORS PERFORMANCE OF THORIUM BASED FUEL UNDER REGULAR CONDITIONS AND ACCIDENT SCENARIOS IN POWER REACTORS	Massoxi Cuiêca Jéssica Santos de Oliveira Luiz A. S. Abreu Lucas Gouveia Bontempo daniel de souza gomes daniel de souza gomes daniel de souza gomes	

	0496	MATHEMATICAL MODELLING OF THE THERMAL POLARIZATION FOR A SOLAR-DRIVEN SEAWATER DESALINATION SYSTEM ON THE SOLID OPEN-CELL FOAMS USING DIRECT CONTACT MEMBRANE (DCM): A SIMULATION APPROACH	Renato Pereira
	1146	THEORETICAL ANALYSIS OF THE RAPID SOLIDIFICATION OF METALLIC MATERIALS IN PLANAR FLOW CASTING PROCESS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE	Marinaldo Medeiros



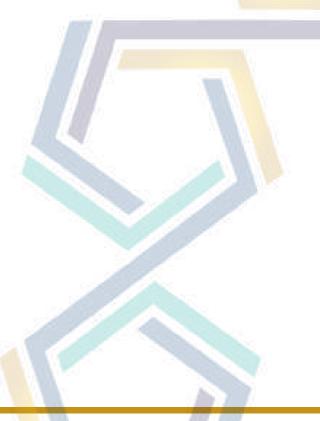
lueso		y and Thermal Sciences	
	day 23		Room 5
	Code	Title	Presenter
ENTS T	ſu1	Applied Heat and Mass Transfer	Chair: Alexandre Kupka
08:35	1248	DEVELOPMENT OF A TEST SECTION FOR DETERMINATION OF	Brunno Abreu da Fonseca
00:35	1240	LOCAL HEAT TRANSFER COEFFICIENT DURING IN-TUBE FLOW	Vargas
08:50	1337	THERMAL ANALYSIS OF A PERMANENT MAGNET SYNCHRONOUS	Gabriel Fernandes Bravo
08:50	1337	GENERATOR FOR A 10 MW WIND TURBINE	Gabriel Fernandes Bravo
00.05		Symposium Speaker: Loop heat pipes – highly efficient heat transfer	Prof. Yury Maydanik
09:05		devices: development and application	
		Symposium Speaker: Loop heat pipes – highly efficient heat transfer	Prof. Yury Maydanik
09:20		devices: development and application	
		Applied Heat and Mass Transfer & Computational Intelligence Applied to	
ENTS T	u2	Thermal Systems	Chair: Felipe Centeno
		IMPLEMENTATION OF A SUPERVISORY SYSTEM WITH LAMBDA	
09:45	0125	WIDEBAND SENSOR FOR ANALYSIS OF OXYGEN CONCENTRATION	João Vitor Silva
		IN INDUSTRIAL COMBUSTION PROCESSES	
		APPLICATIONS OF NEURAL NETWORKS INTO HEAT EXHANGERS	
10:00	2257	TYPE PCHE	Lucas Rangel Freire
		UNCERTAINTIES ASSESSMENT ON THE INFRARED	Victor Eduardo Corte
10:15	1784	THERMOGRAPHY CALIBRATION TECHNIQUES	Baptistella
		INTERACTION BETWEEN NATURAL CONVECTION AND SURFACE	Daptistella
10:30	1827	RADIATION IN A LOW ASPECT RATIO RECTANGULAR ENCLOSURE	Eduardo Güths
10.30	1021		
		WITH DIFFERENT WALL EMISSIVITIES	
10:45	2258	Session Speaker: THERMODYNAMIC-BASED, ONE-DIMENSIONAL	Fabio Junior
		PIPELINE WAX DEPOSITION MODEL	
ENTS T	<u>[u3</u>	Heat and Mass Transfer Fundamentals	Chair: Felipe Centeno
		ON THE CONJUGATED HEAT TRANSFER PROBLEMS INVOLVING	Karoline da Costa Rocha
11:15	0010	FILM CONDENSATION IN THE PRESENCE OF A NONCONDENSABLE	Fernandes Ferreira
		GAS	r emandes r enena
11:30	0291	GENERATION OF C-DISTRIBUTIONS FOR THE BANDED-SLW MODEL	Guilherme Fraga
11.50	0291	GENERATION OF C-DISTRIBUTIONS FOR THE BANDED-SLW MODEL	Guillenne Fraga
11:45	0520	HEAT TRANSFER ANALYSIS OF A SOLID-PROPELLANT ROCKET	José Folino Alvos Avelino
11:45	0529	COMBUSTION CHAMBER	José Felipe Alves Avelino
		AN EXPERIMENTAL TECHNIQUE FOR THE SIMULTANEOUS	
12:00	0683	ESTIMATION OF THERMAL PROPERTIES OF METALS AS FUNCTIONS	Mariana de Melo Antunes
		OF TEMPERATURE	
ENTS T	ru4	Heat and Mass Transfer Fundamentals & Nuclear Energy	Chair: Felipe Centeno
		DEVELOPMENT AND COMPARISON OF EXPERIMENTAL EMISSIVITY	
14:25	0887		Pedro Oliveira
		OFFSHORE FLARES	
		DISCRETIZATION OF A BI-FLUX DIFFUSION EQUATION USING THE	
14:40	1708	FINITE VOLUME METHOD	Gisele Moraes Marinho
		EXPERIMENTAL EVALUATION OF THERMAL PERFORMANCE AND	
	1061	INTERNAL PRESSURE OF THERMOSYPHONS USING GRAPHENE	Victor Vaurek Dimbarre
14.55	1961	OXIDE NANOFLUID	Victor Vaurek Dimbarre
14:55	1301		
14:55			Jorgo Custova Caradaval
	0475	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO	Jorge Gustavo Sandoval
14:55 15:10		AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING	Jorge Gustavo Sandoval Simão
15:10	0475	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE	Simão
15:10		AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY	
15:10 15:25	0475 1891	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR	Simão Felipe Timoteo
15:10 15:25	0475 1891	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer	Simão Felipe Timoteo Chair: Kleber Lisboa
15:10 15:25 <mark>ENTS T</mark>	0475 1891	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de
15:10 15:25 <mark>ENTS T</mark>	0475 1891	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES	Simão Felipe Timoteo Chair: Kleber Lisboa
15:10 15:25 <mark>ENTS T</mark> 15:55	0475 1891 <b>ru5</b> 0085	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES CONSTRUCTAL DESIGN APPLIED TO A MICROCHANNEL WITH TWO	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de Oliveira
15:10 15:25 <mark>ENTS T</mark> 15:55	0475 1891	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de
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15:10 15:25 ENTS T 15:55 16:10	0475 1891 <b>185</b> 0085 0145	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES CONSTRUCTAL DESIGN APPLIED TO A MICROCHANNEL WITH TWO MOUNTED TRAPEZOIDAL BLOCKS SUBJECTED TO LAMINAR	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de Oliveira Bruno Feijó
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15:10 15:25 <mark>ENTS T</mark> 15:55 16:10	0475 1891 <b>185</b> 0085 0145	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES CONSTRUCTAL DESIGN APPLIED TO A MICROCHANNEL WITH TWO MOUNTED TRAPEZOIDAL BLOCKS SUBJECTED TO LAMINAR BOILING FLOWS CFD ANALYSIS OF A SHELL AND TUBE HEAT EXCHANGER AS THERMAL ENERGY STORAGE UNIT	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de Oliveira Bruno Feijó
15:10 15:25 ENTS T 15:55 16:10 16:25	0475 1891 <b>18</b> 91 0085 0145 0149	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES CONSTRUCTAL DESIGN APPLIED TO A MICROCHANNEL WITH TWO MOUNTED TRAPEZOIDAL BLOCKS SUBJECTED TO LAMINAR BOILING FLOWS CFD ANALYSIS OF A SHELL AND TUBE HEAT EXCHANGER AS THERMAL ENERGY STORAGE UNIT MULTI-BLOCK LATTICE BOLTZMANN METHOD APPLIED TO	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de Oliveira Bruno Feijó Diogo Zidan
15:10 15:25 ENTS T 15:55 16:10 16:25	0475 1891 <b>185</b> 0085 0145	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES CONSTRUCTAL DESIGN APPLIED TO A MICROCHANNEL WITH TWO MOUNTED TRAPEZOIDAL BLOCKS SUBJECTED TO LAMINAR BOILING FLOWS CFD ANALYSIS OF A SHELL AND TUBE HEAT EXCHANGER AS THERMAL ENERGY STORAGE UNIT MULTI-BLOCK LATTICE BOLTZMANN METHOD APPLIED TO CONDUCTION IN TWO SOLIDS WITH LARGE DIFFERENCE BETWEEN	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de Oliveira Bruno Feijó
15:10 15:25 ENTS T 15:55 16:10 16:25 16:40	0475 1891 0085 0145 0149 0210	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES CONSTRUCTAL DESIGN APPLIED TO A MICROCHANNEL WITH TWO MOUNTED TRAPEZOIDAL BLOCKS SUBJECTED TO LAMINAR BOILING FLOWS CFD ANALYSIS OF A SHELL AND TUBE HEAT EXCHANGER AS THERMAL ENERGY STORAGE UNIT MULTI-BLOCK LATTICE BOLTZMANN METHOD APPLIED TO CONDUCTION IN TWO SOLIDS WITH LARGE DIFFERENCE BETWEEN THERMAL DIFFUSIVITIES	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de Oliveira Bruno Feijó Diogo Zidan Ivan Martins
15:10 15:25 ENTS 1 15:55 16:10 16:25 16:40	0475 1891 0085 0145 0149 0210	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR Numerical Heat Transfer DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES CONSTRUCTAL DESIGN APPLIED TO A MICROCHANNEL WITH TWO MOUNTED TRAPEZOIDAL BLOCKS SUBJECTED TO LAMINAR BOILING FLOWS CFD ANALYSIS OF A SHELL AND TUBE HEAT EXCHANGER AS THERMAL ENERGY STORAGE UNIT MULTI-BLOCK LATTICE BOLTZMANN METHOD APPLIED TO CONDUCTION IN TWO SOLIDS WITH LARGE DIFFERENCE BETWEEN	Simão Felipe Timoteo Chair: Kleber Lisboa Ariel Flores Monteiro de Oliveira Bruno Feijó Diogo Zidan

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	0132	LINEAR FRESNEL SOLAR COLLECTOR CONCENTRATOR - A REVIEW	Patricia Scalco
	0166	AN IMPROVED ENSEMBLE LEARNING MODEL FOR MULTI-STEP AHEAD WIND POWER GENERATION FORECASTING.	Sinvaldo Rodrigues Moreno
	0278	WIND-SOLAR DESILTER WITH AUTONOMOUS RENEWABLE ENERGY SUPPLY	Gabriel Kimito Kiyohara
17:05	0302	COMPARISON OF LIPID EXTRACTION USING PURE HEXANE AND A MIXTURE OF HEXANE AND ETHANOL AS EXTRACTION SOLVENTS FOR MICROALGAE	Heloísa da Silva
to	0303	USE OF EXHAUST GASES FOR SUGARCANE BAGASSE DRYING	Ramires Silva
18:05	0319	THERMODYNAMIC ANALYSIS OF THE INTEGRATION OF GASIFIED BIOMASS TO THE COMBINED CYCLE (BIG/GTCC) IN THE SUGARCANE INDUSTRY	Isabella Cristina Boroto Vieira
	0336	THE QUASI-3D NOISE PREDICTION IMPLEMENTATION FOR PNOISE/QBLADE SOFTWARE	Sara Rodriguez
	0378	NUMERICAL ANALYSIS OF A SOLAR CHIMNEY SYSTEM FOR DESALINATION AND POWER GENERATION FOR BRUMADINHO, BRAZIL	Paulo Fonseca Marinho Junior
	0517	STUDY OF ECONOMIC VIABILITY AND ENERGY AVAILABILITY OF HYBRID SOLAR / WIND POWER AND COOLING SYSTEMS WITH THERMAL ENERGY STORAGE	Cleison Souza Xavier
	0548	MICROALGAE AS SOURCE OF RENEWABLE ENERGY: A REVIEW	Beatriz Jacob Furlan
	0550	INVESTIGATION OF LIFT AND DRAG COEFFICIENTS FOR A LOW REYNOLDS NUMBER AIRFOIL APPLIED TO SMALL URBAN WIND TURBINES	Mauro Ferraz
	0575	PARAMETRIC DIFFERENCIAL SENSITIVITY ANALYSIS OF A ONE- DIMENSIONAL THERMAL-ELECTRICAL MODEL OF A PHOTOVOLTAIC SOLAR PANEL	Lucas Haas
	0621	HYDROGEN GENERATION BY ALUMINUM OXIDATION IN ALKALINE SOLUTION	Ana Paula Reinert
	2311	ECONOMIC OPTIMIZATION OF GENERATION MICROGRIDS WITH RENEWABLE SOURCES: A CASE STUDY AT THE UNIVERSITY OF CORDOBA, COLOMBIA.	Arnold Martinez



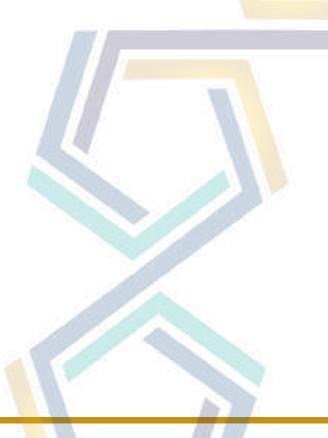
ENTS	- Energ	y and Thermal Sciences		
Wednesday 24 Room 5				
		Title	Presenter	
ENTS W		Numerical Heat Transfer	Chair: Kleber Lisboa	
	0279	NUMERICAL ANALYSIS OF THE THERMAL PERFORMANCE OF AN AUTOMOTIVE RADIATOR USING GRAPHENE NANOFLUIDS	Erick Oliveira do Nascimento	
08:50	0403	NUMERICAL ANALYSIS OF MIXED CONVECTION IN A RECTANGULAR CAVITY AT DIFFERENT ASPECT RATIOS	Roberto Bigonha	
09:05	0423	EVALUATION OF SPECTRAL MODELS FOR DIFFERENT LEVELS OF TURBULENCE INTENSITY IN A THREE-DIMENSIONAL DOMAIN	Bruno Gomes	
09:20	0559	STUDY OF THE INFLUENCE OF SOOT ON THE THERMAL RADIATION ACROSS A UNIDIMENSIONAL FLAME PROFILE USING THE WSGG METHOD	Cesar Augusto Basso	
ENTS W	Ne2	Numerical Heat Transfer	Chair: Kleber Lisboa	
	0804	PERFORMANCE EVALUATION OF AN ELLIPTICAL CROSS SECTION TUBE POWER TRANSFORMER RADIATOR USING A CFD MODEL	Guilherme Ladeira Pinho	
10:00	0814	NUMERICAL ANALYSIS OF THIN FILM EVAPORATION: A STUDY ABOUT CELLS CRYOPRESERVATION	Guilherme Steffenon	
10:15	0830	A NUMERICAL STUDY OF BUOYANCY-INDUCED SMOKE FLOW IN REAL-SCALE EMERGENCY ENCLOSED STAIRS	Augusto Bolzoni	
10:30	0859	TRANSIENT HEAT TRANSFER ANALYSIS OF A MACHINE GUN BARREL	Tales Chaves Bezerra Rocha	
	0982	A NUMERICAL STUDY ON THE INFLUENCE OF THE ATMOSPHERIC WIND IN THE FIRE DYNAMICS AND HEAT TRANSFER IN A COMPARTMENT FIRE		
ENTS W	Ne3	Numerical Heat Transfer	Chair: Kleber Lisboa	
11:15	1070	A SIMPLIFIED MATHEMATICAL MODEL TO PREDICT THE HUMAN BREAST THERMAL RESPONSE	Carlos Dalmaso Neto	
11:30	1138	EVALUATION OF THE WSGG MODEL FOR COUPLED CALCULATIONS OF LAMINAR FLAMES	Pedro Wink Guaragna	
11:45	1255	NUMERICAL-EXPERIMENTAL INVESTIGATION OF CRYOPRESERVATION PROCESS BY DROPLET VITRIFICATION	Álisson Renan Stochero da Silva	
12:00	1314	COOK-OFF EVALUATION IN GUN BARRELS THROUGH A TRANSIENT HEAT TRANSFER ANALYSIS	Rodrigo Telles	
ENTS W	Ve4	Numerical Heat Transfer & Renewable Energy	Chair: Kleber Lisboa	
14:40	1825	ANALYSIS OF MULTILAYER INSULATION SYSTEM ON THE TEMPERATURE FIELD AND HEAT FLUX USING ALUMINUM/CARBON NANOTUBE COMPOSITE	Guilherme Lacerda	
14:55	1844	TRANSIENT THERMAL ANALYSIS OF A MULTILAYER INSULATED SYSTEM WITH DIFFERENT OUTGASSING RATES AND THERMAL CONDUCTIVITY.	Guilherme Lacerda	Å,
15:10	1892	NUMERICAL ANALYSIS OF CONDUCTION AND THERMAL CONTACT RESISTANCE IN MULTI-LAYERED CUTTING TOOL	Rafael Thomaz de Camargo Rodrigues	
15:25	0022	MULTI-STEP WIND SPEED FORECASTING BASED ON MULTI-STAGE DECOMPOSITION APPROACH	Sinvaldo Rodrigues Moreno	
ENTS W	Ne5	Renewable Energy	Chair: Vicente Nicolau	
15:55	0057	INFLUENCE OF THE INLET TEMPERATURE ON THE EFFICIENCY OF A FLAT-PLATE SOLAR COLLECTOR DURING ONE YEAR IN BRAZIL	Bárbara Neves	
16:10	0143	TECHNICAL AND ECONOMIC ANALYSIS OF A SOLAR WATER HEATING SYSTEM TO AVOID THE FORMATION OF PARAFFIN DEPOSITS IN ONSHORE OIL PRODUCTION COLUMNS	Vinicius Rugeri Borges Bonini	
16:25	0204	ENERGY ANALYSIS OF BIODIESEL PRODUCTION FROM MICROALGAE	monica carvalho	
	0235	ECONOMIC ANALYSIS OF PV-T COLLECTORS IN BRAZIL	Matheus Buss	
		Renewable Energy	Chair: Antonio Gallego	
	1663	THE INFLUENCE OF WIND SPEED ON THE PV PLANT OPERATING TEMPERATURE: A CASE STUDY FOR FORTALEZA	Leticia de Oliveira Santos	
I	1902	EVALUATION OF MACHINE LEARNING MODELS FOR VERY SHORT- TERM SOLAR IRRADIANCE FORECASTING: A CASE STUDY FOR PETROLINA / PE, NORTHEASTERN BRAZIL	Nadja Gomes de Oliveira	
,	1914	MICROALGAE BIO-TECHNOLOGICAL INNOVATION FOR ENERGY	Michelle Moreira	
1		RESOURCES IN INDUSTRIAL FACILITIES - A REVIEW		

	1999	FEASIBILITY STUDY OF THE DEPLOYMENT OF PHOTOVOLTAIC ENERGY AT THE HOSPITAL SENHORA APARECIDA, IN THE CITY OF LUZ - MG	Elaine Gonçalves da Costa
	2039	COMPARISON OF TEMPERATURE FORECASTING MODELS OF PHOTOVOLTAIC MODULES OPERATING UNDER TROPICAL CLIMATE	Leticia de Oliveira Santos
17:05 to	2046	FEASIBILITY ANALYSIS AND IMPLEMENTATION OF AN ALTERNATIVE SOLAR HEATER FOR LOW AND MIDDLE INCOME FAMILIES IN THE ABAETé REGION	Franciane Cristina Rodrigues Carvalho
18:05	2097	HYDROKINETIC BENCH PROTOTYPE FOR ELECTROMECHANICAL STUDY IN ENERGY CONVERSION	Wellington Fonseca
	2301	EVALUATION OF THE PHOTODEGRADATION OF ORGANIC SOLAR CELLS	Lucas Phillip Moraes
	1217	HYDRODYNAMIC SIMULATION OF WECS (WAVE ENERGY CONVERTERS) FOR USE ON THE BRAZILIAN COAST.	Maria Fernanda Bezerra de Mendonça
	1312	A NEW CONCEPT OF SOLAR-WIND HYBRID DISH CONCENTRATOR	Alex Anderson Calbino da Silva
	1380	SOLAR TOWER CSP USING MOLTEN SALTS: A REVIEW	Lucas Rodrigues Neumann
	1407	WIND RESOURCE ASSESSMENT FOR URBAN RENEWABLE ENERGY APPLICATION IN REMOTE CITY IN THE STATE OF PARAÃBA	Adriana Lessa Viana
	1421	REFRIGERATION OF PHOTOVOLTAIC MODULES WITH PELTIER CELLS	Bruno de Oliveira Schneider
	1433	VARIABLE GEOMETRY DIFFUSER FOR TURBINES IN CAPTURE AND PRODUCTION OF SUSTAINABLE ENERGY: A SYSTEMATIC REVIEW	Elaine Coim



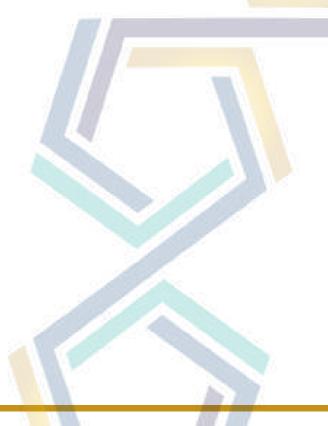
ENTS ·	- Energy	y and Thermal Sciences	
Thurs	day 2	5	Room 5
Time	Code	Title	Presenter
ENTS T		Renewable Energy	Chair: Julio Passos
08:35	0237	NIGHT COOLING POTENTIAL OF PV-T COLLECTORS FOR BRAZILIAN CITIES	Alexander Leyton Mopan
08:50	0247	NOWCASTING AND SHORT TERM GHI FORECASTING USING GOES- 16 SHORTWAVE RADIANCE DATA: A MACHINE LEARNING CASE STUDY OF PETROLINA-PE, BRAZIL	Paulo Alexandre Costa Rocha
09:05	0259	NUMERICAL SIMULATION OF AN HYBRID SYSTEM WITH PHOTOVOLTAIC PANELS, ELECTROLYZER AND SOLID OXID FUEL CELL	João Jun Okada Ahmed
09:20	0263	QUASI-3D MODELING OF FLOW IN HPPS DOWNSTREAM RESERVOIRS TO USE THE REMAINING ENERGY THROUGH HYDROKINETIC TURBINES	Claudio Blanco
ENTS T	Гh2	Renewable Energy	Chair: Julio Passos
09:45	0359	EXERGY ANALYSIS OF A HYDROGEN PRODUCTION PLANT WITH	Gabriel Gomes Vargas
10:00	0368	ENERGY AND EXERGY ANALYSIS OF HYDROGEN PRODUCTION VIA HIGH-TEMPERATURE ELECTROLYSIS POWERED BY SOLAR AND WIND ENERGY	Diego Izidoro
10:15	0372	EXPERIMENTAL ANALYSIS OF A MODULAR SOLAR CHIMNEY	Janaína de Oliveira Castro Silva
10:30	0487	GLYCERIN/ETHANOL BLEND BIOFUEL IN FLEX-FUEL VEHICLES	Gabriel Nobre Alves Nascif
10:45	0622	ANALYSIS OF WAKE EFFECT ON THE ANNUAL ENERGY PRODUCTION OF WIND FARMS	Matheus de Oliveira Camelo
ENTS T	rh3	Renewable Energy	Chair: Julio Passos
11:15	0681	SMALL WIND TURBINE DESIGNED FOR SUPPLYING ELECTRICAL ENERGY TO SMALL HOTELS IN AJURUTEUA-PA-BRAZIL	Mauro Veloso
11:30	0931	EXERGY ANALYSIS OF A SOLAR-BIOMASS HYBRID COGENERATION POWER PLANT APPLIED TO CORN ETHANOL PRODUCTION IN BRAZIL AND IN THE UNITED STATES	Lauro Augusto Jeronimo Oliveira
11:45	0984	FLAT PLATE SOLAR COLLECTOR PERFORMANCE INVESTIGATION BASED ON PLATE EMISSIVITY AND SLOPE ANGLE	Lucas Rodrigues Ne <mark>uma</mark> nn
12:00	1000	CFD SIMULATION OF FLOATINGÂ'BODY DYNAMICS FOR ENERGY CONVERSION USING OPENFOAM	Nicollas Freitas
ENTS T	Րh4	Renewable Energy	Chair: Vicente Nicolau
14:25	1007	EXERGETIC ANALYSIS OF A HYDRID SOLAR-BIOMASS COGENERATION POWER PLANT FOR A POULTRY INDUSTRY APPLICATION	João Damasceno Xavier <mark>Net</mark> o
14:40	1032	A REVIEW OF DESIGN OPTIMIZATION OF SAVONIUS ROTOR	Yan Felipe Cavalcante
14:55	1194	PYROLYSIS OF MACAUBA FRUIT TO OBTAIN FLAVOURED COALS: GOURMET CHARCOAL	Emilly Silva
15:10	1208	COMPARATIVE ANALYSIS OF DESIGN POINT DIRECT NORMAL	João Humberto Serafim Marti <mark>ns</mark>
15:25	1222	EXPERIMENTAL INVESTIGATION ABOUT EDISON TYPE THERMOMAGNETIC MOTORS BEHAVIOR OPERATING WITH A SMALL TEMPERATURE GRADIENT	Carlos Vinicius Xavier Bes <mark>sa</mark>
ENTS T	rh5	Renewable Energy	Chair: Jacqueline Copetti
15:55	1344	A NEW OPTIMIZATION PROCEDURE APPLIED TO HYDROKINETIC TURBINE SWEPT BLADES	MIRIAM LYS DE ALMEIDA GEMAQUE
16:10	1356	EFFICIENCY COMPARISON BETWEEN ELECTRIC AND CONVENTIONAL POWERTRAIN EMPLOYED IN URBAN CONDITIONS	Lucas Alexandre Gonçalves Lima
16:25	1090	SOLAR IRRADIANCE FORECASTING USING MACHINE LEARNING, COMPARISON OF XGBOOST AND BOOSTING MODELS.	David Mickely Jaramillo Loayza
16:40	1115	WIND FARM LAYOUT OPTIMIZATION WITH NOISE CONSTRAINT	Pedro Lucas Sanches Fonseca Silva
ENTS E	-Poster	Thermodynamics and Thermal Systems	Chair: Rogério Oliveira
	0019	THERMOGRAVIMETRY OF TIRES RUBBER UNDER DYNAMIC AND QUASI-ISOTHERMAL CONDITIONS	Diego Jhovanny Mariños Rosado
	0020	DETERMINATION OF ENVIRONMENTAL PARAMETERS OF A NATURAL GAS COMBINED CYCLE THERMOELECTRIC POWER PLANT WITHOUT/WITH SUPPLEMENTARY FUEL BURNING	Diego Jhovanny Mariños Rosado

	0227	INTENSIFICATION OF THERMAL CONDUCTIVITY AND CONDUCTION HEAT TRANSFER PROCESS IN COMPOSITES WITH THE ADDITION OF FILLER MATERIALS: STATE OF THE ART	Ítalo Guilherme
	0356	ASSESSMENT OF A RANKINE CYCLE FOR COGENERATION IN CEMENT INDUSTRIES	Nathália de Assis Gomes
	0406	THERMODYNAMIC AND ECONOMIC ANALYSIS OF A BIOGAS-FUELED MICRO GAS TURBINE WITH COMPRESSOR PHOTOVOLTAIC DRIVE	Gustavo Trindade
	0499	STUDY OF A SOLAR ENERGY KALINA CYCLE APPLIED IN BOM JESUS DA LAPA - BAHIA	Géssica Amorim
17:05	0857	EFFECT OF THE INCLINATION ANGLE ON THE PERFORMANCE OF 100 AND 30 MESH COPPER WATER HEAT PIPES FOR APPLICATION IN A STIRLING ENGINE	Ana Santos
to 18:05	1199	FEASIBILITY ANALYSIS OF QUANTITATIVE THERMOGRAPHY FOR FAILURES AND THE LACK OF LUBRICATION DETECTION IN CYLINDRICAL SPUR GEARS	João Manoel de Oliveira Neto
	1554	THE POTENTIAL OF A CO2 STORAGE SYSTEM COUPLED TO A RANKINE ENERGY STORAGE SYSTEM	Paula Pomaro
	1757	THE INFLUENCE OF TEMPERATURE AND PRESSURE ON PRECIPITATION AND SUBSEQUENT SCALE FORMATION OF BARIUM AND STRONTIUM SULPHATES DURING ENHANCED OIL RECOVERY PROCESSES	Levy Bertoletti
	1803	PERFORMANCE ANALYSIS OF A THERMOELECTRIC COOLING CHAMBER	Isabelle Dias
	1887	EXERGY ANALYSIS OF THE ELECTRICITY GENERATION PROCESS IN THE REUSE OF BLAST FURNACE GASES IN A STEELMAKING COMPANY	Ricardo Carpio
	1918	PCM SOLIDIFICATION AROUND THE PARALLEL PLATES OF A STORAGE SYSTEM	Antonio Bruno de Vasconcelos Leitão
	2132	A MAGNETOCALORIC ROTARY REFRIGERATOR PROCESSES SIMULATOR USING A STEPWISE MODELLING APPROACH	Victória Heringer Saippa
	2288	DIMENSIONING OF SUPERCRITICAL CO2 TURBINES THROUGH A PSEUDO-POLYTROPIC TRANSFORMATION MODEL	Matheus Cruz

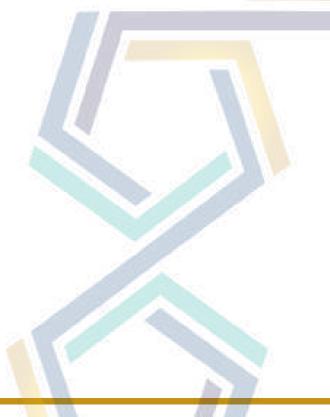


ENTS -	- Energy	y and Thermal Sciences		
Friday			Room 5	
	Code	Title	Presenter	
ENTS F		Renewable Energy	Chair: Paulo Schneider	
08:35	1442	EVALUATION AND MODELING OF THE PART-LOAD PERFORMANCE OF A BIOMASS STEAM GENERATOR INTEGRATED WITH A CONCENTRATED SOLAR POWER PLANT	Alvaro Adolfo Diaz Perez	
08:50	1500	THERMODYNAMIC ANALYSIS OF COMBINED PARABOLIC TROUGH SOLAR POWER AND DESALINATION PLANT IN THE NORTHEAST REGION OF BRAZIL	Vítor Silva Medeiros	
09:05	1542	PERFORMANCE ANALYSIS OF OSCILLATING HYDROFOILS WITH DIFFERENT WING PROFILES	Guilherme Amaral do Prado Campos	
09:20	1750	EVALUATION OF ENVIRONMENTAL IMPACTS OF CHARCOAL PRODUCTION: USE OF WOOD CARBONIZATION BY-PRODUCTS	Sarah Silva	
ENTS F	r2	Renewable Energy	Chair: Antonio Gallego	
09:45	1931	FEASIBILITY STUDY FOR INSTALLATION OF PHOTOVOLTAIC PLANTS USING AHP METHOD IN THE STATE OF MARANHÃFO	JOSÉ RIBAMAR RIBEIRO SILVA JÚNIOR	
10:00	1933	PRELIMINARY STUDY FOR OBTAINING BIOFUELS FROM AQUATIC	Ruan Vitor Cortelassi da Cruz	
10:15	1953	DETERMINATION OF INSTALLATION SITES OF HYDROKINETIC TURBINES DOWNSTREAM OF THE SEFAC HYDROELECTRIC FACILITY	Kaajal Gopie	
10:30	1962	DIRECT HEATING OF SUPERCRITICAL CARBON DIOXIDE IN LINEAR FRESNEL COLLECTORS ANALYSIS	Ricardo Hofer Begrow	
10:45	2113	THERMODYNAMIC MODELING OF A HYBRID PLANT CONSIDERING SOLAR THERMAL ENERGY AND COMBINED POWER CYCLE	Bernardo Bergantini Botamede	
ENTS F	r3	Renewable Energy & Thermodynamics and Thermal Systems	Chair: Rogério Oliveira	
11:15	2278	APPLING THE LARGE-SCALE PARTICLE IMAGE VELOCIMETRY WITH DRONE IMAGES FOR DETERMINING THE HYDROKINETIC POTENTIAL IN RIVERS	Felipe Ribeiro de Toledo Camargo	
11:30	2299	VALIDATION OF THE SATELLITE PRODUCTS CAMS-RAD AND SOLCAST: A CASE STUDY FOR PETROLINA-PE, USING THE BRAZILIAN IRRADIANCE DATA FROM THE NATIONAL INSTITUTE OF SPATIAL RESEARCH	Mirella Martins Camelo	
11:45	2344	DESIGN OF A REGENERATIVE BRAKING SYSTEM FOR A BICYCLE DRIVEN BY AN ELECTRIC MOTOR OF 500 W	Luis André Vilcahuamán Hinostroza	
12:00	0039	COUPLING OF FINITE TIME THERMODYNAMIC-DYNAMIC MODELS OF A STIRLING ENGINE FOR NUCLEAR SPACE PROPULSION	Ermerson Moura	
ENTS F	r4	Thermodynamics and Thermal Systems	Chair: Rogério Oliveira	
14:25	0130	BICRITERIA OPTIMIZATION OF ENERGY SUPPLY SYSTEMS UNDER ECONOMIC UNCERTAINTY	monica carvalho	
14:40	0161	EFFECTS OF INPUT TEMPERATURE PROFILE IN THE DESIGN OF CONTINUOUS-FLOW SENSIBLE-THERMAL ENERGY STORAGE SYSTEMS	Conrado Ermel	
14:55	0218	THERMODYNAMIC PROPERTIES CALCULATION OF PURE COMPOUNDS USING A MULTIOBJECTIVE APPROACH IN ESTIMATING THE ADJUSTABLE EMPIRICAL PARAMETERS OF THE GEOS3C EQUATION OF STATE	Géssica Ramos da Silva	
	0228	INTENSIFICATION OF THE THERMO-PHYSICAL PROPERTIES OF HYDRATED LIME AND GYPSUM COMPOSITES WITH GRAPHITE MICRO-SCALE PARTICLES	Ítalo Guilherme	
15:25				
ENTS F	r5	Thermodynamics and Thermal Systems	Chair: Rogério Oliveira	
15:55	0367	THERMAL MANAGEMENT OF BATTERIES APPLIED ON VESSEL HYBRID POWER SYSTEMS	Gustavo Passeti Andrade da Silva	
16:10	0436	INFLUENCE OF SPEED AND LOAD VARIATION ON THE ENERGY BALANCE OF AN INTERNAL COMBUSTION ENGINE WITH GASOLINE	Claudio Santana	
16:25	0604	CHARACTERIZATION OF VAPOR COMPRESSION REFRIGERATION	Vinicius Akyo Matsuda	
	0605	AN EXTENDED AXIAL MOMENTUM ANALYSIS FOR STEAM TURBINES	Davi Oliveira	

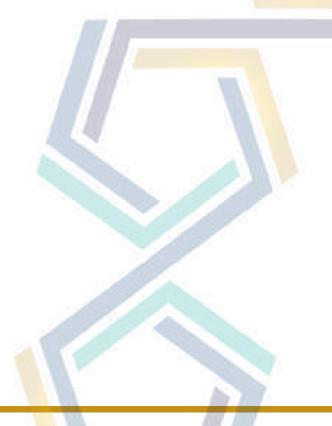
ENTS	- Energ	y and Thermal Sciences	
Mond	lay 22		Room 6
Time	Code	Title	Presenter
ENTS N	No1	Thermodynamics and Thermal Systems	Chair: Rogério Oliveira
11:15	0717	FAST RESPONSE MODEL FOR HEAT TRANSFER IN FURNACES BASED ON RADIANT BEHAVIOR	Eduardo Dias
11:30	0835	IMPLEMENTATION AND DEVELOPING OF A ROUTINE TO DEFINE THE AMMONIA-WATER THERMODYNAMIC PROPERTIES BY USING GIBBS FREE ENERGY DEFINITION	Beethoven Narváez-Romo
11:45	1207	GAS TURBINE WASTE HEAT RECOVERY AND EXERGETIC OPTIMIZATION	Rafael Silverio Barbosa
12:00	0929	Session Speaker: COMPARISON OF THE THERMAL EFFICIENCY OF A GAS TURBINE WORKING WITH COMBUSTION AND DETONATION CHAMBERS	Ramiro Veronese de Vargas
ENTS N	v No2	Thermodynamics and Thermal Systems	Chair: Rogério Oliveira
14:25	1238	LAINE: BUILDING AN OPEN SOURCE WEB APP FOR EQUATION ORIENTED MODELING	Rafael Nogueira Nakashima
14:40	1478	EXPERIMENTAL PHASE EQUILIBRIUM OF CO2 AND CH4 HYDRATES	Luiz Fernando Santos de Vasconcelos
14:55	1512	NUMERICAL EVALUATION OF THE INFLUENCE OF OPERATIONAL PARAMETERS ON THE ADSORTION DESALINATION SYSTEM PERFORMANCE	Roberto Marçal
15:10	1537	HYBRID HEAT PUMPS TO MEET HEATING AND COOLING DEMAND IN BREWERIES AND OTHER PROCESS INDUSTRIES	Rogério Gomes de Oliveira
15:25	1563	THERMOPHYSICAL PROPERTIES FOR CO2 AND CO2 RICH MIXTURES PREDICTED USING A CPA EOS	Matheus Vitor Rocha Pereira
ENTS N	No3	Thermodynamics and Thermal Systems	Chair: Rogério Oliveira
15:55	1599	THERMODYNAMIC OPTIMIZATION OF THE ENERGY DENSITY IN AN ORGANIC RANKINE ENERGY STORAGE SYSTEM	Maury Oliveira Jr
16:10	1602	EFFECT OF SUPERHEATING DEGREE AND PRESSURE ON EFFICIENCY OF AN ORES (ORGANIC RANKINE ENERGY STORAGE) SYSTEM	Maury Oliveira Jr
16:25	1686	EXPERIMENTAL CHARACTERIZATION OF THE DEW POINT OF METHANE + ETHANOL MIXTURE	Luiz Henrique Meneg <mark>he</mark> l Lino
16:40	1714	DEVELOPMENT OF HEAT AND MASS TRANSFER MODELLING FOR COUNTER-FLOW COOLING TOWER	Andre Chun



ENTS	ENTS - Energy and Thermal Sciences					
Tues	day 23		Room 6			
Time	Code	Title	Presenter			
ENTS	Tu1	Thermodynamics and Thermal Systems & Thermo-Economic Analysis and Energy Policy	Chair: Rogério Oliveira			
08:35	1925	DEVELOPMENT OF OFF-DESIGN MODELLINGS FOR DISTINCT HEAT EXCHANGERS COUPLED TO AN INTERNAL COMBUSTION ENGINE	Bruno Muniz de Freitas Miotto			
08:50	0525	COBEM2021-0525 SOLAR CHIMNEY COUPLED TO AN EARTH-TO-AIR HEAT EXCHANGER FOR PASSIVE COOLING AND POWER GENERATION: A PAYBACK ANALYSIS	Erick Oliveira			
09:05	1022	THERMOECONOMIC ANALYSIS OF A HYBRID BIOMASS COGENERATION PLANT FROM WOOD RESIDUES ASSISTED BY SOLAR ENERGY	Vivaldo Grechi Guimarães Neto			
09:20	1489	ON THE NEED FOR TOTAL AND LOCALIZED EXERGY DISAGGREGATION IN THERMOECONOMIC DIAGNOSIS BASED ON COMPREHENSIVE DIAGRAMS	Pedro Rosseto de Faria			
ENTS 1	Tu2	Thermo-Economic Analysis and Energy Policy	Chair: Rogério Oliveira			
09:45	1538	AN EVALUATION OF THERMOECONOMIC DIAGNOSIS THROUGH THE LOCALIZED DISAGGREGATION IN A REFRIGERATION SYSTEM	Rodrigo Santos			
10:00	1737	THE IMPORTANCE OF THE ENVIRONMENT IN THE THERMOECONOMIC MODELING: A CONVENTIONAL BOILER WASTE AND ENVIRONMENTAL COSTS ALLOCATION	Igor Belisario			
10:15	2012	ON THE THERMOECONOMIC APPROACHES FOR FUEL AND WASTES ALLOCATION IN A COGENERATION PLANT: ARBITRARINESS AND COMPLEXITIES	Lucas Rodrigues Loyola			
10:30						
10:45						

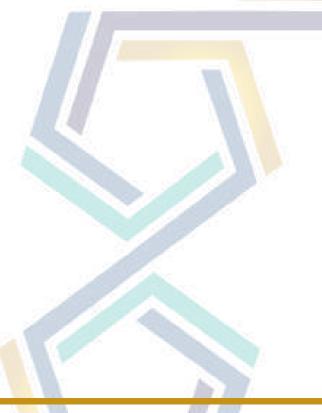


ENTS	ENTS - Energy and Thermal Sciences				
Thurs	sday 25	5	Room 6		
Time	Code	Title	Presenter		
ENTS E	E-Poster	Thermo-Economic Analysis and Energy Policy & Renewable Energy	Chair: Marcia Mantelli		
	0509	THERMOECONOMIC EVALUATION OF THE PROPOSAL TO INTEGRATE A BIOMASS GASIFICATION SYSTEM IN THE PULP AND PAPER	Izabela Barbosa		
	1317	THERMOECONOMIC ANALYSIS OF A SUGARCANE PLANT COGENERATION SYSTEM UNDER DIFFERENT THERMAL INTEGRATION LEVELS	Hiago Braz		
	1496	OPTIMIZATION AND THERMOECONOMIC ANALYSES IN DUAL PLANTS TO THERMAL DESALINATION WITH INTEGRATED SOLAR RANKINE CYCLE FOR DEVELOPMENT IN SÃFO MATEUS €" ES€	Carlos Filipe Lacerda Martins		
	2321	EXEGETICAL ANALYSIS OF BRAYTON CYCLE POWER GENERATION USING BIOGAS AS FUEL	Jesús David Rhenals Julio		
	1463	MAINTENANCE PROPOSAL IN INTEGRATED SYSTEM BIODIGESTORS THROUGH REMOTE MONITORING	Jéssica de Sousa Carvalho		
	1488	ENERGY ANALYSIS OF A HYBRID SOLAR/GAS SYSTEM FOR WATER HEATING: A CASE STUDY	Olinto Evaristo		
17:05 to	1515	EVALUATION OF THE ENERGY 3D POTENTIAL USE AS A SIMULATION TOOL FOR UNDERGRADUATE STUDENTS: A CASE STUDY ON ENERGY EFFICIENCY AND PV GENERATION	Pedro Canali		
18:05	1532	THERMAL CONVERSION KINETICS IN THE PYROLYSIS OF POLYETHYLENE/ALUMINUM FROM VACUUM PACKAGING WASTE	Matheus Henrique Zanardini		
	1591	THE EFFECT OF THE EXTERNAL LOAD ON THE PERFORMANCE OF MICROBIOLOGICAL FUEL CELLS FOR ACID MINE DRAINAGE REMEDIATION AND ENERGY GENERATION	Elise Watzko		
	0661	INTERFACES BETWEEN ATMOSPHERIC WATER HARVESTING AND SOLAR ENERGY: EVIDENCES FROM A BIBLIOMETRIC STUDY	Ana Carolina Lamas da Silva		
	0766	PERFORMANCE OF THE NREL PHASE VI WIND TURBINE BLADES WITH WAVY LEADING EDGE PROJECTED PROPORTIONAL TO THE BLADE LOCAL CHORD	Juan Flores Mezarina		
	0836	PREDICTION OF BIOGAS GENERATION AND BIOENERGY USING MCI FOR THE MARITUBA-PA LANDFILL	yan dos santos lima		
	1078	ECONOMIC AND RISK ANALYSIS FOR IMPLEMENTATION OF A SAVONIUS WIND TURBINE FOR AERATION PROCESS IN FISH FARMING	Pericles Balafa		
	1196	TECHNICAL ANALYSIS OF COMPLEMENTARITY OF ENERGY GENERATION FROM SOLAR-WIND PLANTS IN RIO GRANDE DO NORTE	Leslye Soares Ferreira		



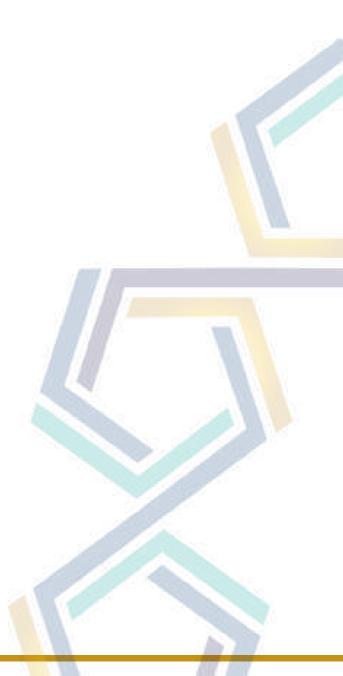
Program Overview and Engineering Design					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary		Engineering Design	Engineering Design	Engineering Design
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future		Engineering Design	Engineering Design	Engineering Design
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20			Engineering Design	Engineering Design	
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45			5 min break Engineering Design	Engineering Design	
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00			Engineering Design	Engineering Design	
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Keynote speaker	Engineering Keynote Design speaker	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	





Wodn	nesday	24	Room 6	
Time	Code	Title	Presenter	
	We1	Case Studies and Industrial Experiences in Engineering	Chair: Zilda de Castro Silveira	
)8:35				
08:50	0353	ADDITIVE MANUFACTURING PARTS FOR SONAR AND CAMERA HOUSING OF A SUBSEA CLEANING AND INSPECTION ROBOT	Valter Estevão Beal	
09:05	0584	CASE STUDIES OF MODELLING AND STRUCTURAL AND VIBRATION ANALYSIS OF CENTRIFUGAL COMPRESSOR IMPELLERS	Lucas Carvalho	
09:20	0712	Session Speaker: INTEGRATION AND REPLACEMENT OF INTERNAL PARTS OF AN EMERGENCY MECHANICAL VENTILATOR	Valter Estevão Beal	
ENGD	We2	Case Studies and Industrial Experiences in Engineering	Chair: Zilda de Castro Silveira	
09:45	0349	MANUAL FASTEN TORQUE TOOL DESIGNED AND MANUFACTURED	Valter Estevão Beal	
10:00	1100	DEVELOPMENT AND VALIDATION OF PHYSICAL EFFORT GAUGING SYSTEM IN SURF TRAINING EQUIPMENT-A PILOT STUDY	Luiz Fernando Segalin de Andrade	
10:15	1108	DIE DEMONSTRATORS FOR THE TOOLING INDUSTRY	André Dorigueto Canal	
		Symposium Speaker: Digital technologies in a machining automotive	-	
10:30	2353	industry	Dr. Fabiano Mocellin	
10:45	2353	Symposium Speaker: Digital technologies in a machining automotive industry	Dr. Fabiano Mocellin	
ENGD	We3	Design Creativity and Innovation in Engineering Design	Chair: Zilda de Castro Silveira	
11:15				
11:30	0370	CHALLENGES IN THE MANUFACTURING OF A CRYOGENIC COOLING MANIFOLD FOR AN X-RAY MONOCHROMATOR AT SIRIUS LIGHT SOURCE	Marlon Saveri Silva	
11:45	0679	TESTING PLAN IN SYSTEMS & REQUIREMENTS ENGINEERING FOR STRATEGIC ENGINEERING AREAS	Filipe Wiltgen	
12:00	1416	CUSTOMIZATION OF A SYSTEM FOR REACTIVE AGILITY TESTS WITH COGNITIVE DEMAND	Eloi Antonio Triaca	
ENGD	We4	Design Education	Chair: Valter Estevão Beal	
14:40			2	
14:55	0675	MATHEMATICAL MODELLING, COMPUTATIONAL FLUID DYNAMICS WITH ANSYS CFX AND EXPERIMENTAL ANALYSIS OF A HOVERCRAFT PROTOTYPE€™S AIR CUSHION LIFT SYSTEM	Ana Paula Pagotti	
15:10	1149	ENGINEERING DESIGN PROCESS LEARNING OF UNDERGRADUATE MECHANICAL ENGINEERING STUDENTS: A CASE STUDY ON THE UFSM COURSE	Vinicius Marini	
15:25	2262	STAINLESS STEEL AUTOCLAVE SANDING DEVICE: A CASE STUDY ON A MECHANICAL ENGINEERING PROJECT-BASED LEARNING COURSE	Gabriel de Andrade Janen <mark>e</mark> Gonini	
ENGD	We5	Design for "X" (Sustainability, Customization, Logistic, and other) & Design Process, Methodology, Methods, and Tools	Chair: Valter Estevão Beal	
15:55	1857	EXPERIMENTAL APPARATUS FOR DUST EMISSION TESTING IN TRAIN WAGONS AND STOCKPILES MODELS	Arthur dos Reis Lemos Fontana	
16:10	1874	COMPUTER VISION BASED GATES APPLIED TO CONTROLLING INBOUND AND OUTBOUND FLOW OF ITEMS TO SUPPORT WAREHOUSE MANAGEMENT	Claiton Mattos	
16:25	0023	DESIGN OF A MULTIPURPOSE DEVICE TO SUPPORT DAILY	Alina de Souza Leão Rodrigues	
16:40	0177	DESIGN OF AN ELECTRO-PNEUMATIC GEAR SHIFTER FOR A FORMULA SAE VEHICLE	Marcus Vitorio	
ENGD	E-Poster	Case Studies and Industrial Experiences in Engineering & Product and	Chair:	
	0147	A COMPARATIVE STUDY OF THERMAL ERRORS OF 5-AXIS MACHINING CENTERS OBTAINED USING THE LASER INTERFEROMETER DEVICE USING THE EXPERIMENTAL AND NUMERICAL METHODS	Marcelo Santos	
	2043	STUDY OF COST REDUCTION AND APPLICATION OF ENERGY EFFICIENCY IN THE LIGHTING AND AIR CONDITIONING SYSTEMS OF IFES CAMPUS SÃFO MATEUS	Bruno de Oliveira Schneider	

	2150	HYDRAULIC SYSTEM SIZING FOR GREYWATER REUSE IN TOILET FLUSHING	Igor Silveira
17:05	2061	MAGNETIC REFRIGERATOR	Edigar Botelho
to 18:05	1212	DEVELOPMENT OF AN INDUSTRIAL ASSET MANAGEMENT MATURITY ANALYSIS METHOD APPLIED TO HYDROELECTRIC POWER PLANTS MAINTENANCE	Paulo Walenia
	1597	APPLICATION OF THE QUALITY FUNCTION DEPLOYMENT METHOD FOR DETERMINING TRIBOMETER DESIGN REQUIREMENTS.	Fernando Henz Maldaner
	1614	METHODOLOGY FOR OPTIMIZING BATTERY SIZE WHEN CONVERTING INTERNAL COMBUSTION UTILITIES VEHICLE TO ELECTRIC TRACTION	Paulo Cezar da Silva
	1133	TECNOMOBELET €" ADAPTION OF VAN FOR ELECTRIC PROPULSION AND DESIGN OF STEERING, COOLING AND BRAKING ASSISTANCE SUBSYSTEMS	João Wohlgemuth

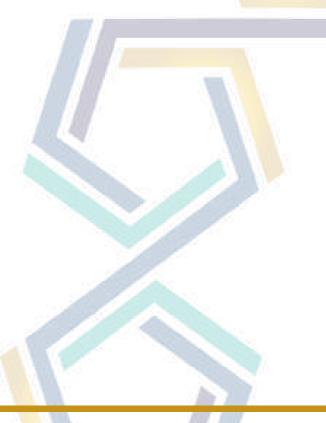


ENGD	- Engin	eering Design	
Thurs	day 2	5	Room 6
Time	Code	Title	Presenter
ENGD <sup>-</sup>	Th1	Design Process, Methodology, Methods, and Tools	Chair: Cristiano Vasconcellos Ferreira
08:35	0222	GOAL-ORIENTED REQUIREMENTS ANALYSIS APPLIED TO SYSTEMS ENGINEERING IN AUTOMOTIVE ECU DEVELOPMENT	GUILHERME PEREIRA MARCHIORO BERTELLI
08:50	0493	DESIGN OF A TEST BENCH FOR ELECTRIC PROPULSION SYSTEMS OF UNMANNED AERIAL VEHICLES	lvi Silva
09:05	0721	SYSTEM ENGINEERING APPLIED TO HIGH POWER ROCKET DEVELOPMENT	João Vítor Bernardi Rohr
09:20	0341	Session Speaker: ANALYSIS OF INJECTION MOLDING PROCESS OF PLASTIC PROPELLER FAN BASED ON THE ROBUST DESIGN METHOD	Gabriela Buzzi
ENGD <sup>-</sup>	Th2	Design Process, Methodology, Methods, and Tools	Chair: Cristiano Vasconcellos Ferreira
09:45	0733	THE LEAN STARTUP APPROACH IN THE MANUFACTURED PRODUCTS DEVELOPMENT PROCESS: A SYSTEMATIC REVIEW	Pollyanna Amanda Fick Gehm Denzin Zenkner
10:00	0746	CONCEPTUAL PROJECT OF THE CLASSIC FIRESAT MISSION FOR THE MONITORING OF FOREST FIRES IN THE NORTHEAST OF BRAZIL USING THE SPACE MISSION ANALYSIS AND DESIGN (SMAD) PROCESS	Mariana Tarifa
10:15	1009	MACHINING STRATEGIES FOR AUTOMOTIVE STAMPING TOOLS BASED ON MACHINING SIMULATIONS: A BENCHMARK OF HYPERMILL SOFTWARE.	Jéssica Christina dos Santos Silva
10:30		Symposium Speaker: Patents and Innovation: Challenges and Opportunities	Prof. Maria Aparecida de Souza
10:45		Symposium Speaker: Patents and Innovation: Challenges and Opportunities	Prof. Maria Aparecida de Souza
ENGD <sup>-</sup>	Th3	Design Process, Methodology, Methods, and Tools	Chair: Cristiano Vasconcellos Ferreira
11:15	1086	DESIGN DEVELOPMENT OF A CERAMIC DLP 3D PRINTER INTEGRATING QFD AND TRIZ	Italo Leite de Camargo
11:30	1094	MECHANICAL DESIGN OF A REDUCED FZG TRIBOMETER WITH VARIABLE LOADING	Salete Alves
11:45			
12:00			
ENGD <sup>-</sup>	Th4	Design Process, Methodology, Methods, and Tools & Engineering Design + AI and Industry 4.0	Chair: Cristiano Vascon <mark>cello</mark> s Ferreira
14:25	1812	AN INTEGRATED SPACE SYSTEM DESIGN TOOL KIT FOR THE ITA SPACE CENTER€™S PROJECTS	Rodrigo Dias
14:40	2095	DESIGN OF A FORMING DIE USING CAX SOLUTIONS	André Miranda
14:55	0376	MODELING AND SIMULATION OF THE BABY DIAPER PRODUCTION SYSTEM USING COLORED PETRI NET	Fabio Pereira
15:10	2152	DETECTION OF SUBSEA GAS LEAKAGES VIA COMPUTATIONAL FLUID DYNAMICS AND CONVOLUTIONAL NEURAL NETWORKS	Gustavo Luís Rodrigues Cald <mark>as</mark>
15:25	0037	Session Speaker: A NEW MULTI-OBJECTIVE OPTIMIZATION ALGORITHM INSPIRED BY LICHTENBERG FIGURES APPLIED TO ISOGRID STRUCURES	João Luiz Junho Pereira
ENGD <sup>-</sup>	Th5	Engineering Design + AI and Industry 4.0 & Design Process, Methodology, Methods, and Tools	Chair: Cristiano Vasconcellos Ferreira
15:55	1190	LEAN MORPHOLOGICAL MATRIX: A NEW APPROACH FOR CONCEPTS DEVELOPMENT	Alinne Geronimo
16:10	1202	A SYSTEMATIC APPROACH FOR RELATIONSHIPS ANALYSIS OF MORPHOLOGICAL MATRIX SOLUTION PRINCIPLES	Luiz Alexandre Barros de Carvalho
16:25	2316	MERGING THE JOB-TO-BE-DONE THEORY WITH TRADITIONAL PRODUCT DEVELOPMENT PROCESS: AN APPLICATION TO MOTORCYCLES' ACCESSORY DESIGN	Ícaro Carneiro
16:40	1125	Session Speaker: GETTER: AN INNOVATION APPLIED TO MANUFACTURING ENVIRONMENTS	Guilherme van der Laars Ribeiro

ENGD	ENGD - Engineering Design					
Friday	y 26		Room 6			
Time	Code	Title	Presenter			
ENGD I	Fr1	Product and Project Management	Chair: Valter Estevão Beal			
08:35	0595	CONCEPTUAL DESIGN OF A DOMESTIC POLYMER SHREDDER	Guilherme Maier Slaviero			
08:50	0953	OPERATIONAL REQUIREMENTS FOR A CABINED MARINE RESCUE VESSEL	Igor Carrijo Ramos			
09:05	1071	A CRITICAL REVIEW OF PRODUCT SERVICE SYSTEM RISK MANAGEMENT: BIBLIOMETRIC ANALYSIS AND NEW RESEARCH DIRECTIONS	Viviane Vasconcellos Ferreira Grubisic			
09:20	1099	DIGITAL TRACEABILITY SYSTEMS FOR QUALITY CONTROL IN AN AUTOMOBILE MANUFACTURER	João Paulo Fonseca			
ENGD I	Fr2	Reliability and Maintainability & Product and Project Management	Chair: Valter Estevão Beal			
09:45	0091	STRATEGY FOR SIMULTANEOUS FORMULA SAE AND WORLD SOLAR CHALLENGE ELECTRIC VEHICLES DEVELOPMENT	Artur Sabino de Andrade			
10:00	0083	APPLICATION OF FAILURE MODE AND EFFECTS ANALYSIS (FMEA) IN THE MECHANICAL VENTILATOR INSPIRE: A CASE STUDY.	Bruno Pinheiro de Melo Lima			
10:15	0199	MAINTENANCE STRATEGY BASED ON RELIABILITY ANALYSIS: A CASE STUDY OF MECHANICAL VENTILATORS	João Paulo de Aguiar			
10:30	0694	RELIABILITY ANALYSIS OF THE EXPERIMENTAL SOLID ROCKET MOTOR OF THE KOSMOS ROCKETDESIGN TEAM	Martin Schultz			
10:45	2007	OPTIMIZATION OF PREVENTIVE MAINTENANCE IN WIND TURBINES THROUGH LEAN SERVICE	William Henrique de Lima Fiuza			

Program Overview and Fluid Mechanics and Rheology					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20	Fluid Mechanics and Rheology (two rooms)	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45	Fluid Mechanics and Rheology (two rooms)	Fluid Mechanics and Rheology	5 min break Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology	Fluid Mechanics and Rheology
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Fluid Mech. and Rheology	Fluid Mech. and Rheology	Keynete speaker	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	

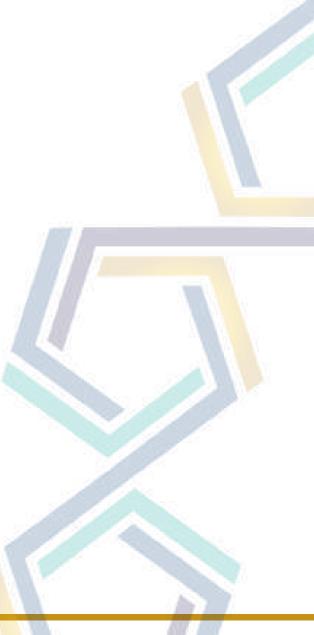




FLMR ·	- Fluid I	Mechanics and Rheology		
Mond	ay 22		Room 7	
Time	Code	Title	Presenter	
FLMR N		Computational Fluid Dynamics	Chair: Juan Pablo Salazar	
11:15	0086	VALIDATION AND ANALYSIS OF TURBULENCE MODELING IN SECONDARY FLOW CONDITIONS USING OPENFOAM	Ana Cristina Neves Carloni	
11:30	0093	NUMERICAL ANALYSIS OF CONTROLLED PERTURBATION IN THE GENERATION OF ROLL WAVES IN OPEN-CHANNEL FLOWS	Valdirene Rocho	
11:45	0094	ANN-BASED MESH-FREE METHOD TO SOLVE PARTIAL DIFFERENTIAL EQUATIONS	Filipi Teixeira Kunz	
12:00	0112	STABILITY AND ORDER OF ACCURACY ANALYSIS OF HIGH-ORDER SCHEMES FORMULATED USING THE FLUX RECONSTRUCTION APPROACH	Frederico Bolsoni Oliveira	
FLMR N	/lo2	Computational Fluid Dynamics	Chair: Roney Thompson	
14:25	0154	TWO-DIMENSIONAL NUMERICAL ANALYSIS OF A VERTICAL AXIS WIND TURBINE USING SLIDING MESH	Kaio Lourenço Teixeira Barbosa	
14:40	0174	DISCRETE AND CONTINUOUS SPECTRAL METHODS APPLIED TO BOUNDARY LAYER STABILITY	Juan Carlos Assis da Silva	
14:55	0207	FLOW AND LEAKOFF IN A HYDRAULIC FRACTURE USING THE FINITE VOLUME METHOD	Keveen Tenereli	
15:10		Symposium Speaker: Microscale Phenomena of Complex Liquid Flow in Porous Media	Prof. Márcio da Silveira Carvalho	
15:25		Symposium Speaker: Microscale Phenomena of Complex Liquid Flow in Porous Media	Prof. Márcio da Silveira Carvalho	
FLMR N	<u>/lo3</u>	Computational Fluid Dynamics	Chair: Jader Barbosa	
15:55	0209	ON THE USE OF STABILIZATION SCHEMES IN COLLOCATED GRIDS FOR THE INCOMPRESSIBLE NAVIER-STOKES EQUATIONS	Gustavo Choaire	
16:10	0224	NUMERICAL MODELING OF FLUIDS MIXTURE FLOW IN HIGH VELOCITIES WITH PHASE CHANGE	Breno de Almeida Avancini	
16:25	0301	REDUCED ORDER MODELING BASED ON COMPUTATIONAL FLUID DYNAMICS: A STUDY OF CASE FOR A STIRRED TANK	Marcelo José Alba	
16:40	0320	WALL RESOLVED FLUID-STRUCTURE INTERACTION SIMULATIONS OF A MODERN WIND TURBINE BLADE	Mohsen Lahooti	
FLMR E	E-Poster	Computational Fluid Dynamics	Chair: Luís Orlando Emerich dos Santos	
	0004	NUMERICAL STUDY OF A FERROFLUID FLOW IN A T-JUNCTION	Hugo Morais	
	0221	ABSORPTION RATE OF CO2 IN A BUBBLE COLUMN: A NUMERICAL MODELING USING OPENFOAM	Marlon Lemos	
	0230	CFD BUBBLE PUMP€™S NUMERICAL SIMULATIONS FOR LIBR€"H2O ABSORPTION REFRIGERATION€™S CYCLE MOVED BY SOLAR ENERGY	Gustavo Fernandes Soares	
	0239	IMPLEMENTATION OF AN ACCELERATOR ALGORITHM TO REDUCE THE COMPUTATIONAL COSTS IN LAGRANGIAN SIMULATIONS	Marília Vidille	
17:05 to	0265	NUMERICAL ANALYSIS OF A SAVONIUS TURBINE INSERTED IN OSCILLATING WATER COLUMN WAVE ENERGY CONVERTER	Andrei Santos	
18:05	0686	IMPLEMENTATION OF THE STEPWISE IMPLICIT-EXPLICIT TIME-STEP METHOD ON A DNS CODE	Giovanni Braga	
	1381	CFD ANALYSIS OF DIFFERENT COOLING ALTERNATIVES FOR A FSAE CAR BRAKE DISC	David Filho	
	1467	FLOW VISUALIZATION AND DETERMINATION OF AERODYNAMICS COEFFICIENTS IN AIRFOILS WITH PROTUBERANCES ON THE LEADING EDGE BY CFD-OPENFOAM	DANIEL BARCONI	
	1526	A COMPARATIVE STUDY OF RANS TURBULENCE MODELS AND INFLUENCE OF WIND DIRECTION IN A BUILDING ARRAY	Gabriel Gusmão Almeida	
	1725	ANALYSIS OF INDOOR VENTILATION IN A PNEUMOLOGY WARD AT THE LAURO WANDERLEY UNIVERSITY HOSPITAL, BRAZIL	William Henrique de Lima Fiuza	

FLMR	- Fluid I	Mechanics and Rheology	
Tueso	day 23		Room 7
Time	Code	Title	Presenter
FLMR 1	Tu1	Computational Fluid Dynamics	Chair: Bruno Carmo
08:35	0369	DIMENSIONING, ESSAY AND NUMERICAL SIMULATION OF FLOW IN HYDROCYCLONES	Marcella Tacconi
08:50	0377	SIMULATION OF FLOW IN SATURATED POROELASTIC MEDIA WITH	Monique Feitosa Dali
09:05	0409	COMPARISON BETWEEN AXISYMMETRIC AND 3D MODELS FOR THE EVALUATION OF DRAG ON SUBMARINE HULLS	Eduardo de Bittencourt Ribeiro
9:20	0398	Session Speaker: NUMERICAL ANALYSIS OF FLOW IN A SUPERSONIC SEPARATOR NOZZLE WITH CENTRAL BODY	Thomaz Faccioli
	Гu2	Computational Fluid Dynamics	Chair: Marcello Augusto Faraco de Medeiros
09:45	0419	COMPARISON AND ENHANCEMENT OF TURBULENCE MODELS THROUGH PIPES USING WALL FUNCTIONS	Umberto Costa Bitencourt
10:00	0449	STUDIES ON THE INFLUENCE OF CAVITATION BOUNDARY CONDITION MODEL ON THE PERFORMANCE OF TEXTURED SURFACE HYDRODYNAMIC JOURNAL BEARINGS	Luiz Fellipe Nogueirão
10:15	0567	NUMERICAL INVESTIGATION OF METASTABLE CONDENSATION OF WET STEAM UNDER HIGH PRESSURE CONDITIONS	Luccas Kavabata
10:30	0581	DNS SIMULATION OF COMPRESSIBLE FLOWS OVER GAPS: STRATEGIES FOR REACHING A BASE FLOW UNDER STABLE AND UNSTABLE CONDITIONS	Marlon Sproesser Mathias
10:45	0582	NUMERICAL SIMULATION OF THE BOUNDARY LAYER LAMINAR- TURBULENT TRANSITION CAUSED BY A SMALL GAP	Felipe Oliveira Aguirre
FLMR 1	ru3	Computational Fluid Dynamics	Chair: Juan Salazar
11:15	0623	ESTIMATION OF ATMOSPHERIC EMISSIONS BY AN ADAPTIVE MONTE CARLO MARKOV CHAIN METHOD	Roseane Albani
11:30	0667	A MACHINE LEARNING APPROACH TO SOLVE THE LID DRIVEN CAVITY FLOW	Rogerio Werneck Costa Rodrigues Filho
11:45	0750	NUMERICAL STUDY OF THE FLOW PAST AN INCLINED FLAT PLATE VIA SPECTRAL/HP ELEMENT METHODS WITH NOVEL STABILIZATION	Yukari Watanabe Guerreiro Martins
12:00	0834	NUMERICAL STUDY OF SHOCK WAVE REFLECTION WHEN INTERACTING WITH A RIGID WEDGE	Rodrigo Savi Justi
LMR 1	ru4	Computational Fluid Dynamics	Chair: Juan Salazar
4:25	0845	A NEW DIRECT NUMERICAL SIMULATION CODE OF BOUNDARY LAYER FLOWS VERIFIED BY THE METHOD OF MANUFACTURED SOLUTIONS	Mateus Ribeiro
14:40	1031	LARGE-EDDY SIMULATION OF A TURBULENT INCOMPRESSIBLE ROUND JET FLOW	Livia S. Freire
14:55	1128	PREDICTION OF AERODYNAMIC NOISE GENERATED BY CYLINDERS	Filipe Dutra da Silva
15:10	1151	FLOW DYNAMICS AND AERODYNAMIC FORCES ON AN ADAPTED AHMED BODY AT MODERATE REYNOLDS NUMBERS THROUGH NUMERICAL SIMULATION	Marcos Heduardo Pereira da Silva
15:25	1218	NUMERICAL INVESTIGATION OF NATURAL GAS MIXTURE THROUGH A SUPERSONIC SEPARATOR	Lucas Melo
FLMR 1	Tu5	Computational Fluid Dynamics	Chair: Juan Salazar
15:55	1224	NUMERICAL STUDY AND DEVELOPMENT OF AN EXPERIMENTAL TEST-RIG CONFIGURATION OF A SUPERSONIC NOZZLE FOR GAS SEPARATION	Rodrigo Fazioli Gastaldo
16:10	1304	NUMERICAL STUDY IN SUPERSONIC GAS SEPARATOR WITH CURVED NOZZLE	Denis Fernando Gregório Júnior
16:25	1365	BOUNDARY CONDITIONS EFFECTS ON THE BOILING HEAT TRANSFER PROBLEM IN CHANNELS USING THE LATTICE BOLTZMANN METHOD	Luiz Czelusniak
16:40	1413	FLUID-STRUCTURE INTERACTION FOR CANTILEVER PLATES IMMERSED IN AIR AND WATER USING SOLID ELEMENT IN STRUCTURE SUBSYSTEM ON MFSIM (IN-HOUSE SOFTWARE)	Freddy Portillo Morales
FLMR E	E-Poster	Computational Fluid Dynamics & Instrumentation and Experiments & Industrial Applications and Turbomachinery	Chair: Juan Salazar
	1728	NUMERICAL EXPERIMENTS OF COMPRESSIBLE FLOW USING THE MULTI DIRECT FORCING	Rafael Romão da Silva Melo

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	1744	CFD ANALYSIS OF PRESSURE VARIATIONS ON THE WASTE VALVE	Pedro Bottlender
	1943	INFLUENCE OF ASPECT RATIO AND WALL TEMPERATURE ON SMOKE EXHAUSTION IN A PRE-CHAMBER OF A SMOKE-PROOF STAIRCASE.	Airque Assis
17:05	1952	ANALYSIS OF THE FLUID DYNAMICS OF A SPOUTED BED WITH AND WITHOUT DRAFT TUBE: MODELING AND SIMULATION	Ana Clara Nery
to 18:05	2056	STUDY OF BED FLUIDIZATION THROUGH CFD ANALYSIS AND SIMULATION	Fernando Léo Bueno de Oliveira e Silva
	2127	A MULTILEVEL APPROACH IN THE NUMERICAL MODELLING OF A FLOW ACCELERATED CORROSION PHENOMENON	Pedro Henrique Augusto Mota
	0813	STUDY OF THE DESTABILIZATION OF EMULSIONS BY SHEAR- INDUCED COALESCENCE	Patricia Tristão
	2037	IMPROVED PRELIMINARY GEOMETRY FOR SCO2 CENTRIFUGAL COMPRESSORS THROUGH FULL 1D MODELING	Gustavo Singulane Gonçalves
	0354	DEVELOPMENT OF AN AUTOMATED HOPPLER VISCOMETER	José Victor Passos Santiago
	1247	A REVIEW OF PARTICLE IMAGE VELOCIMETRY TECHNIQUES	Anderson Girardi

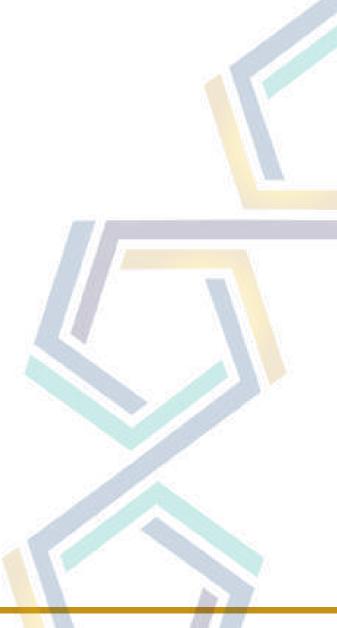


FLMR	- Fluid I	Mechanics and Rheology	
Wedr	nesday	24	Room 7
Time	Code	Title	Presenter
FLMR	We1	Computational Fluid Dynamics	Chair: Gustavo Charles Peixoto de Oliveira
08:35	1503	FINITE ELEMENT SIMULATION FOR TWO-PHASE FLOW WITH A DECOUPLED FLUID INTERFACE	Daniel Barbedo Vasconcelos Santos
08:50	<b>50</b> 1527 BLOOD FLOW NUMERICAL SIMULATION USING FE-METHOD FOR 2D- AXISYMMETRIC NAVIER-STOKES EQUATION		Leandro Marques dos Santos
09:05	1607	CFD MESH TOPOLOGY STUDY OF A TRUSS GEOMETRY UNDER FORCED OSCILLATIONS	Gustavo de Goes Gomes
09:20	1660	NUMERICAL SIMULATION OF THE DIFFUSION EQUATION VIA A NON- LINEAR FLUX SPLITTING TECHNIQUE WITH THE MULTIPOINT FLUX APPROXIMATION METHOD WITH A DIAMOND STENCIL SATISFYING THE DISCRETE MAXIMUM PRINCIPLE USING 2-D UNSTRUCTURED MESHES	ARTUR CASTIEL REIS DE SOUZA
FLMR	We2	Computational Fluid Dynamics	Chair: Luís O. Emerich dos Santos
09:45	1689	CFD-BASED MULTI-OBJECTIVE AERODYNAMIC OPTIMIZATION OF A CAR REAR DIFFUSER	Bruno Carmo
10:00	1806	NUMERICAL INVESTIGATION OF THE DESTRUCTIVE INTERFERENCE OF TWO NONLINEAR STANDING WAVES IN A DUCT	Guilherme Mendes Santana
10:15	2041	TWO-DIMENSIONAL CFD ANALYSIS OF THE H-DARRIEUS WIND TURBINE USING OPENFOAM	Arthur Guilherme
10:30	2117	NUMERICAL SIMULATION OF TRANSPORT THROUGH POLYMER LAYER AND POROUS ARTERIAL WALL OF SIROLIMUS AND PACLITAXEL IN DRUG-ELUTING STENTS	Haroldo Rosman Junior
10:45	2228	FULL THREE-DIMENSIONAL VERSUS THREE-DIMENSIONAL SYMMETRIC LAMINAR SWIRLING FLOW	Moises Miranda
FLMR	We3	Computational Fluid Dynamics & Flow Induced Vibration	Chair: Sergio Viçosa Möller
11:15	2275	IMPACT OF VISCOSITY ON BLOOD FLOW IN ASCENDING AORTIC ANEURYSM	Gabriela de Castro Almeida
11:30	2284	IMPACT OF AORTIC VALVE TOPOLOGY IN THE HEMODYNAMIC FLOW PATTERNS IN THE ASCENDING AORTA	Enrico Luigi Moreira <mark>Per</mark> occo
11:45	0294	PASSIVE CONTROL OF VORTEX-INDUCED VIBRATIONS WITH A ROTATIONAL NONLINEAR ENERGY SINK	Gabriel Araujo
12:00	0821	ENERGY HARVESTING FROM BISTABILITY PHENOMENON ON CIRCULAR CYLINDERS	Patrick Habowski
FLMR	We4	Flow Induced Vibration & Industrial Applications and Turbomachinery	Chair: Luís O. Emerich d <mark>os</mark> Santos
14:40	1627	ANALYSIS AND MODELING OF THE DYNAMIC BEHAVIOR OF CYLINDRICAL CABLES UNDER TRANSIENT EXCITATION	Marcos Fabrício de Souza Aleixo Filho
14:55	0996	INVESTIGATION OF THE PSEUDO-ISOTROPIC APPROXIMATION OF A TURBULENT FLOW IN A STIRRED TANK	Mateus Portella
15:10	1159	ACQUISITION AND CONTROL SYSTEM OF THE PELTON TURBINE INSTALLED AT THE FLUID MECHANICS AND HYDRAULIC MACHINES LABORATORY AT AERONAUTICS INSTITUTE OF TECHNOLOGY	Alex Rodrigues da Silva
15:25	1355	A MODIFIED WINDKESSEL MODEL APPLIED IN A TUBULAR PULSATION DAMPENER ANALYSIS	Michel de Oliveira dos Sant <mark>os</mark>
FLMR	We5	Instrumentation and Experiments	Chair: Luis Fernando Alzuguir Azevedo
15:55	0257	STEREO-PIV VELOCITY MEASUREMENTS OF TURBULENT FLOWS IN A SQUARE DUCT	Leonardo Fernandes
16:10	0277	EXPERIMENTAL TEST OF CRITICAL REYNOLDS NUMBER CORRELATION IN BIFURCATIONS	Flavio Peres Amado
16:25	0489	DESIGN OF A TORQUE AND THRUST BIAXIAL SENSOR FOR PROPELLERS	Gabriel Pereira Gouveia da Silva
16:40	0563	DESIGN OF A PLATFORM AERODYNAMIC BALANCE FOR LAMINAR WING FORCE MEASUREMENTS	João Paulo Eguea

FLMR	- Fluid I	Mechanics and Rheology		
Thurs	day 2	5	Room 7	
Time	Code	Title	Presenter	
FLMR 1		Instrumentation and Experiments	Chair: Rigoberto Morales UTFPR	
08:35	0627	ON THE USE OF SOUND SPEED FOR EVALUATION OF THE PERFORMANCE OF LIQUID ULTRASONIC FLOW METER IN ZERO FLOW CONDITIONS	Phelipe Augusto Lima	
08:50	1415	EXPERIMENTAL ANALYSIS OF DOWNWARD VERTICAL AIR-WATER ANNULAR FLOW	Ana Luiza Beltrão Santana	
09:05	1670	DESIGN AND MANUFACTURE OF THE SYSTEM MEASUREMENT OF THE AIR FLOW IN THE ALTERNATIVE PULMONARY MECHANICAL VENTILATOR	Felipe Pamplona Mariano	
09:20	2246	AN EXPERIMENTAL STUDY ON GROUND INFLUENCE AT HORIZONTAL AXIS TURBINES	Guilherme Medeiros	
FLMR 1	Гh2	Multi-phase Flow	Chair: Oscar Rodriguez	
09:45	0282	SIMULATION OF THE RELATION BETWEEN THE FLUID MIXTURE ADMITTANCE AND PHASE FRACTION IN WIRE-MESH SENSOR FOR OIL-WATER FLOW	Carlos Jose Gonzalez Rojas	
10:00	0324	NUMERICAL PREDICTIONS OF THE LIQUID FILM THICKNESS FOR GAS-LIQUID FLOWS ON SEPARATED PATTERN	Vinicius Sylvestre Simm	
10:15	0352	NUMERICAL SIMULATION OF SLIGHT DIRECTION CHANGES IN TWO- PHASE FLOWS USING A SLUG CAPTURING MODEL	Adryel Leandro Leão	
10:30	0545	DESIGN AND CONSTRUCTION OF AN EXPERIMENTAL APPARATUS FOR VELOCITY DETERMINATION OF A GAS BUBBLE FLOWING IN STAGNANT LIQUID	Luiz Eduardo Muzzo	
10:45	0770	FOAM GENERATION DURING GAS INVASION OF A POROUS MEDIUM SATURATED WITH SURFACTANT SOLUTION	Nicolle Lima	
FLMR 1	ſh3	Multi-phase Flow	Chair: Rafael F.L. de Cerqueira - UNICAMP	
11:15	NUMERICAL SIMULATION OF FLUID FLOW IN 2-D NATURALLY FRACTURED RESERVOIRS TENSORS USING THE EMBEDDED1:150809DISCRETE FRACTURE MODEL AND THE PROJECTION-BASED EMBEDDED DISCRETE FRACTURE MODEL APPROACHES WITH THE MULTI-POINT FLUX APPROXIMATION WITH A DIAMOND STENCIL		André Demski de Oliveira	
11:30	0851	NUMERICAL SIMULATION APPLIED TO THE AERODYNAMIC STUDY OF A FORMULA SAE VEHICLE	Carlos Sousa	
11:45	0893	BUBBLE PATTERN RECOGNITION FROM PARTICLE IMAGE VELOCIMETRY (PIV) IMAGES USING A DEEP-LEARNING-BASED IMAGE PROCESSING TECHNIQUE	Rafael Franklin Lazaro <mark>de</mark> Cerqueira	V
12:00	0917	INVESTIGATION OF THE INFLUENCE OF GAS DENSITY ON TWO- PHASE FLOW FOR MINERAL OIL AND SF6 PRESSURIZED IN A ROCK- FLOW CELL	Marco Germano Conte	0.005
FLMR 1	۲h4	Multi-phase Flow	Chair: Erick Franklin - UNICAMP	
14:25	1047	DEVELOPMENT OF A PARTICLE TRACKING VELOCIMETRY (PTV) MEASUREMENT TECHNIQUE FOR THE EXPERIMENTAL INVESTIGATION OF OIL DROPS BEHAVIOR IN DISPERSED OIL- WATER TWO-PHASE FLOW WITHIN A CENTRIFUGAL PUMP IMPELLER	Rafael Franklin Lazaro de Cerqueira	
14:40	1254	COMPARISON BETWEEN DPM AND DDPM METHODS APPLIED TO SLURRY FILTRATION PROCESS	Matheus Oliveira	K
14:55	1264	A SISTEMATIC REVIEW ON TWO-PHASE FLOW THERMOHYDRAULIC MODELS TO CONVECTIVE BOILING	Gabriel Pereira da Silva Morais	
15:10	1346	BARCHAN-BARCHAN INTERACTIONS WITH BIDISPERSE GRAINS	Willian Assis	15
15:25	1377	GAS-SOLID FLUIDIZED BEDS IN NARROW TUBES	Karlo Rocha	Ľ
FLMR 1	ſh5	Multi-phase Flow	Chair: Moisés Alves Marcelino Neto (UTFPR)	
15:55	1391	INTERACTIONS OF SMALL-FRICTION PARTICLES IN VERY NARROW SOLID-LIQUID FLUIDIZED BEDS	Vinícius Oliveira	
16:10	1511	NUMERICAL SIMULATION OF HYDRAULIC CONVEYING OF SOLID PARTICLES THROUGH A NARROW ELBOW	Elmar Anton Schnorr Filho	
16:25	1562	INFLUENCE OF PHYSICAL-CHEMICAL PARAMETERS ON FOAM	Erich Takenore Tiuman	
16:40	1592	A STUDY ON IMAGE PRE-PROCESSING AND PIV PROCESSING TECHNIQUES FOR FLUID FLOWS	William Denner Pires Fonseca	

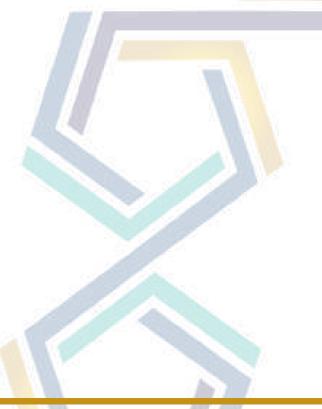
FLMR	- Fluid I	Mechanics and Rheology	
Frida			Room 7
Time	Code	Title	Presenter
FLMR I		Multi-phase Flow	Chair: Francisco Ricardo Cunha
08:35	1612	ANALYSIS AND MODELLING OF CONCENTRATION WAVES IN LIQUID - SOLID FLUIDIZED BEDS IN THE LINEAR REGIME	Victor Shumyatsky
08:50	1618	WATER CUT ESTIMATION IN ELECTRICAL SUBMERSIBLE PUMPS USING NEURAL NETWORKS	Matheus Orsi
09:05	1717	A FIRST ESTIMATE OF THE DISPLACEMENT OF MONO ETHYLENE GLYCOL IN AN OIL PIPELINE USING COMPUTATIONAL FLUID DYNAMICS (CFD)	Nathália Roseane de Melo
09:20	1761	NUMERICAL SIMULATIONS OF MULTIPHASE FLOW WITH COMPRESSIBILITY EFFECTS	Rafael Romão da Silva Melo
FLMR I	Fr2	Multi-phase Flow & Rheology and Non-Newtonian Fluid Mechanics	Chair: Erick Franklin
09:45	1970	EXPERIMENTAL INVESTIGATION SIZE PARTICLES SEGREGATION BY LAMINAR SHEARING FLOWS	Jaime Gonzalez-Maya
10:00	2003	FINITE ELEMENT ANALYSIS ON BIOFUEL PARTICLES DISPERSION	João Paulo Innocente de Souza
10:15	2145	MEASUREMENT OF THE LIQUID THICKNESS IN AIR-WATER FLOWS USING CHROMATIC CONFOCAL MICROSCOPY	Fernando Neves Quintino dos Santos
10:30	0275	INFLUENCE OF THE PRESSURE ON THE ETHANE HYDRATES KINETICS	Ana Carolina Rebello
10:45	0408	Session Speaker: NUMERICAL INVESTIGATION OF THE INFLUENCE OF THE GEOMETRY ORIENTATION ON THE HEAT TRANSFER OF A VISCOPLASTIC FLUID	Marcos Vinicius Teixeira Maciel
FLMR F	Fr3	Rheology and Non-Newtonian Fluid Mechanics	Chair: Roney Leon Thompson
11:15	0599	STARTUP FLOW VISUALIZATION OF VISCOPLASTIC MATERIAL IN THE PRESENCE OF WALL SLIP	Angel De Jesus Rivera Jimenez
11:30	0779	UNSUPERVISED MACHINE LEARNING TECHNIQUE FOR SOLVING FLOWS OF GENERALIZED NEWTONIAN FLUIDS.	Bernardo Brener
11:45	0902	THE PH INFLUENCE ON THE CARBOPOL® SOLUTIONS STABILIZATION BY ADDITION OF NAOH	Fernando Barbosa
12:00	0957	ANALYSIS OF PARTICLES SEDIMENTATION IN SHEAR-THINNING FLUID: SETTLING VELOCITY, DRAG COEFFICIENT, AND SETTLING TRAJECTORIES COMPARISON	Victor Santana
FLMR I	Fr4	Rheology and Non-Newtonian Fluid Mechanics & Theoretical and Analytical Modeling	Chair: William Roberto Wolf
14:25	1280	MOTION OF A SOLID BODY WITHIN A GRANULAR MEDIUM	Douglas Daniel de Carv <mark>alho</mark>
14:40	1345	STRESS RELAXATION FUNCTION RESPONSE OF FERROFLUIDS IN THE PRESENCE OF A MAGNETIC FIELD TO TRANSIENT SHEAR FLOWS: STEP STRAIN AND OSCILLATORY SHEAR.	Igor Dal Osto Pereira
14:55	1376	MATRIX METHOD FOR A STABILITY ANALYSIS OF NON-NEWTONIAN FLUID FLOW	Laison Junio da Silva Furlan
15:10	0223	MODIFYING FACTOR AND PROPOSAL FOR A NEW CAVITATION FORECASTING DIAGRAM IN MARINE PROPELLERS	Flavio Peres Amado
15:25	0453	CONTACT PROPERTIES AND MODELLING OF BENTONITE PELLETS DISPLACEMENT FOR PLUGGING AND ABANDONMENT IN OFF- SHORE OIL WELLS	Fernando Barbosa
FLMR I	Fr5	Theoretical and Analytical Modeling	Chair: Admilson Teixeira Franco
15:55	1481	MODELLING AND THEORETICAL ANALYSIS OF THE FLOW OF A ELECTRICALLY CONDUCTING FLUID IN THE PRESENCE OF HIGH FREQUENCY WAVES	Leonardo Afonso da Silva Inácio
16:10	0097	IMPACT OF NON-NORMALITY IN A LOCAL STABILITY ANALYSIS OF POISEUILLE-RAYLEIGH-BENARD FLOW	Gabriel Yudi Ragni Hamada
16:25			
16:40			

FLMR ·	FLMR - Fluid Mechanics and Rheology					
Mond	Nonday 22 Room 1					
Time	Code	Title	Presenter			
	<b>/</b> Io1	Computational Fluid Dynamics & Rheology and Non-Newtonian Fluid Mechanics & Flow Induced Vibration	Chair: Jader Riso Barbosa Jr.			
11:15	0196	BREAKUP OF THIN LIQUID SHEET WITH A VISCOUS INTERFACE	Vitor Heitor Cardoso Cunha			
11:30	1351	VERIFICATION OF SYMMETRY AND CONVERGENCE TOWARDS STEADY-STATE OF WENO SCHEMES	Rafael Henrique Olindo de Oliveira			
11:45	0281	INTERFACIAL RHEOLOGY OF CYCLOPENTANE HYDRATES	Monica Naccache			
12:00	0425	NUMERICAL SIMULATION OF THE VORTEX INDUCED MOTION OF A SEMI-SUBMERSIBLE PLATFORM	Daniel Francisconi Oliveira			
FLMR N	lo2	Multi-phase Flow & Theoretical and Analytical Modeling	Chair: Jader Riso Barbosa Jr.			
14:25	0219	BREAKUP OF TWO-LAYER LIQUID FILM	Pedro Calderano			
14:40						
14:55						
15:10						
15:25						

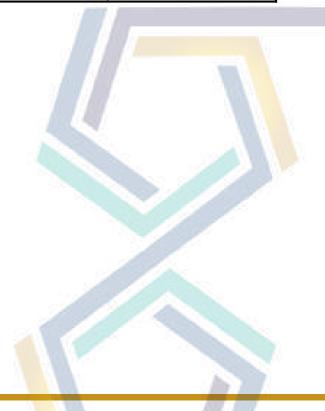


Program Overview and Fracture, Fatigue, and Structural Integrity					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary			Fracture, Fatigue, and Structural Integrity	Fracture, Fatigue, and Structural Integrity
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future			Fracture, Fatigue, and Structural Integrity	Fracture, Fatigue, and Structural Integrity
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20				Fracture, Fatigue, and Structural Integrity	Fracture, Fatigue, and Structural Integrity
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45			5 min break		Fracture, Fatigue, and Structural Integrity
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00					
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Keynote speaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	1.
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	





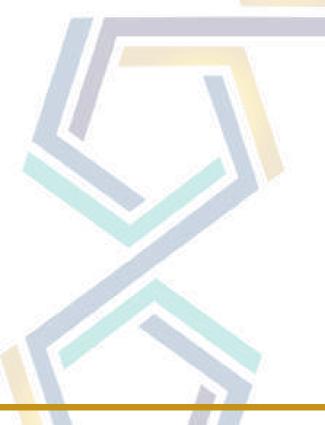
FFSI -	FFSI - Fracture, Fatigue, and Structural Integrity			
Thurs	sday 2	5	Room 11	
Time	Code	Title	Presenter	
FFSI Th1		Fatigue	Chair: Chair: Eduardo Fancello Co-chair: Carlos Chaves	
08:35	0226	AN EXPERIMENTAL INVESTIGATION ON THE FATIGUE BEHAVIOUR OF 304L STAINLESS STEEL NOTCHED MEMBER SUBJECTED TO AXIAL-TORSIONAL LOADING	Cainã Bemfica de Barros	
08:50	0400	MODELING OF MEAN STRESS RELAXATION IN INCONEL 718 UNDER AXIAL-TORSIONAL LOADING AND ITS IMPACT ON FATIGUE LIFE PREDICTION	Vitor Nascimento	
09:05	0472	ANALYSIS OF THE FATIGUE LIFE PREDICTION OF OVERHEAD CONDUCTORS CONSIDERING THE TIME AND FREQUENCY DOMAIN	Emanuely Ugulino Cardoso	
09:20	0656	FATIGUE ASSESSMENT IN FREQUENCY DOMAIN OF GAUSSIAN STRESS-TIME HISTORIES WITH VARYING IRREGULARITY FACTOR	Thiago Santos	
FFSI T	h2	Fatigue	Chair: Chair: Carlos Chaves Co-Chair: Eduardo Fancello	
09:45	1049	FATIGUE LIFE PREDICTION IN RIGID RISERS WITH CRACK PROPAGATION	Andrielli Pereira	
10:00	1130	CORROSION FATIGUE ANALYSIS OF GRADE R4 STEEL IN SIMULATED SEAWATER.	Felipe Azevedo Canut	
10:15	1156	FATIGUE AND DWELL-FATIGUE BEHAVIOR OF THE TI-6AL-4V TITANIUM ALLOY WITH EQUIAXED MICROSTRUCTURE	Martin Ferreira Fernandes	
10:30		Symposium Speaker: Constitutive models for damage assessment and crack propagation analysis: past, present and future of unified approaches	Prof. Rene Alderliesten	
10:45		Symposium Speaker: Constitutive models for damage assessment and crack propagation analysis: past, present and future of unified approaches	Prof. Rene Alderliesten	
FFSI T	h3	Fatigue & Fracture	Chair: Chair: Mariano Arbelo Co-chair: Fabio Comes de Castro	
11:15	1227	METHODOLOGY VALIDATION FOR FATIGUE DESIGN OF POLYPROPYLENE COMPONENTS	Gabriel Scomparin Silva	
11:30	1634	DYNAMIC FATIGUE CRACK PROPAGATION IN TUBULAR SPECIMENS	Ali Hassanirad	
11:45	0504	ON THE USE OF THE X-FEM METHOD FOR COMPUTATIONAL FRACTURE MECHANICS FOR MIXED MODE FRACTURE	José Airton Neiva Alves <mark>da s</mark> Silva Brasil	
12:00	1561	Session Speaker: FRETTING FATIGUE OF 6201 ALUMINUM ALLOY WIRES UNDER VARIABLE AMPLITUDE LOADING	lan Matos	



FFSI -	Fractur	e, Fatigue, and Structural Integrity	
Friday	y 26		Room 11
Time	Code	Title	Presenter
FFSI Fr	r <b>1</b>	Fracture & Pipelines and Pipes	Chair: Chair: Marcelino Guedes Gomes Co-chair: Mariano Arbelo
08:35	0608	EXPLORATORY EVALUATION OF THE T0 REFERENCE TEMPERATURE FOR A HIGH STRENGTH MARTENSITIC STEEL USING THE MASTER CURVE APPROACH	Vitor Scarabeli Barbosa
08:50	1041	NUMERICAL STUDY OF THE RELATIONSHIP BETWEEN THE LOAD APPLIED BY THE BOLT AND THE STRESS INTENSITY FACTOR IN A MODIFIED-WOL SPECIMEN	Emerson da Trindade Marcelino
09:05	1680	ON THE EFFECT OF PRE-STRAIN ON HYDROGEN EMBRITTLEMENT SUSCEPTIBILITY OF STRUCTURAL STEELS	Pedro Brito
09:20	0606	Session Speaker: FRACTURE TOUGHNESS TESTING OF A PRESSURE VESSEL STEEL USING CLAMPED SE(T) SPECIMENS AND THE NORMALIZATION METHOD	Vitor Scarabeli Barbosa
FFSI Fr2		Pipelines and Pipes	Chair: Chair: Marcelino Guedes Gomes Co-chair: Mariano Arbelo
09:45	0538	AN EFFICIENT UNSTEADY TRANSIENT FRICTION MODELLING FOR LIQUID-FILLED PIPE FLOWS	Douglas Monteiro Andrade
10:00	0540	MODELLING OF FLUID TRANSIENTS IN VISCOELASTIC COMPLIANT PIPES	Douglas Monteiro Andrade
10:15			
10:30			
10:45 FFSI Fr	r3	Structural Integrity	Chair: Chair: Fabio Comes de Castro Co-chair: Eduardo Fancello
11:15			
11:30	1410	RELIABILITY ASSESSMENT OF CORRODED PIPELINES CONSIDERING THE REAL CORROSION PROFILE	Rodolfo Miiller Santos Cabral
11:45	1559	OPERATION VARIABLES INFLUENCE ON STRUCTURAL INTEGRITY OF MINING HAUL TRUCK€™S CHASSIS	Tarcísio Augusto Santos Almeida
12:00	1696	SIMILARITY-BASED MODELS FOR TESTING VEHICLE ROOFS AGAINST CRUSHING DURING IMPACT EVENTS	João Marcos Hilário J <mark>únio</mark> r
FFSI Fr	r <b>4</b>	Structural Integrity	Chair: Chair: Carlos Ch <mark>aves</mark> Co-Chair: Fabio Comes de Castro
14:25	0141	CREEP LIFETIME PREDICTION OF LOW-CARBON STEELS WITH ARTIFICIAL NEURAL NETWORKS	Giovanni Corsetti Silva
14:40	0772	ELASTIC SURFACE CRACK INTERACTION AND ITS ENGINEERING CRITICAL ASSESSMENT WITHIN THE FRAMEWORK OF BS 7910 AND API 579/ASME FFS-1	Gabriel de Castro Coêlho
14:55	0962	CLADDED PIPES RESIDUAL STRESS ANALYSIS	Rodr <mark>igo Braga da silva</mark>
15:10		Symposium Speaker: Fatigue Assessment and Stress Corrosion Cracking Challenges in Flexible Pipes for Oil and Gas Industry	Prof. Marcelo Favaro Bo <mark>rges</mark>
15:25		Symposium Speaker: Fatigue Assessment and Stress Corrosion Cracking Challenges in Flexible Pipes for Oil and Gas Industry	Prof. Marcelo Favaro Borg <mark>es</mark>

Program Overview and Heating, Ventilation, Air-Conditioning, and Refrigeration					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary			Heat., Vent., Air-Cond., and Refrig.	
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future			Heat., Vent., Air-Cond., and Refrig.	
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20				Heat., Vent., Air-Cond., and Refrig.	
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45			5 min break Heat., Vent., Air-Cond., and Refrig.	Heat., Vent., Air-Cond., and Refrig.	
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00			Heat., Vent., Air-Cond., and Refrig.		
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Keynote speaker	Heat., Vent., Air-Cond., and Refrig.	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	



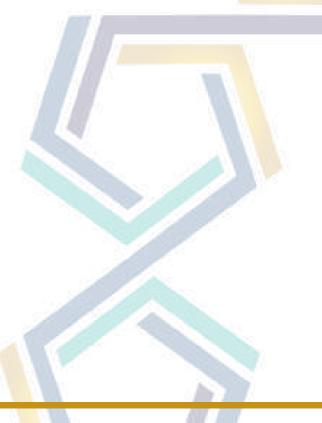


HVAR	- Heat.,	Vent., Air-Cond., and Refrig.	
Wedn	lesday	24	Room 8
Time	Code	Title	Presenter
HVAR	We4	Refrigeration & Air-conditioning	Chair: Enio Bandarra - UFU
14:40	1170	THERMODYNAMIC SIMULATION OF AN ELECTRIC VARIABLE SPEED SCROLL COMPRESSOR FOR AUTOMOTIVE AIR-CONDITIONING	Vinicius Pereira Dall Agnol Alves
14:55	0990	A COMPARATIVE ANALYSIS BETWEEN AMMONIA-WATER ABSORPTION AND VAPOR COMPRESSION REFRIGERATION SYSTEMS	Wellorzzon Ronnan Ibide Novais
15:10	0397	MODELING AND ANALYSIS OF BUBBLE PUMP PARAMETERS FOR A SOLAR-POWERED REFRIGERATOR BY DIFFUSION AND ABSORPTION FOR VACCINE STORAGE IN REGIONS WITHOUT ELECTRIFICATION	Rafael Teixeira Mendes
15:25	0759	Session Speaker: COMPARISONS BETWEEN TWO TRANSIENT SIMULATION APPROACHES APPLIED TO A DUAL-EVAPORATOR REFRIGERATOR	Guilherme Zanotelli
HVAR	We5	Air-conditioning & Refrigeration	Chair: Christian Hermes - UFSC
15:55	0030	THERMODYNAMIC MODELING OF A TWO-STAGE REFRIGERATION SYSTEM FOR A BATTERY ELECTRIC VEHICLE	George Vegini
16:10	0384	EVALUATION OF BLAST FREEZING PROCESS ON THE QUALITY OF FROZEN STRAWBERRIES (FRAGARIA X ANANASSA)	Diogo Lôndero Da Silva
16:25		Symposium Speaker: Low-GWP Refrigerants: Options and Decisions	Dr. Piotr A. Domanski
16:40		Symposium Speaker: Low-GWP Refrigerants: Options and Decisions	Dr. Piotr A. Domanski
HVAR I	E-Poster	Ventilation & Refrigeration	Chair: Diogo Lôndero - UFSC
	0844	EVALUATION OF THE THERMAL PERFORMANCE OF INDUSTRIAL SHEDS VIA COMPUTER SIMULATIONS: OBTAINING TG AND TWB BY MEANS OF ITERATIVE ALGORITHMS FOR APPLICATION IN THE INDEX WBGT	André Miranda
47.05	0700	PARAMETRIC ANALYSES OF AN ABSORPTION REFRIGERATION SYSTEM WITH WATER AND LITHIUM BROMIDE IN STEADY STATE POWERED BY SOLAR ENERGY	Vitor Prendin
17:05 to 18:05	0974	A REVIEW OF MECHANOCALORIC REFRIGERATION DEVICES FROM 2012 TO 2020	Gabriel Lucas Foleis
10:00	0547	MODELING AND COMPUTATIONAL SIMULATION OF VAPOR COMPRESSION REFRIGERATION SYSTEMS IN THE QUASI-STEADY STATE REGIME	Leonardo Cavalheiro Ma <mark>rtin</mark> ez
	1662	PROJECT OF INSTALLATION ABSORPTION REFRIGERATOR 5 TR FOR THE CLIMATE OF A BUILDING	Flavio Junior Santiago Silv <mark>a</mark>
	0832	A MATHEMATICAL MODEL OF AN ABSORPTION REFRIGERATION SYSTEM FOR A REFRIGERATED STORAGE FOR FISHING BOATS.	Rafael Silva Ribeiro Gonçalves

HVAR	- Heat.,	Vent., Air-Cond., and Refrig.				
Thurs	Thursday 25 Room 8					
Time	Code	Title	Presenter			
HVAR <sup>-</sup>	Th1	Refrigeration	Chair: Guilherme Ribeiro - ITA			
08:35	1836	EXPERIMENTAL EVALUATION OF THE FLUID FLOW MANAGEMENT SYSTEM OF A MAGNETIC AIR CONDITIONER	Maria Claudia Régio e Silva			
08:50	0195	NUMERICAL ANALYSIS OF THE THERMODYNAMIC PERFORMANCE OF AN ACTIVE BAROCALORIC REGENERATOR USING PDMS RUBBER FOR REFRIGERATION APPLICATIONS	Pedro Faria			
09:05	1823	INFLUENCE OF THE HEAT TRANSFER FLUID ON THE PERFORMANCE OF AN ACTIVE MAGNETIC REGENERATOR: A SENSITIVITY ANALYSIS	Elias Pagnan			
09:20	1683	CHARACTERIZATION OF THE THERMO-HYDRAULIC PERFORMANCE OF A LA(FE,MN,SI)13HY REGENERATOR	Hígor Feltrin Teza			
HVAR <sup>-</sup>	Th2	Refrigeration	Chair: Enio Bandarra - UFU			
09:45						
10:00	1330	THE USE OF NEURAL NETWORK FOR DETERMINATION OF THE LOAD AND ADJUSTMENT OF THE INTERNAL TEMPERATURE OF A HOUSEHOLD REFRIGERATOR	Matheus Mugayar Monteiro			
10:15	1116	THERMODYNAMIC EVALUATION OF TWO PORTABLE COOLERS RUNNING WITH RECIPROCATING AND ROTARY COMPRESSORS	Diego Marchi			
10:30	1092	REFRIGERATION CYCLE PERFORMANCE USING CO2 BLENDS TO OTHER NATURAL REFRIGERANTS	Matheus Garros			
10:45	0763	Session Speaker: MASS FLOW PREDICTION IN A REFRIGERATION MACHINE USING ARTIFICIAL NEURAL NETWORKS	Vinícius Fonseca			
HVAR <sup>-</sup>	Th3	Refrigeration	Chair: Diogo Lôndero - UFSC			
11:15	0240	THERMODYNAMIC ANALYSIS OF A RESIDENTIAL AIR CONDITIONING EQUIPMENT OPERATING WITH ODP FREE AND LOW GWP REFRIGERANTS	Victor Bernardoni Cavalcanti Baptista			
11:30	1285	STANDARD ASSESSMENT FOR ENERGY SAVING STRATEGIES OF	Jéssica Duarte			
11:45	2293	THERMODYNAMIC MODELING OF A TWO-STAGE AIR-CONDITIONING SYSTEM WITH AN ECONOMIZER	Leonardo Grous Franco			
12:00	1992	DEVELOPMENT AND CHARACTERIZATION OF A CALIBRATED CALORIMETER TO EVALUATE AIR CONDITIONING SYSTEMS	Maria Claudia Régio <mark>e Si</mark> lva			
HVAR <sup>-</sup>	Th4	Air-conditioning & Ventilation	Chair: Christian Herm <mark>es -</mark> UFSC			
14:25	1810	ENERGY AND EXERGY ANALYSIS FOR A VRF SYSTEM FOR A RESIDENTIAL BUILDING	Ana Lívia Formiga Leite			
14:40	1126	Session Speaker: A FIRST-PRINCIPLES MODEL FOR AXIAL FANS: OPTIMIZATION RESULTS OF BLADE PITCH ANGLE	Gabriel Podgaietsky			
14:55						
15:10						
15:25			Eu-			

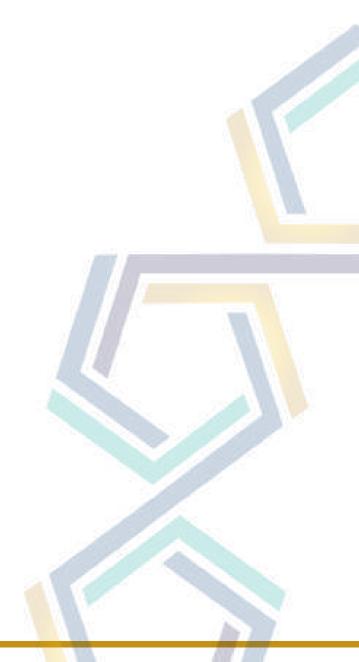
Program Overview and Materials and Manufacturing Engineering					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45	Materials and Manuf. Eng.	Materials and Manuf. Eng.	5 min break Materials and Manuf. Eng.	Materials and Manuf. Eng.	
15:45 - 15:55	10 min break	10 min break	-	10 min break	10 min break
15:55 - 17:00	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.	
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials and Manuf. Eng.	Materials ABCM/ and Manuf. EMBRAER Eng. Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	





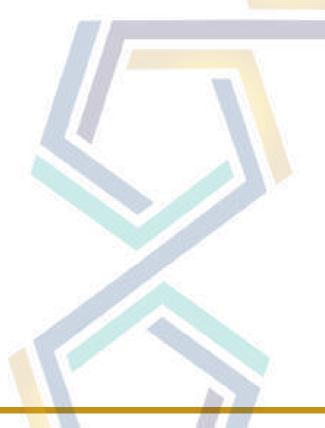
		ials and Manuf. Eng.	Be area 0	
vionc	lay 22		Room 9	
Time	Code	Title	Presenter	
IMEN	Mo1	Additive Manufacturing	Chair: Milton Pereira	
1:15	0229	ANALYSIS OF THE CO2 INFLUENCE IN THE GAS MIXTURE FOR WAAM USING CMT VERSION OF THE GMAW PROCESS	Pedro Maciel	
11:30	0310	ANALYSIS OF THE IMPACT OF THE PART AIR COOLING ON THE INTERLAYER YIELD STRENGTH IN ADDITIVE MANUFACTURING OF PLA AND PETG	Leonardo Thiesen Baum	
11:45	0339	GEOMETRICAL AND DIMENSIONAL TOLERANCES OF A PART 339 PRODUCED BY ADDITIVE MANUFACTURING AS A FUNCTION OF PRINTING SPEEDS AND NUMBER OF PARTS PER CYCLE		
12:00	Session Speaker: MILLING AND MAGNETIC ABRASIVE FINISHING OF		Adriel Magalhães Souza	
MEN	Mo2	Additive Manufacturing	Chair: João Carlos Espíndola Ferreira	
14:25	0443	INFLUENCE OF NOZZLE TEMPERATURE ON DIMENSIONAL TOLERANCES OF SPECIMENS PRODUCED WITH MATERIAL EXTRUSION MANUFACTURING	José Guilherme Peres	
14:40	0626	DEFECTS IN WIRE AND ARC ADDITIVE MANUFACTURED COMPONENTS: A REVIEW	André Luiz Brito Novelino	
14:55	0745	THE INFLUENCE OF PRINTING PARAMETERS ON MONOLAYER PART FEATURES IN FUSED FILAMENT FABRICATION	Thiago Glissoi Lopes	
15:10		Symposium Speaker: Prototyping and manufacturing processes development at Embraco/Nidec GA	Dr. Moises Alves de Oliveira	
15:25		Symposium Speaker: Prototyping and manufacturing processes development at Embraco/Nidec GA	Dr. Moises Alves de Oliveira	
MMEN	Mo3	Additive Manufacturing	Chair: Laurence Colares Magalhães (UFES)	
15:55	0751	FEASIBILITY OF OPTICAL PROFILOMETRY FOR QUALITY CHARACTERIZATION OF MONOLAYER PARTS OBTAINED BY FUSED FILAMENT FABRICATION	Thiago Glissoi Lopes	
16:10	0829	ANALYSIS OF TECHNOLOGICAL MATURITY OF ADDITIVE MANUFACTURING BASED ON S-CURVE	Luis Folle	
6:25	1406	EXTRUSION-BASED 3D PRINTING: COLOR INFLUENCE ON MECHANICAL PROPERTIES OF PLA PARTS	Francisco Castro	
16:40	0958	Session Speaker: PARAMETRIZATION EFFECT IN RELATION TO MICROHARDNESS, MICROSTRUCTURE AND GEOMETRY OF ROCKIT 401 ALLOY DEPOSITED VIA DIRECTED ENERGY DEPOSITION	Renato Panziera	
MMEN	E-Poste	Additive Manufacturing & Manufacturing Management & Materials Characterization and Processing	Chair: João Carlos Espíndola Ferreira	
	0123	INFLUENCE OF CUTTING PARAMETERS IN SURFACE ROUGHNESS	Ed Claudio Bordinassi	
	0261	A NUMERICAL ANALYSIS ABOUT REPLACEMENT OF STEEL WITH POLYAMIDE COMPOSITE IN THE DEVICE FOR DIMENSIONAL CONTROL	Marcelo Soares	
	0894	SIMULATION AND ANALYSIS OF A DESIGNED L-DED POWDER HEAD	João Victor Osório	
	0886	STUDY APPLICATION OF PRODUCTION SYSTEM TYPICALLY €ŒENGINEERING-TO-ORDER€ IN COMMERCIAL VEHICLES SEGMENT	Andre Luiz Mota	
	1359	PREDICTIVE ASSESSMENT OF THE TURNING TOOL WEAR USING ARTIFICIAL INTELLIGENCE	Vanessa Seriacopi	
4	1555	FLEXIBLE SUPPLY SYSTEM FOR AN ASSEMBLY LINE: A CASE STUDY TO OPTIMIZE THE FLOWS IN THE MANUFACTURING OF TRUCK CABINS	Carolina Sacramento	
17:05 to	1945	APPLICATION OF MAINTENANCE CONTROL AND PLANNING TOOLS IN A MANROD MILLER €" MR 205	Matheus Gonçalves de Ataide	
to	1	SUSTAINABLE PRODUCTION AND MECHANICAL	Felipe dos Anjos Rodrigues	
	0480	CHARACTERIZATION OF EXTRUDED WOOD-PLASTIC COMPOSITE MADE FROM HDPE AND BABASSU FIBER	Campos	
to	0480 0999		Campos Thailler Machado Nunes da Silva	

0992	INFLUENCE OF ANNEALING AND NORMALIZING HEAT TREATMENT ON THE MICROSTRUCTURE OF THE WELD JOINT OF THE SAE 1020 STEEL	Thailler Machado Nunes da Silva
1105	3D PRINTING PARAMETERS EFFECT ON THE FLEXURAL STRENGTH OF POLYLACTIC ACID (PLA) PARTS	Ricardo Lago Valente
1171	DESIGN, ANALYSIS AND MANUFACTURING OF A SPECIAL CUTTING TOOL FOR TITANIUM MILLING	Edson Bruno Lara Rosa



MMEN	- Mater	ials and Manuf. Eng.	
Tueso	day 23		Room 9
Time	Code	Title	Presenter
MMEN	Tu1	Additive Manufacturing	Chair: João Carlos Espíndola Ferreira
08:35	0856	EXPLORATORY INVESTIGATION ON RESIDUAL STRESS AND DISTORTION OF 20MNCR5 CARBURIZING STEEL PROCESSED BY LASER POWDER BED FUSION	Lucas Robatto
08:50	1752	WELDING BEADS OVERLAPPING ALGORITHM DEDICATED TO WAAM	Pedro Correa Jaeger Rocha
09:05	1039	EFFECT OF ENGINEERING DESIGN ON PRINTING OPTIMIZATION OF THE FDM ADDITIVE MANUFACTURING TO MAKE FAST THE PFF2 FILTER PLA ADAPTERS FOR REUSABLE MODIFIED HALF-FACE MASK AS PPE AGAINST THE COVID-19 VIRUS	Jose Matheus Domingos de Lira Andrade
09:20	1189	Session Speaker: FORMULATION AND TESTS OF HYBRID PHOTOCURABLE RESINS FOR ADDITIVE MANUFACTURING	João Fiore Parreira Lovo
MMEN	Tu2	Additive Manufacturing & Manufacturing Management	Chair: João Carlos Espíndola Ferreira
09:45	1878	LASER DIRECTED ENERGY DEPOSITION (L-DED) OF AISI 410L: DEVELOPMENT OF AN OPERATIONAL MAP AND THE EFFECT PROCESSING PARAMETER ON THE BEAD GEOMETRY	Jurandir Sousa
10:00	2090	ADDITIVE MANUFACTURING OF RARE EARTH PERMANENT MAGNETS: A REVIEW ON LASER POWDER BED FUSION (LPBF)	Melissa Röhrig Martins Silva
10:15	2215	APPLICATION FIELDS FOR DIFFERENT DIRECT ENERGY	Daniel Rojas
10:30	0471	EVALUATION OF PRACTICES AND PERFORMANCES OF COMPANIES IN THE METAL-MECHANICAL SECTOR IN A REGION IN SOUTHERN BRAZIL USING BENCHMARKING IN THE CONTEXT OF THE TRIPLE BOTTOM LINE	Joao Carlos Espindola Ferreira
10:45			Chair: João Carlos Espíndola
MMEN	Tu3	Manufacturing Management & Materials Characterization and Processing	Ferreira
11:15	1441	THE RELEVANCE OF INTELLECTUAL CAPITAL STATEMENT AS A GROUNDWORK FOR INDUSTRY 4.0	Marcelo Fabricio Prim
11:30	1447	PROPOSITION OF THE USE OF NETWORK THEORY FOR DECISION MAKING WHILE SELECTING NEW MANUFACTURING TECHNOLOGIES	Gabriel Bertholdo Vargas
11:45	2187	APPLYING A DYNAMIC SIMULATION MODEL RECONFIGURATION LOGIC TO ERP SYSTEM	Gabrielly Cordeiro
12:00	0755	MICROSTRUCTURAL CHARACTERIZATION OF SOAPSTONE- REINFORCED POLYETHYLENE COMPOSITES AND CORRELATIONS WITH THE MACROSCOPIC MECHANICAL BEHAVIOR	Giulia Simão de Sousa
MMEN	Tu4	Materials Characterization and Processing	Chair: Armando Albertazzi
14:25	0182	HOLLOW CATHODE DISCHARGE FOR ABSORBER FILM DEPOSITION	Gustavo César Pamplona de Sousa
14:40	0345	PHYSICAL, MECHANICAL AND MICROSTRUCTURAL CHARACTERIZATION OF ZTM CERAMICS AS A TBC PROSPECTIVE MATERIAL	Bruna Constantino
14:55	0732	STUDY OF THE INFLUENCE OF THE ZRO2-3Y2O3 CONTENT ON THE AL2O3 MATRIX	Ana Carolina Agrizzi Araujo
15:10	0767	EXPERIMENTAL DETERMINATION OF THE PARAMETERS FOR THE ROTARY FRICTION WELDING PROCESS OF NICKEL ALUMINUM BRONZE CUAL10NI5FE5	
15:25	0775	EVALUATION OF CEMENTED CARBIDE/HIGH SPEED STEEL       Daniella Gualberto Caldeira d         COMPOSITE SINTERED BY PECS       Paula	
MMEN	Tu5		
15:55	0946	NEW BIO-BASED POLYURETHANE FOAM WITH ALUMINA TRIHYDRATE: SOUND TRANSMISSION LOSS PROPERTIES	Enio Henrique Pires da Silva
16:10	1017	ELECTROCHEMICAL CORROSION RESISTANCE OF MARTENSITIC STAINLESS STEEL COATINGS ON CARBON STEEL SUBSTRATES OBTAINED BY THERMAL SPRAYING AND FRICTION SURFACING	Gabriela de Andrade Oliveira
	1	EFFECT OF LASER POWER MODULATION ON POROSITY AND	

16:40	1295	CHARACTERIZATION OF HIGH MANGANESE STEEL (FE27MN1SI)         SUBMITTED TO ABRASION WEAR TEST AND SOLUTION HEAT         TREATMENT			
MMEN	E-Poste	Materials Characterization and Processing	Chair: Armando Albertazzi		
	1174	PLASMA NITRIDING OF SINTERED AUSTENITIC STAINLESS STEEL 316L WITH NITROGEN PULSED FLOW	Diandra Grossmann Pereira		
	1176	ALUMINA COATINGS ON STAINLESS STEEL AND GRAPHITE SUBSTRATES OBTAINED BY PLASMA SPRAY PROCESS	Roberson Silva		
	1440	INFLUENCE OF HEAT TREATMENTS AT 850, 900 AND 950°C ON THE FORMATION OF SIGMA PHASE FOR UNS S32750 SUPER DUPLEX STAINLESS STEEL.	Ernandes Marcos Scopel		
	1551	CHARACTERIZATION OF THE MECHANICAL PROPERTIES OF DIFFERENT METALLIC MATERIALS THROUGH SMALL PUNCHED TEST	Natalia Cordeiro Noce		
	1578	ELECTRODEPOSITION OF CUZN FROM ALKALINE SOLUTION CONTAINING MICROMETRIC SIC PARTICLES IN A FLOW-CELL FOR COMPOSITE COATINGS.	Paulo Cezar Tulio		
	1692	GRINDING CUSTOMIZED CARBIDES FOR THREAD TURNING OF TITANIUM ALLOYS	Felipe Dias Monteiro		
17:05 to	1727	MATERIAL CHARACTERIZATION AND ANALYSIS OF CRITICAL FAILURE IN EGR COMPONENT FOR DIESEL PICKUP TRUCKS	Felipe dos Anjos Rodrigues Campos		
18:05	1758	MICROSTRUCTURAL AND MECHANICAL CHARACTERIZATION OF 3104-H34 ALUMINUM ALLOY	Ricardo Zanatta Kapp		
	1766	MICROSTRUCTURAL AND MECHANICAL CHARACTERIZATION OF 5052-H32 ALUMINUM ALLOY	Julia Brescovici Badke		
	1939	SURFACE MODIFICATION OF TI6AL4V ALLOY BY PULSED LASER: INFLUENCE OF PARAMETERS VARIATION	ROGERIO GOES DOS SANTOS		
	1960	EFFECTS OF CARBURIZING AND CARBONITRIDING THROUGH CHEMICAL, MICROGRAPHIC AND HARDNESS ANALYSIS ON JIS SCM 420 STEEL	Bruno Mello de Freitas		
	1981	PHASE FORMATION OF LAVES (FE2NB) UNDER LOW TEMPERATURE HEAT TREATMENTS AFTER MECHANICAL ALLOYING	Marcela Lamoglia		
	2126	CORRELATION BETWEEN INTERLAMELLAR SPACING AND HARDNESS OF A PERLITIC RAIL	Vinicius Silva dos Re <mark>is</mark>		
	2310	ASSESSMENT OF THE RESISTANCE OF A HARDOX® 450 STEEL TO REDUCE THE WEAR OF A CENTRIFUGAL PUMP USED IN THE WATER TREATMENT PROCESS WITH MICRO-SAND	Marcus Galdino		



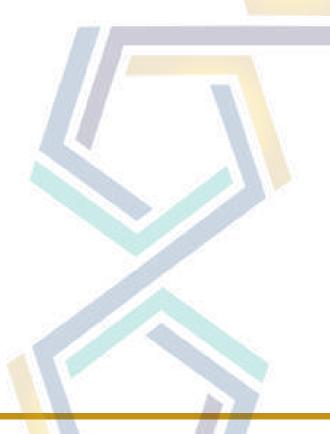
		ials and Manuf. Eng.	Beem 0
	esday		Room 9
Time		Title	Presenter
MMEN	We1	Materials Characterization and Processing	Chair:
08:35	1386	MAGNETIC PERMEABILITY MEASURES FOR THE DETECTION OF HEAT TREATMENTS AND ANISOTROPY IN A SAE 4340 STEEL	Edgard Silva
08:50	1392	DEVELOPMENT OF IRON ALUMINIDE COATINGS ON STEEL SUBSTRATES	Gabriela de Andrade Oliveira
09:05	1476	LIGNOCELLULOSIC RESIDUES AS POLYMER COMPOSITES REINFORCEMENTS: A REVIEW ON ITS MANUFACTURING AND CHARACTERIZATION PROCESSES	
09:20	1479	IMPROVEMENT IN FIBER / MATRIX ADHESION THROUGH CHEMICAL TREATMENTS: A REVIEW	MICHEL GIFFONI SANTOS
MEN	We2	Materials Characterization and Processing	Chair:
9:45			
10:00	1385	HARMONIC ANALYSIS OF ELECTROMAGNETIC WAVES FOR DETECTING EMBRITTLEMENT MICROSTRUCTURES IN A DUPLEX STAINLESS STEEL	Edgard Silva
10:15	1917	ROLLING LOAD PREDICTION FOR THICK PLATES VIA ARTIFICIAL NEURAL NETWORKS	Perseu Silva Soares
10:30		ANALYSIS OF COPPER ADDITION BY ELECTROLYSIS ON THE MICROSTRUCTURE AND CORROSION RESISTANCE OF LASER WELDED SUPER-DUPLEX STAINLESS STEEL	Bruna Berbel Seloto
10:45	1384	NON-DESTRUCTIVE ELECTROMAGNETIC TEST FOR DETECTING DISCONTINUITIES IN STEELS	Edgard Silva
MMEN	We3	Materials Characterization and Processing	Chair:
11:15	1963	CHARACTERIZATION OF CERAMIC COMPOSITE FROM WASTE FOR THE MANUFACTURE OF A SOLAR OVEN.	Alice Suassuna
11:30	2042	COMPARRISON OF SLURRY JET EROSION BEHAVIOUR OF THERMAL SPRAY COATINGS WITH DIFFERENT LEVELS OF HARDNESS	
11:45	2137	CORROSION RESISTANCE OF COLD-DRAWN ZK60A MG-ALLOY AS A FUNCTION OF STRAIN-HARDENING	
12:00	2147	SUSCEPTIBILITY OF HYDROGEN EMBRITTLEMENT OF AL-ALLOY CIRCULAR BARS SUBMITTED TO COLD DRAWING	Pedro Brito
MMEN	We4	Materials Characterization and Processing & Metallurgical Processes	Chair:
4:40	2149	PROCESSING NIOBIUM SILICIDES COATINGS MODIFIED WITH COPPER	Beatriz Aparecida Pinto
4:55		COB-2021-1055 COMPUTATIONAL SIMULATION FOR EVALUATION AND OPTIMIZATION OF CASTING PARAMETERS FOR ALUMINUM- SILICON ALLOYS	Carlos Costa de Carvalho
15:10	2010	EXPERIMENTAL ANALYSIS ON THE PERFORMANCE OF SMA WELDING ELECTRODES	Felipe Batista
15:25		EVALUATION OF THE SIGMA PHASE CONTENT IN MULTI-PASS WELDING OF STAINLESS STEEL DUPLEX UNS S31803 VIA LINEAR SWEEP VOLTAMMETRY TECHNIQUE	Elan Forteski
MMEN	We5	Metallurgical Processes & Metrology, Inspection, and Quality Control	Chair:
15:55	2296	PROCESSING OF NIAL INTERMETALLIC COATINGS MODIFIED WITH FE AND CR.	Heber Abreu Castillo
16:10	0380	DESIGN OF AN ELECTROMAGNETIC EDDY CURRENTS SENSOR APPLIED TO CRACK MONITORING IN AIRCRAFT STRUCTURAL COMPONENTS	Raul Gaspari Santos
16:25	0954	SENSITIVITY OF BARKHAUSEN NOISE MEASUREMENTS ON STEEL SAMPLES PRODUCED BY LASER POWDER BED FUSION	Bruno Cardozo
16:40	0995	LONG PULSE THERMOGRAPHY FOR NONDESTRUCTIVE	José Faria
MMEN	E-Postei	Metallurgical Processes & Metrology, Inspection, and Quality Control & Processes with Material Removal	Chair:
	1850	STUDY OF THE HEAT TRANSFER DURING THE QUENCHING OF A HADFIELD STEEL IN POLYMERIC SOLUTION	Ana Pereira
	1936	USE OF STATISTICAL TOOLS IN THE EVALUATION OF MICRO	Matheus Gonçalves de Ataide

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	0477	INFLUENCE OF INCREMENTAL SHEET FORMING PARAMETERS ON FORM DEVIATION OF TITANIUM PARTS MEASURED BY COORDINATE MEASURING MACHINE AND 3D SCANNING THROUGH KINECT SENSOR	Felipe dos Anjos Rodrigues Campos
	0943	EVALUATION OF CIRCULARITY MEASUREMENT THROUGH LIMAÇON APPROXIMATION AND A LIGHT DETECTION AND RANGING (LIDAR) SYSTEM	Vinicius Conti da Costa
17:05 to	1015	DETERMINATION OF PHYSICAL COEFFICIENTS BY MONITORING DEFORMATION	Fernanda Novaes Santos
18:05	1305	ANALYSIS OF THE OXIDATION LEVEL AND SURFACE CURVATURE ON EMISSIVITY USED IN INFRARED PYROMETRY	Kamila Borba Silva
	0148	DEVELOPMENT OF AN EXPERIMENTAL METHODOLOGY FOR REAL- TIME THERMAL ERRORS COMPENSATION OF MACHINED WORKPIECES IN A 5-AXIS MACHINING CENTER IN NON- CONTROLLED TEMPERATURE ENVIRONMENT CONDITION	Marcelo Santos
	0214	SAE H-13 STEEL REPLACEMENT BY SAE 4340 IN THE SHRINK TOOL CHUCKS	Kaique Vieira
	1250	DETERMINING SPECIFIC CUTTING ENERGY BY SPINDLE POWER WHEN MICROMILLING TI6AL4V	Rodrigo Ferreira
	1598	EVALUATION OF TOOL WEAR WITH INTERNAL COOLING CHANNELS IN MACHINING GRAY CAST IRON	Gustavo Henrique Nazareno Fernandes
	1646	INFLUENCE OF CUTTING FLUID TYPE ON CUTTING REGION TEMPERATURE DURING GRINDING OF BEARING STEEL	Felipe dos Anjos Rodrigues Campos

	- mater	ials and Manuf. Eng.				
Thurs	Thursday 25 Room 9					
	Code	Title	Presenter			
MMEN -	Th1	Metrology, Inspection, and Quality Control & Processes with Material Removal	Chair:			
08:35	1465	ASSESSMENT OF CUTTING TOOL WEAR USING COMPUTER VISION	Breno Costa			
08:50	2192	APPLICATION OF THE MONTE CARLO METHOD FOR DEFINING DIMENSIONAL TOLERANCES IN ADDITIVE MANUFACTURING	Lucas de Campos Carolo			
09:05	0007	EVALUATION METHODS FOR CARBON STEEL LASER CLEANING PROCESS	Manoel Kolling Dutra			
	0035	INFLUENCE OF TOOL SPEEDS ON FORCES IN SINGLE-PASS HONING	Morgana Zumpano			
MMEN	Th2	Processes with Material Removal	Chair: Milton Pereira			
09:45	0118	INVESTIGATION OF SURFACE ROUGHNESS GENERATED BY END MILLING OF TOOLOX 44 ®	Michele Ribeiro			
10:00	0129	INFLUENCE OF DEBURRING METHODS IN MICRO SLOTS OF INCONEL 718	Gabriel de Paiva Silva			
10:15	0782	EFFECT OF SURFACE TEXTURE TOOLS AND MINIMUM QUANTITY LUBRICATION (MQL) IN TURNING OF AISI 1045 STEEL	Luiz Eduardo Rodrigues Vieira			
10:30	0800	INFLUENCE OF PROCESS VARIABLES ON GEOMETRICAL DEVIATIONS IN WEDM TRIM CUTS	Maria Vitoria Sikora			
10:45	0115	Session Speaker: EFFECT OF MACHINING PARAMETERS ON CUTTING FORCES DURING THE END MILLING OF UNS S32205	Julia Canicali			
MMEN	Th3	Processes with Material Removal	Chair:			
11:15	1163	METAL MAGNETIC MEMORY €" A NON-INTRUSIVE NDT TECHNIQUE	LEONARDO FIORINI			
11:30	1261	INFLUENCE EVALUATION OF THE NORMALIZING HEAT TREATMENT ON THE AISI 1020 STEEL SURFACE GRINDING PROCESS BY THE BARKHAUSEN MAGNETIC NOISE TECHNIQUE	Lucas Benini			
11:45	1274	FINITE ELEMENT METHOD APPLIED TO MODEL THE STRUCTURAL STIFFNESS BEHAVIOR OF A MACHINE TOOL	Tedni de Abreu Goulart			
12:00	1298	INDIRECT ASSESSMENT OF THE TOOL TIP TEMPERATURE USING KALMAN FILTER	Lúcio Sant'Anna Purri Miranda			
MMEN <sup>-</sup>	Th4	Processes with Material Removal	Chair: Laurence Cola <mark>res</mark> Magalhães (UFES) e Luis Alonso Betancur			
14:25	1444	ANALYSIS OF ROUGHNESS IN TURNING GRAY CAST IRON USING TOOLS WITH INTERNAL COOLING CHANNELS	Pedro Henrique Pires Fr <mark>anç</mark> a			
14:40	1795	PERCUSSION DRILLING ON AISI 1020 STEEL USING A NANOSECOND PULSED FIBRE LASER SOURCE	Santiago Caraguay			
14:55	1854	STUDY OF THE SURFACE ROUGHNESS AND SHAPE OF THE CHIP IN CONVENTIONAL AND LFV (LOW FREQUENCY VIBRATION) TURNING OF ALUMINUM ABNT 1200 AND ALUMINUM ALLOY ABNT 5052	João Pedro Santiago Carneiro			
15:10	1877	OPTIMIZATION OF MACHINING PARAMETERS IN THE DRY MILLING OF NI-BASED VAT 32® SUPERALLOY WITH TIALN-TIN COATED CARBIDE INSERTS	Emanuele Schneider Callisaya			
15:25	2052	Session Speaker: OPTIMIZATION OF LASER MICROMILLING PROCESS PARAMETERS FOR TEXTURING OF NUCLEATION SITES	Gabriel Serafin Couto Vieira			
MMEN <sup>-</sup>	Th5	Processes with Material Removal & Tribology	Chair:			
15:55	2233	ANALYSIS OF THE INFLUENCE OF MACHINE VIBRATION IN THE MILLING OF CARBON FIBER REINFORCED POLYMER (CFRP) LAMINATES	Wesley Camargo			
16:10	0875	DESIGN AND INSTRUMENTATION OF A LOW-COST RAMAN	Salete Alves			
16:25	0890	A METHODOLOGY TO FIELD TESTING FRICTION BETWEEN ALUMINUM WIRES AND WHEELS OF CABLE RIDING ROBOTS	Marina Baldissera de Souza			
16:40	0975	DETERMINATION OF THE REMOTION PERCENTAGE OF BARNACLE BIOFOULING FROM MARINE STEEL PLATES USING STEEL BRUSH FOR CLEANING	Vinícius Teles			
MMEN I	E-Postei	Processes with Material Removal & Tribology & Union and Assembly Processes	Chair:			

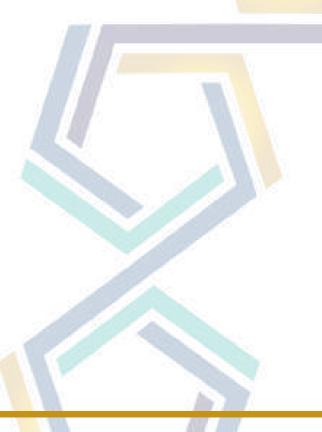
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	1859	INFLUENCE OF PROCESSING PARAMETERS ON THE LASER MICROMACHINING AND TEXTURING OF 3Y-TZP COMPACTS DOPED WITH GRAPHITE	Pedro Oliveira
	2076	INFLUENCE OF CUTTING CONDITIONS ON MACHINING FORCES AND TOOL WEAR IN MILLING AISI304 STAINLESS STEEL	Rafael Hamano
	2222	UNIVARIATE CUTTING FORCES ANALYSIS OF A NOVEL INTERNALLY COOLED TOOL DURING CAST GRAY IRON TURNING	Gustavo Henrique Nazareno Fernandes
	2253 OPTIMIZATION DUPLEX STAINLESS STEEL UNS S32205 MILLING PROCESS USING CONTROL CHARTS		Bárbara Silva
17:05 to	0042	THIN FILMS: INFLUENCE OF THE MICRO-ABRASIVE WEAR MODES ON THE VOLUME OF WEAR AND COEFFICIENT OF FRICTION	Jorge Thiago de Sousa Lima Wilcken Wilcken
18:05	0968	ANALYSIS OF THE EFFECTS OF PREVIOUS HARDENING BY PLASTIC DEFORMATION ON THE ABRASIVE WEAR RESISTANCE OF ABNT 1045 STEEL	thais ramos pereira
	1870	WEAR BEHAVIOR OF INCONEL 625 COATINGS ON CARBON STEEL AND STAINLESS STEEL SUBSTRATES	ELIANE Kihara
	2116	INVESTIGATION OF THE INFLUENCE OF LOADING ON THE WEAR OF A PERLITIC RAIL	Eric Espíndola
	0949	GTAW COLD WIRE FEED: TRANSITIONAL TRANSFER MODE CHARACTERIZATION	Anna Louise Voigt
	2053	CHARACTERIZATION OF WEAR IN IMAGES OF SAMPLES FROM THE HFRR TEST	José Josemar de Oliveira Júnior

MMEN	MMEN - Materials and Manuf. Eng.					
Friday 26			Room 9			
Time	Code	Title	Presenter			
MMEN	Fr1	Tribology	Chair: Guilherme Barra			
08:35	0900	COMPARISON OF FRICTION PROPERTIES OF MATERIALS WITH DIFFERENT HARDNESS FOR CABLE RIDING ROBOTS€™ WHEELS	Marina Baldissera de Souza			
08:50	1464	EXPERIMENTAL MEASURING PROCEDURE FOR WEAR AND COEFFICIENT OF FRICTION OF POLYMERIC CONVEYOR IDLERS	Daniel Estefano Pacholok			
09:05	1739	LABORATORY TEST RIG TO MEASURE CARRY-DOWN, RETENTIVITY, SPLASH AND PICKUP OF LUBRICANT IN WHEEL-RAIL LUBRICATION SYSTEM	Pedro Del Negro Tayer			
09:20	1741	METHODOLOGY FOR MEASURE THE WEAR RESISTANCE OF ANTIFOULING PAINTS	Vinícius Teles			
MMEN	Fr2	Tribology & Metrology, Inspection, and Quality Control	Chair:			
09:45	0747	SIMULTANEOUS SHEAROGRAPHY WITH THREE SHEARING DIRECTING USING A MULTI-OPENING MASK	Tainara Pedrosa de Lima			
10:00	1930	EVALUATION OF TRIBOLOGICAL PERFOMANCE OF LIQUID IONIC AS ADDITIVE FOR VEGETABLE-BASED LUBRICANT	Márcio Segundo Medeiros			
10:15	1969	FINITE ELEMENT ANALYSIS OF ROUGHNESS TRANSFER ANALYSIS: MODELLING FOR TEMPER ROLLING PROCESS	Yukio Shigaki			
10:30	2050	TRIBOLOGICAL AND THERMAL BEHAVIOR OF WAGON BRAKE SHOES SLIDING AGAINST WHEEL MATERIAL	Adler Armelini Furlan			
10:45	1937	DEVELOPMENT AND PHYSICOCHEMICAL CHARACTERIZATION OF LUBRICANT ADDED WITH IONIC LIQUIDS	Hugo Vinícius Santos			
MMEN	Fr3	Union and Assembly Processes & Metallurgical Processes	Chair: Regis Silva e Luis Alonso Betancur			
11:15	0286	ULTRASOUND METHOD TO EVALUATE THE FORCE IN BOLTED JOINT	Rafael Tavares			
11:30	0653	ANALYSIS OF THE TORQUE BEHAVIOR VS CLAMP FORCE WITH DIFFERENT SURFACE TREATMENTS IN M8 SCREWS	Rodrigo Kaiser			
11:45	1452	ANALYSIS OF PROCESS PARAMETERS INFLUENCE ON QUALITY PERFORMANCE AND ENERGY CONSUMPTION OF RESISTANCE SPOT-WELDING	Carla Ferreira Andrade Cunha			
12:00	1184	THE INFLUENCE OF VEGETABLE LUBRICATION WITH SILICA MICROPARTICLES ON THE DEEP DRAWING FORCE	Lucas Alexandre de Carvalho			



Program Overview and Mechatronics and Automation					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary		Mechatronics and Automation	Mechatronics and Automation	Mechatronics and Automation
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future		Mechatronics and Automation	Mechatronics and Automation	Mechatronics and Automation
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20			Mechatronics and Automation	Mechatronics and Automation	Mechatronics and Automation
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45			5 min break Mechatronics and Automation	Mechatronics and Automation	Mechatronics and Automation
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00			Mechatronics and Automation	Mechatronics and Automation	Mechatronics and Automation
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Keynote speaker	Keynote speaker	Mech. and Automation ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	/ `
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	





MECH	- Mecha	atronics and Automation		
	esday		Room 10	
Time	Code	Title	Presenter	
MECH		Robotics and Mechanisms	Chair: Daniel Martins	
	1	GAIN ADJUSTMENT METHOD TO AVOID JACKKNIFE OF A MARV		
08:35	0467	WITH TWO PASSIVE TRAILERS IN BACKWARD MOVEMENTS	Diego Bertolani	
	0557	LOW-COST DATA GLOVE FOR ROBOTIC HAND-FOREARM		
08:50	0557	TELEOPERATION SYSTEMS APPLICATIONS	Lukas Gabriel Dias Gomes	
00.05	1869	DIMENSIONAL OPTIMIZATION OF A PASSIVE GRIPPER FOR UAV	Redrige Corqueire Compas	
09:05	1869	CARGO TRANSPORTATION	Rodrigo Cerqueira Campos	
09:20	0722	Session Speaker: SCREW BASED STATIC ANALYSIS OF A 4-DOF 3T1R FULLY DECOUPLED PARALLEL MANIPULATOR	Paulo Rossi	
			Chair: Rogério Sales	
MECH	We2	Robotics and Mechanisms	Gonçalves	
		GLOBAL KINEMATIC RELIABILITY INDEX OF ROBOTIC	-	
09:45	0032	MANIPULATORS	Fabian Andres Lara-Molina	
10:00	0045	DESIGN OF A LOW-COST 3D PRINTED EDUCATIONAL ROBOT	Julio Cesar Frantz	
		COMPARISON BETWEEN TWO SINGULARITY AVOIDANCE INDICES		
10:15	0059	FOR PLANAR PARALLEL KINEMATICALLY REDUNDANT	Felipe Marques Farias Filho	
		MANIPULATORS		
		Symposium Speaker: Role and impact of Mechanism Design for		
10:30		robots	Prof. Marco Ceccarelli	
40.45		Symposium Speaker: Role and impact of Mechanism Design for		
10:45		robots	Prof. Marco Ceccarelli	
MECH	We3	Robotics and Mechanisms	Chair: Daniel Martins	
44.45	0075	COMPARISON OF PATH PLANNING TECHNIQUES FOR	Annalda Dahanta Dadu Danar	
11:15	0075	AUTONOMOUS MOBILE ROBOTS	Arnaldo Roberto Rady Peron	
11:30	0156	A ROBOTIC DEVICE FOR INSPECTING SMALL DIAMETER PIPES	Luiz Guilherme Dias de Barros	
11.30	0150	A ROBOTIC DEVICE FOR INSPECTING SMALL DIAMETER FIFES	Luiz Guillerme Dias de Barros	
11:45	0424	IMPROVING COLLABORATION IN INDUSTRIAL ROBOTS FOR	Glauco Caurin	
11.45	0424	AERONAUTICAL MANUFACTURING TASKS	Gladeo Cadrin	
		DEVELOPMENT OF A HIGH FIDELITY SPACE ROBOT GAZEBO-BASED		
12:00	0620	SIMULATOR FOR SPACE CLOSE-PROXIMITY OPERATIONS	Luiz Manoel Santos Santana	
		EXPERIMENTS	24 1 6	
MECH	Wo4	Robotics and Mechanisms	Chair: Jocarly P. de Souza	
WECH	vve4		(UPF)	
44.40	0055	CHALLENGES AND OPPORTUNITIES OF ROBOTIZATION IN	Luces Demenden Mashada	
14:40	0855	AGRICULTURAL GREENHOUSES	Lucas Bernardon Mach <mark>ado</mark>	
14:55	0862	ANALYSIS OF COMPLIANT JOINTS FOR PLANAR LEGGED ROBOTS	Cristiane Tonetto	
15:10	0888	MODELING AND SIMULATION OF A SMALL SIZE ROBOT KICKING	Reynaldo Santos de Lima	
15.10	0000	MECHANISM	Reynaldo Santos de Linia	
15:25	0908	DRIVING MOTIONS FOR WHEELED-LEGGED ROBOTS IN ROUGH	Vivian Suzano Medeiros	
		TERRAIN USING 2D TRAJECTORY OPTIMIZATION		
MECH	We5	Robotics and Mechanisms	Chair: Lucas Weihmann	
15:55	0978	ACCURACY ANALYSIS OF MULTIBODY SYSTEMS WITH JOINT	Rogério Sales Gonçalves	
		CLEARANCE IN FOUR-BAR MECHANISMS		
16:10	1080	HUMANOID WALKING FOR A ROBOT WITH CURVED FEET	Caroline Silva	
16:25	1096	OPTIMIZING SWING FOOT TRAJECTORY OF HUMANOID ROBOT	Caroline Silva	
.0.20	1030	WALKING FOR ENERGY EFFICIENCY		
16:40	1147	MODELING AND SIMULATING A COMMERCIAL ROBOTIC	Amanda Kozlowski de Morais	
	1''''''	MANIPULATOR USING COPPELIASIM		

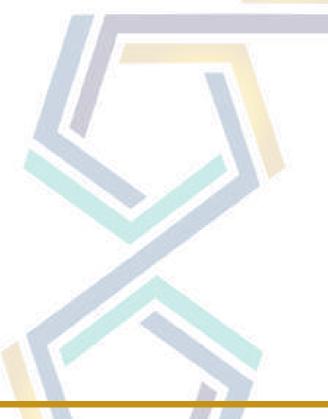
		atronics and Automation	Deem 10
	day 2		Room 10
	Code	Title	Presenter
NECH .	Th1	Robotics and Mechanisms	Chair: Marcos Paulo Nostrani
8:35	1180	A NEW APPROACH OF A MOBILITY ANALYSIS IN MECHANISM DESIGN	Luan Meneghini
08:50	1187	PEOPLE FOLLOWING SYSTEM FOR HOLONOMIC ROBOTS USING AN RGB-D SENSOR	Gabriel Abati
9:05	1193	GRASP SYNTHESIS FOR A SPATIAL 6 DOF GRIPPER BASED ON ITS WRENCH CAPABILITY.	Leonardo Mejia Rincon
9:20	1243	DESIGN ASPECTS OF A SYSTEM FOR RESEARCH OF INTEGRATION OF COMPUTER VISION AND MACHINE LEARNING IN ROBOTICS	Carlos Rodrigues Rocha
NECH .	Th2	Robotics and Mechanisms	Chair: Rogério Sales Gonçalves
)9:45	1375	A FOUR LEG ROBOT STABILITY ANALYSIS THROUGH A VIRTUAL ENVIRONMENT SIMULATION BASED IN DIRECT AND INVERSE KINEMATICS	Frederico Gomes Pires Azzolini
0:00	1494	VIRTUAL REALITY APPLICATION FOR SQUAT EXERCISE WITH ROBOTIC EXOSKELETON	David Zink
0:15	1576	COMPARATIVE ANALYSIS OF DIFFERENT MODELING APPROACHES ON CABLE-SUSPENDED PARALLEL ROBOTS	Fabiola da Silva Rosa
0:30	1640	DESIGN OF A LOW-COST SERIES ELASTIC ACTUATOR FOR APPLICATION IN ROBOTIC MANIPULATORS	Felipe Rebelo Lopes
10:45	1710	MODELING OF THE PARABOLIC KICK DEVICE OF OMNIDIRECTIONAL ROBOTS	Eric Ezequiel Yoshida de Lima
NECH .	Th3	Robotics and Mechanisms & Artificial Intelligent Applications	Chair: Estevan Murai
1:15	1826	CHALLENGES AND OPPORTUNITIES FOR PSEUDO-CONTINUUM ROBOTS IN SINGLE PORT ACCESS, TRANSLUMINAL AND INTRALUMINAL SURGERIES	Gabriel Klein Lunkes
1:30	2068	DEVELOPMENT OF ROBOTIC SYSTEM IN OPEN-SOURCE PLATFORM FOR MOBILE ROBOT.	Everton Silva Libânio
1:45	0096	INCREASING OF OEE IN WIRE DRAWING PROCESS USING MACHINE LEARNING TECHNIQUE	Felipe Lara
12:00	0193	SPECTRAL KURTOSIS-BASED UNSUPERVISED LEARNING METHOD FOR ESTIMATING REMAINING USEFUL LIFE OF ROTATING MACHINERY	Leonardo Godói
MECH .	Th4	Artificial Intelligent Applications	Chair: Lucas Weihmann
4:25	0579	STATISTICAL INDICATORS-BASED MACHINE LEARNING METHOD FOR CLASSIFICATION OF VIBRATION SIGNALS	Gisele de Fátima Lima Camargo
4:40	0728	MODULAR, SCALABLE AND GENERIC DIGITAL TWIN APPROACH FOR DYNAMIC MANUFACTURING PROCESSES	Matheus Antonio Nogueira de Andrade
4:55	0981	DEEP CONVOLUTIONAL NEURAL NETWORKS FOR IMAGE CLASSIFICATION: A CASE STUDY IN AN ELECTRIC UTILITY WAREHOUSE	Paulo Piratelo
5:10	0985	STANDARDS CLASSIFIER: APPLICATION TO OPERATIONAL SUPERVISION OF DIESEL GENERATING UNITS	Rafael Novais Lacerda de Olive <mark>ira</mark>
5:25	0853	Session Speaker: CONE DETECTION WITH CONVOLUTIONAL NEURAL NETWORKS FOR AN AUTONOMOUS FORMULA STUDENT RACE CAR	Laíza Milena Scheid Parizotto
NECH .	Th5	Artificial Intelligent Applications & Assistive Technologies	Chair: Lucas Weihmann
5:55	1499	THE APPLICATIONS OF ARTIFICIAL INTELLIGENCE TO THE CONTAINMENT OF COVID-19 IN TIMES OF PANDEMIC	Bárbara Silva
6:10	0972	DEVELOPMENT OF A SERIOUS GAME FOR HUMAN GAIT REHABILITATION	Rogério Sales Gonçalves
6:25	1608	USE OF ARTIFICIAL NEURAL NETWORKS IN FAULT DETECTION AND DIAGNOSIS IN THREE-PHASE INDUCTION MOTORS	Guilherme de Oliveira
6:40	1704	Session Speaker: APPLICATION OF SINUSOIDAL ANALYSIS TO FEATURE EXTRACTION IN ROTATING MACHINE VIBRATION SIGNALS	Dionisio Martins
<b>IECH</b>	- E-Postei	MECH & NLPH & OSPE & SMST & UQSM	Chair: Marcos Paulo Nostrani
	0528	A STUDY OF IMAGE SEGMENTATION TECHNIQUES APPLIED TO CROP ROW DETECTION IN MOBILE ROBOTICS	Henrique Toledo
	1907	COMPUTATION OF MINIMUM-TIME SOLUTION OF A SEALING MACHINE THROUGH LINEAR PROGRAMMING WITH SENSITIVITY AND CLOSED-LOOP ROBUSTNESS ANALYSIS	Yuri Mariano

	0114	RETROFITTING OF A TWO-DEGREES-OF-FREEDOM WELDING TORCH DISPLACEMENT SYSTEM	Pablo Andretta Jaskowiak	
17:05	1135	NONLILEAR FINITE ELEMENT SIMULATION AND STRUCTURAL	Mateus Piccin Duarte de	
to	1155	VALIDATION OF SCHOCK ABSORBER USED ON TREADMILLS	Souza	
18:05	1139	COMPUTATIONAL STUDY OF ELECTRIC FIELD TREATMENT AT BONE	Daniella de Lourdes Luna	
10.00	1155	NEIGHBORING TUMORS	Santana de Andrade	
	1256	KEY DESIGN CALCULATION, MEASUREMENT AND CORRECTION OF	Marcelo dos Reis Farias	
	1200	SHIP PROPULSION SHAFT ALIGNMENT		
		INFLUENCE OF GEOMETRIC PARAMETERS ON THE PIEZOELECTRIC		
	0396	RESPONSE OF THIN PVDF FILMS EXCITED BY LONGITUDINAL	Luiz Marchezini	
		MECHANICAL STRESS WAVES		
	0926 BAYESIAN NETWORKS AS PRODUCT CONFIGURATION S		Bruno Ziegler Haselein	
	0320	(PCSS) TO SELECT ELECTRIC MOTORS COMPONENTS		

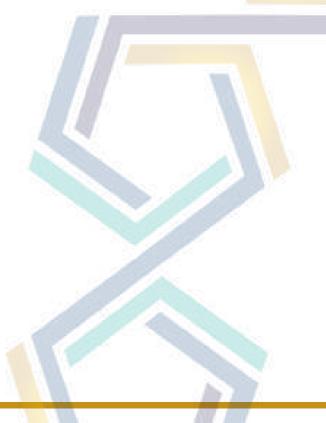
MECH	- Mecha	atronics and Automation	
Friday	/ 26		Room 10
Time	Code	Title	Presenter
MECH F	Fr1	Computer Vision	Chair: Julio Frantz (UNIFEBE)
	0806	AUTONOMOUS NAVIGATION WITHIN CORN PLANTATION USING	Gabriel Araujo
08:50	1051	EFFICACY TEST OF THE VISUAL ODOMETRY METHOD ON TERRASENTIA ROBOT	Jorge ld Facuri Filho
09:05	1076	NEURAL NETWORKS AND COMPUTATIONAL VISION APPLICATION IN FEATURE RECOGNITION AT AGRICULTURAL FIELDS	Lucas Toschi de Oliveira
	1707	MACHINE VISION ALGORITHM FOR CONTINUOUS COUNTING OF POULTRY IN SLAUGHTERHOUSES	Guilherme de Santana Weizenmann
MECH F	Fr2	Computer Vision & Control Systems	Chair: Jonny Carlos da Silva
09:45	2263	QUALITY INSPECTION USING ACTIVE INFRARED THERMOGRAPHY WITH COMPUTATIONAL VISION AID USED IN COMPOSITE MATERIAL OF WIND TURBINE BLADE	JÚLIO CÉSAR CAPISTRANO ESTÁCIO
10:00	2290	COMPUTER VISION SYSTEM FOR AUTOMATIC EVALUATION OF IMAGES AND THICKNESS MEASUREMENT OF DRY LAYER OF WIND BLADE PROTECTION PAINT	JÚLIO CÉSAR CAPISTRANO ESTÁCIO
10:15	0029	METAHEURISTICS APPLIED TO A FUZZY-CONTROLLED VEHICLE NAVIGATION OPTIMIZATION	José Henrique Kleinübing Larcher
10:30	0055	HARRIS HAWKS OPTIMIZATION APPROACHES ON THE MULTIVARIABLE PID CONTROLLER TUNING	José Henrique Kleinübing Larcher
10:45	0280	GLOBALLY ROBUST SLIDING MODE COMMAND TRACKING UNDER INPUT BOUNDS USING A TIME-OPTIMAL SIGMOID	Davi Antônio dos Santos
MECH F	Fr3	Control Systems	Chair: Mauro André Barbosa Cunha (UFPel)
11:15	0365	SIMULATION OF HYBRID POWER SYSTEMS FOR VESSELS	Crisley de Souza Peixoto
11:30	0442	ATTITUDE DETERMINATION FOR MULTIROTOR AERIAL VEHICLE USING A SUPER-TWISTING SLIDING MODE OBSERVER	João Filipe Renó Peixoto de Azevedo Silva
11:45	0459	WAYPOINT-BASED GUIDANCE FOR MULTIROTOR AERIAL VEHICLES USING ADAPTIVE GLOBAL SLIDING MODES	Luiz Gustavo Pereira Roéfero
12:00	0309	Session Speaker: SLIDING MODE CONTROLLER OF A COMPACT HYDRAULIC SERVOVALVE DEVELOPED FOR AN IN-PIPE CLEARANCE ROBOT	Gabriel Squizani Manske
MECH F	Fr4	Control Systems & Fluid Power Systems	Chair: Julio Frantz (UNIFEBE)
14:25	0524	MULTIVARIABLE CONTROL ANALYSIS OF AN ACTIVE SUSPENSION SYSTEM	Felipe Marques Farias Filho
	0698	INSTRUMENTATION AND DIGITALIZATION OF A HEXAPOD ROBOT AIMING THE INSPECTION OF AERONAUTICAL STRUCTURES.	Gabrielle Pimentel
14:55	1335	HIL PLATFORM FOR FIXED WING AUTOPILOT €" A TUTORIAL.	Waldenê de Melo Moura
15:10	0590	SURVEY OF FLUID POWER APPLICATIONS IN MILITARY MACHINERY	Alan Mavignier
15:25	1613	Session Speaker: DIGITAL HYDRAULIC PUMP: AN ENERGY EFFICIENCY STUDY	Dimitri Oliveira e Silva
MECH F	Fr5	Industrial Informatics, Discrete and Hybrid Systems	Chair: Marcos Paulo Nostrani
15:55	0137	I4.0 COMPONENTS BASED ON SOFTWARE AND DOCUMENTS, AND A METHOD PROPOSED FOR UPDATING ERP MODULES FOR THE CONTEXT OF INDUSTRY 4.0	Felipe Braidotti
16:10	0441	TRANSPILATION FROM NC FILES TO CANONICAL MACHINING FUNCTIONS	Francisco Ricardo Taborda Aguiar
16:25	0084	ESTIMATION OF SHAFT SPEED AND LOAD INERTIA APPLIED TO INDUCTION MOTOR USING KALMAN FILTER FOR UNKNOWN INPUTS	Daniel de Lemos Santos

Program Overview and Nano and Microfluidic and Microsystems					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Nano and Microfluidic and Microsystems			
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Nano and Microfluidic and Microsystems			
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20		Nano and Microfluidic and Microsystems			
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45			5 min break		
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00					
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Keynote speaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	



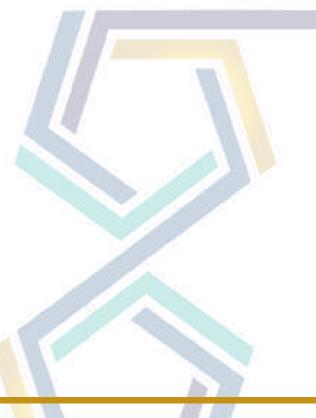


NMMS - Nano and Microfluidic and Microsystems				
Tuesd	lay 23		Room 11	
Time	Code	Title	Presenter	
NMMS T	Гu1	Heat and Mass Transfer in Micro and Nano scales	Chair: Prof. Diogo Nardelli	
08:35	0387	THERMOPHYSICAL PROPERTIES CHARACTERIZATION OF MOS2/H2O-EG FOR HEAT TRANSFER APPLICATIONS	Felipe Silva dos Santos	
08:50	0629	SILVER-PVP DISPERSANT NANOFLUIDS FOR THE AUTOMOTIVE COOLING SYSTEM APLICCATION	Edwin Martin Cardenas Contreras	
09:05	0632	THERMAL EFFICIENCY OF OPEN-CELL METAL FOAMS WITH DIFFERENT THICKNESS: A COMPARATIVE ANALYSIS BETWEEN CORRELATIONS AND NUMERICAL MODELING	Leonardo Manetti	
09:20	0695	Session Speaker: THERMAL AND HYDRODYNAMIC BEHAVIOR OF A MICRO-FINNED HEATSINK FOR CONVECTIVE FLOW BOILING OF DIELECTRIC FLUID	Jessica Martha Nunes	
NMMS T	Fu2	Heat and Mass Transfer in Micro and Nano scales & Micro and Nanofluidics	Chair: Prof. Fabiano Wolf	
09:45				
10:00	1062	VARYING GEOMETRY OF MICRO-CHANNEL FLOW SIMULATED WITH LATTICE BOLTZMANN METHOD	Arthur do Canto Pivetta	
10:15	0374	CONTROLLED RELEASE OF THE INNER CONTENT OF GELLAN GUM MICROCAPSULES USING TEMPERATURE AS THE TRIGGER MECHANISM	Mateus Lima	
10:30		Symposium Speaker: Micro-to-macro approach of multiphase flows: pool and flow boiling based systems for industrial and defense applications	Prof. Ana S. Moita	
10:45		Symposium Speaker: Micro-to-macro approach of multiphase flows: pool and flow boiling based systems for industrial and defense applications	Prof. Ana S. Moita	
NMMS T	ГuЗ	Micro and Nanofabrication & Micro and Nanofluidics	Chair: Prof. Daduí Cordeiro Guerrieri	
11:15	1935	PHASE CHANGE MATERIAL ENHANCED WITH CARBON-BASED HYBRID NANOPARTICLES	Thiago da Silva André	
11:30	1974	MACHINE LEARNING AND CFD: A NEW APPROACH TO SIMULATE AND OPTIMIZE MICROMIXERS IN DIFFERENT GEOMETRIES	Luca Ainstein	
	AND OPTIMIZE MICROMIXERS IN DIFFERENT GEOMETRIES		Ana Carolina Bomfim	
11:45	1842	ELECTROCHEMICAL AND CHEMICAL POLISHING	Rodrigues	

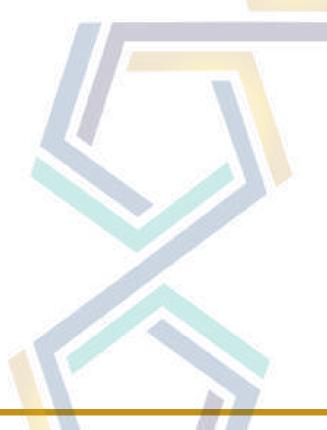


Program	Program Overview and Non-linear Phenomena				
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Non-linear Phenomena			
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future				
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20	Non-linear Phenomena				
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45	Non-linear Phenomena		5 min break		
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00	Non-linear Phenomena				
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Keynote speaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	





NLPH	- Non-li	near Phenomena	
Mond	lay 22		Room 10
Time	Code	Title	Presenter
NLPH I	Mo1	Analytical methods & Applications of Nonlinear Systems in Engineering	Chair: Prof. Angelo Marcelo Tusset
11:15	1885	REMARKS ON THE DYNAMIC BEHAVIOR OF AN ASYMMETRIC BISTABLE ENERGY HARVESTER	João Pedro Norenberg
11:30	0684	POST-FLUTTER ANALYSIS OF A NONLINEAR AEROELASTIC TYPICAL SECTION BASED ON THE METHOD OF MULTIPLE SCALES	José Augusto Ignacio da Silva
11:45	2075	ON THE INFLUENCE OF NONLINEAR STIFFNESS ON THE DESIGN OF VIBRATION ABSORBER AND NEUTRALIZERS	Atila Almeida
12:00	1702	Session Speaker: CO-EXISTING ATTRACTORS IN HIGH FREQUENCY JARRING	ldin Nazzari
NLPH I	Mo2	Identification of Nonlinear Systems & Complex Systems in Engineering & Chaos and its Applications	Chair: Prof. Americo Cunha Jr
14:25	0316	THE EFFECT OF DATA SELECTION ON THE SPARSE IDENTIFICATION OF DYNAMICAL SYSTEMS	Davi Lettieri
14:40	0350	A SIMPLE PHYSICAL MODEL TO STUDY THE RELATIONSHIP BETWEEN THE INDIVIDUAL AUTOMOBILE PROPERTIES AND THE COLLECTIVE TRAFFIC BEHAVIOR	Maurício Santos
14:55	0402	CHAOS AND HYPERCHAOS IN A TWO-DEGREE OF FREEDOM DUFFING OSCILLATOR	Luã Guedes Costa
15:10		Symposium Speaker: Elastic metamaterial for wave control over a broad range of frequencies	Prof. Diego Misseroni
15:25		Symposium Speaker: Elastic metamaterial for wave control over a broad range of frequencies	Prof. Diego Misseroni
NLPH I	Mo3	Nonlinear Mechanics	Chair: Frederico Martins Alves Silva
15:55			
16:10	1658	CONTROL METHODS FOR SWITCHING BETWEEN COEXISTENT ATTRACTORS OF IMPACT OSCILLATOR	Dimitri Danulussi Alves Costa
16:25	2250	DYNAMIC ANALYSIS AND CONTROL OF A DOUBLE PENDULUM ARM EXCITED BY AN RLC CIRCUIT	Angelo Marcelo Tusset
16:40	0492	Session Speaker: SPATIOTEMPORAL CHAOS ON A DUFFING-TYPE SYSTEM	Eduardo Villela Mac <mark>had</mark> o dos Reis



NLPH	NLPH - Non-linear Phenomena					
Tuesday 23			Room 10			
Time	Code	Title	Presenter			
NLPH <sup>·</sup>	1111	Numerical methods & Applications of Nonlinear Systems in Engineering & Nonlinear Mechanics	Chair: Prof. José Manoel Balthazar			
08:35	0422	EVALUATION OF NONLINEAR MODES OF A 2 DOF OSCILLATOR USING POINCARé MAP	Filipe Eduard Leite Ossege			
08:50		INFLUENCE OF THE FLUID FREE SURFACE ON THE NONLINEAR RESONANCE CURVES OF A FLEXIBLE TANK PARTIALLY FILLED WITH FLUID	Frederico Martins Alves da Silva			
09:05	09:05 0765 NUMERICAL NONLINEAR DYNAMICS STUDY OF A SIMPLIFIED TWO- PHASE FLOW MODEL FOR PIPELINE-RISER SYSTEMS		ADILSON PAULO DE JUNIOR			
09:20						

Program Overview and Offshore and Petroleum Engineering					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary				
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Offshore and Petroleum Engineering			
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20		Offshore and Petroleum Engineering			
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45		Offshore and Petroleum Engineering	5 min break		
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00		Offshore and Petroleum Engineering			
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Keynote <del>sp</del> eaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	

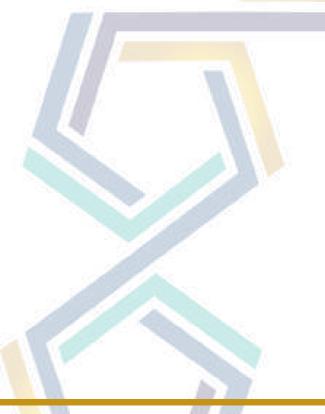




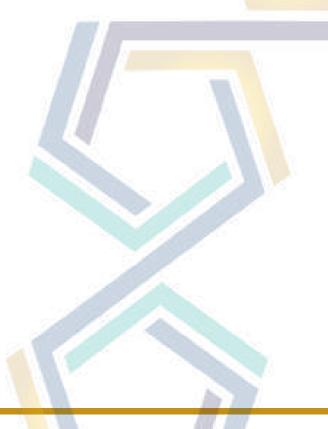
OSPE	- Offsho	re and Petroleum Engineering	
Tueso	day 23		Room 10
Time	Code	Title	Presenter
OSPE 7	ru2	Offshore and Petroleum Engineering	Chair: Emilio Paladino
09:45	0255	RESERVOIR CHARACTERIZATION USING ES-MDA METHOD COMBINING PRESSURE AND TEMPERATURE DATA	Vinicius Mattoso Reis Da Silva
10:00	0822	WAX DEPOSITION EXPERIMENT UNDER COLD FLOW: A TRANSIENT ANALYSIS	Alexandre de Castro Martins
10:15	10868 1	FLUID-STRUCTURE ANALYSIS OF PSHE HEAT EXCHANGER PLATES BY NUMERICAL APPROACH	Talita Possamai
10:30	0357	INFLUENCE OF THERMAL EFFECTS IN STABILITY ANALYSIS FOR SEVERE SLUGGING	Thierry Caique Lima Magalhães
10:45		ANALYSIS OF WATER ALTERNATING GAS (WAG) IN AN IMMISCIBLE RESERVOIR	Vinicius Rafael de Freitas
OSPE 1		Offshore and Petroleum Engineering	Chair: Celso P. Fernandez
11:15		PERFORMANCE EVALUATION OF THE OPERATION OF TWIN-SCREW PUMPS OPERATING IN SERIAL ARRANGEMENT	Emilio Paladino
11:30	10749 1	METHODOLOGY FOR OBTAINING A DIGITAL TWIN FOR A FPSO MOORING SYSTEM	Guilherme Rangel
11:45	0321	WETTABILITY EVALUATION IN PRE-SALT CARBONATES USING TUNED WATER	Barbara Meneguesso
12:00	0323	EVALUATION OF OIL RECOVERY BY LOW SALINITY WATER INJECTION (LSWI) ON OIL-WET CARBONATES FROM PRE-SALT	Taciana Cristina Clemente
OSPE 1	ru4	Offshore and Petroleum Engineering	Chair: Celso Morooka
14:25		NUMERICAL AND EXPERIMENTAL INVESTIGATION OF THE HYDRODYNAMICS OF A SEMISUBMERSIBLE PLATFORM MODEL FOR FLOATING OFFSHORE WIND TURBINES	André Scopel
14:40	1729	DYNAMIC BEHAVIOR OF A REDUCED HEAVE MOTION PLATFORM FOR OFFSHORE WIND TOWER	Paulo Kiryu
14:55	1954	NUMERICAL STUDIES OF FLOW AROUND FOUR CYLINDERS IN SQUARE ARRANGEMENT	Paulo Vitor Reis Guilherme
15:10	0680	FLOW-INDUCED VIBRATIONS OF THE DOWNSTREAM CYLINDER IN A TANDEM ARRANGEMENT BASED ON A WAKE OSCILLATOR	Rafael Feher
15:25	1513	Session Speaker: SIGNAL TREATMENT AND ANALYSIS OF A LOW COST STRAPDOWN INERTIAL MEASUREMENT UNIT	Aline Peres Leal
OSPE 1	Гu5	Offshore and Petroleum Engineering	Chair: Rafael de Cerquira
15:55			
16:10		FINITE ELEMENT ANALYSIS OF A DP-SLIP SYSTEM	Liping Tang
16:25		NUMERICAL STUDY OF FLAMMABLE GASES DISPERSION IN OIL PLATFORMS	Thiago Gonsalves
16:40	1864	Session Speaker: OPTIMUM WELL LOCATION AND RATES USING GENETIC ALGORITHMS CONSIDERING SURROGATES	Eduarda de França Andrade

Program	Program Overview and Smart Materials and Structures					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26	
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses	
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break	
08:35 - 09:40	Celebrating COBEM's 50th anniversary				Smart Materials and Structures	
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break	
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future				Smart Materials and Structures	
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break	
11:15 - 12:20					Smart Materials and Structures	
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch	
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker	
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break	
14:25 - 15:45			5 min break			
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break	
15:55 - 17:00						
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break	
17:05 - 18:05	Informative lectures	Keynote speaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session	
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break		
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary		



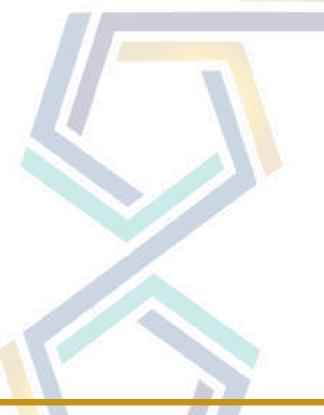


SMST	- Smart	Materials and Structures	
Friday	y 26		Room 8
Time	Code	Title	Presenter
SMST F	- - r1	Active and Passive Structures & Magnetic Materials & Nonlinear Dynamics of Smart Systems & Shape Memory Alloys	Chair: Thiago Ritto
08:35	INVESTIGATION OF THE PASSIVE VIBRATION CONTROL USING LOW-		Adailton Gomes Pereira
08:50	1996	CHALLENGES TO FABRICATE FUNCTIONALLY GRADED RARE EARTH BASED PERMANENT BONDED MAGNETS VIA POWDER- BASED ADDITIVE MANUFACTURING	Rafael Gitti
09:05	0404	ENERGY HARVESTING FROM CHAOTIC VIBRATION	Luã Guedes Costa
09:20	1044	Session Speaker: DESIGN AND CHARACTERIZATION OF A COMPACT ACTUATOR COMPOSED BY SMA MICRO-SPRINGS	José Fernando de Morais Firmino
SMST F	r2	Shape Memory Alloys	Chair: Adriano Fabro
09:45	0087	3D PRINTED HEXAPOD ROBOT ACTUATED BY SHAPE MEMORY ALLOY SPRINGS: DESIGN AND PERFORMANCE ANALYSIS	Edilberto Alves de Abrantes Júnior
10:00	0515	NUMERICAL ANALYSIS OF A DRONE BIO-INSPIRED MORPHING WING ACTUATED BY SHAPE MEMORY ALLOY ELEMENTS	BRUNO DIAS SANTOS
10:15	1106	EXPERIMENTAL VALIDATION OF A BOND GRAPH MODEL OF A SHAPE MEMORY ALLOY WIRE ACTUATOR	Lucas Olinda
10:30		Symposium Speaker: Recent Developments in the Computational Mechanics Based Modeling of Magnetic Shape Memory Alloys	Prof. Björn Kiefer
10:45		Symposium Speaker: Recent Developments in the Computational Mechanics Based Modeling of Magnetic Shape Memory Alloys	Prof. Björn Kiefer
SMST F	- r3	Piezoelectric Materials	Chair: Marcela Machado
11:15			
11:30	0296	STAR-SHAPED ENERGY HARVESTING SYSTEM FOR MULTIDIRECTIONAL AND WIDEBAND EXCITATIONS	VIRGILIO JUNIOR CAETANO
11:45	1649	STUDY OF THE TEMPERATURE EFFECT ON THE ELECTROMECHANICAL IMPEDANCE TECNIQUE APPLIED TO STRUCTURAL HEALTH MONITORING OF A BEAM	Lorena Lopes Dias
12:00	1882	Session Speaker: INCREASING ROBUSTNESS TO THE ISHM APPROACH FOR FAULT DETECTION IN A COMPOSITE HOLLOW SHAFT	Fernanda Beatriz Aires de Freitas

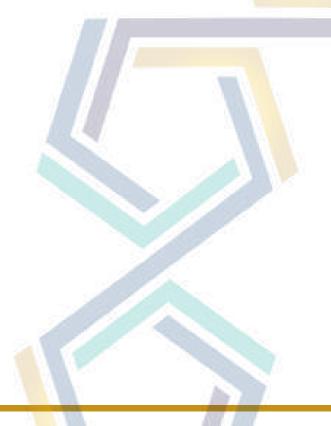


Program Overview and Solid Mechanics					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary	Solid Mechanics	Solid Mechanics		
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future	Solid Mechanics	Solid Mechanics		
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20	Solid Mechanics	Solid Mechanics			
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45	Solid Mechanics	Solid Mechanics	5 min break		
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00	Solid Mechanics	Solid Mechanics			
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Solid Keynote Mechanics speaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	



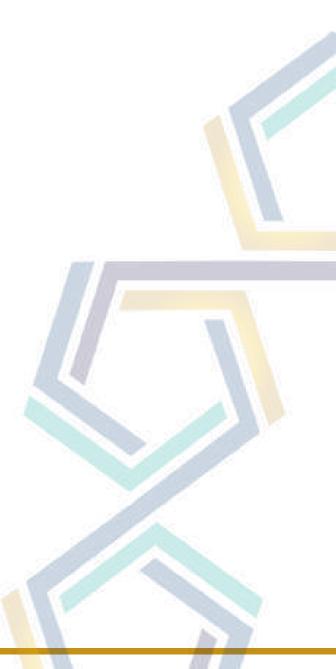


SOLM	- Solid	Mechanics		
Mond	lay 22		Room 8	
Time	Code	Title	Presenter	
SOLM	Mo1	Composite Materials and Structures	Chair: Volnei Tita	
11:15	0276	ANALYSIS OF LAMINATE COMPOSITE PLATES USING MOVING LEAST SQUARE RITZ METHOD	Plínio Santos	
11:30	1399	A FINITE ELEMENT METHOD ANALYSIS FOR THE INTERLAMINAR FAILURE MODELLING OF THIN SYMMETRIC LAMINATED COMPOSITE PLATES	Armando Italo de Paula Goncalves	
11:45	1771	APPLICATION OF TSAI€™S THEORY FOR THE DESIGN AND ANALYSIS OF A CARBON/EPOXY STRUCTURE FOR AN ENERGY- EFFICIENCY PROTOTYPE VEHICLE	Eyder Ferreira Augusto	
12:00	1732	Session Speaker: PROGRESSIVE FAILURE ANALYSIS OF COMPOSITE LUGS	Marx Thezolin	
SOLM	Mo2	Elasticity, Plasticity, Damage and Fracture Mechanics: Models, Experiments and Applications	Chair: Paulo de Tarso Rocha de Mendonça	
14:25	0051	EXPERIMENTAL CHARACTERIZATION AND COMPUTATIONAL MODELLING OF THE EFFECT OF IN VITRO CORROSION ON THE MECHANICAL INTEGRITY OF BIODEGRADABLE MAGNESIUM ALLOY WE43 FOR ORTHOPEDIC APPLICATIONS	Felipe Saconi	
14:40	0414	DETERMINATION OF FRACTURE PARAMETERS OF AN ELASTOMER USING DIGITAL IMAGE CORRELATION	Zélia Garcia da Fonseca	
14:55	0588	ANALYSIS OF EQUILIBRIUM IN ELASTICITY USING A REGULAR PERTURBATION TECHNIQUE	Lucas Rocha	
15:10		Symposium Speaker: "Plastic anisotropy and fracture of 6000-series aluminium alloys: An experimental and numerical study"	Prof. Odd Sture Hopperstad	
15:25		Symposium Speaker: "Plastic anisotropy and fracture of 6000-series aluminium alloys: An experimental and numerical study"	Prof. Odd Sture Hopperstad	
SOLMI	Mo3	Composite Materials and Structures & Elasticity, Plasticity, Damage and Fracture Mechanics: Models, Experiments and Applications	Chair: Pablo Andrés Muñoz Rojas	
15:55			24	
16:10	2000	USE OF NATURAL FIBERS IN 3D PREFORMS OF COMPOSITES MATERIALS: A REVIEW	Carlos Alberto França Junior	
16:25	0773	APPLICATION OF THE GALERKIN METHOD, IN A STOCHASTIC BEAM BENDING PROBLEM, SUPPORTED BY A PASTERNAK TYPE FOUNDATION.	Marcelo Borges dos <mark>San</mark> tos	
16:40	1048	Session Speaker: ON THE INFLUENCE OF THE LODE ANGLE ON THE PSEUDO-ELASTIC BEHAVIOR OF NI-TI ALLOYS UNDER MULTIAXIAL LOADING PROGRAMS	Stefan Viggiano	

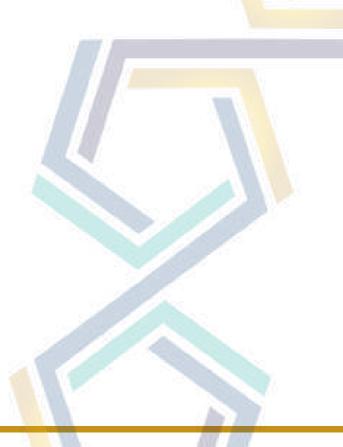


SOLM	- Solid I	Mechanics	
	lay 23		Room 8
Time	Code	Title	Presenter
SOLM 1	Fu1	Numerical Methods: FEM, XFEM, GFEM, BEM and other methods & Fatigue and Failure Analyses	Chair: Paulo de Tarso Rocha
08:35	1028	PHASE-FIELD MODEL FOR STRESS CORROSION CRACKING BASED ON CONTINUUM MECHANICS AND THE CONCEPT OF MICROFORCES	<mark>de Mendonça</mark> Murilo Prudente Rodrigues
08:50	1300	EXTRACTION OF STRESS INTENSITY FACTORS VIA THE DISPLACEMENT CORRELATION METHOD FROM STABLE GENERALIZED FINITE ELEMENT SOLUTIONS	Felipe Lopes
09:05	1428	CONTINUOUS MODEL FOR DISSOLUTION IN ELASTIC SOLIDS UNDER TENSION	Suelen Sobrinho
09:20	2063	FATIGUE FAILURE ANALYSIS OF A WIND TURBINE GEARBOX CAUSED BY TORSIONAL VIBRATIONS	Alex De Pretto Mansano
SOLM 1	Гu2	Elasticity, Plasticity, Damage and Fracture Mechanics: Models, Experiments and Applications & Numerical Methods: FEM, XFEM, GFEM, BEM and other methods	Chair: Paulo Pedro Kenedi
09:45	0172	AN ALTERNATIVE APPROACH TO COMPUTE THE MATERIAL PARAMETERS FOR THE PERIDYNAMIC THEORY	Atila Lupim Cruz
10:00	0665	LINEAR STATIC ANALYSIS OF CABLES BY THE GENERALIZED FINITE ELEMENT METHOD	Leonardo Basso
10:15	1493	PHASE-FIELD MODELING FOR BRITTLE FRACTURE DUE TO RESIDUAL STRESS	Diego Turbino
10:30	1908	MACROSCOPIC MECHANICAL BEHAVIOR OF POLYMERIC FOAMS VIA FINITE ELEMENT ANALYSIS OF A REPRESENTATIVE VOLUME ELEMENT	Eliardo Gabriel Rezende Martins
10:45	2071	Session Speaker: AN ASSESSMENT OF THE VOID DISTRIBUTION ON THE COMPUTATIONALLY HOMOGENIZED CONSTITUTIVE BEHAVIOR OF POROUS DUCTILE MEDIA	Wanderson Ferreira dos Santos
SOLM 1	ГuЗ	Numerical Methods: FEM, XFEM, GFEM, BEM and other methods	Chair: Pablo Andrés Muñoz Rojas
11:15			
11:30	1525	APPLICATION OF THE DOMAIN SUPERPOSITION TECHNIQUE TO STRESS ANALYSIS OF PLANE BENDING OF PLATES WITH CIRCULAR INCLUSIONS	Jhonata dos Santos <mark>de M</mark> oraes
11:45	2120	STRUCTURAL ANALYSIS OF THE NOSE CLIP FROM THE ANTIVIRAL FILTERING FACEPIECE RESPIRATOR N95 - VESTA	Matheus Filippe Santos Alves
12:00	1760	Session Speaker: CONTINUUM STRONG DISCONTINUITY APPROACH IN THE CONTEXT OF BOUNDARY ELEMENT METHOD FOR STRUCTURAL ANALYSIS OF THREE-DIMENSIONAL BRITTLE SOLIDS	Alisson Pinto Chaves
SOLM 1	Гu4	Structural Reliability Methods and Reliability-Based Design Optimization & Structural Statics and Dynamics	Chair: Volnei Tita
14:25	0024	SPRINGS WITH PROPORTIONAL STIFFNESS TO THE APPLIED FORCE	Julia Good Lima Dantas
14:40	0362	COMPARATIVE STUDY BETWEEN GALVANIZED AND STAINLESS STEEL APPLIED IN INDUSTRIAL EQUIPMENTS UNDER DYNAMIC AND NONLINEAR BEHAVIOR	Paulo Almir Borges de Sou <mark>sa</mark> Filho
14:55	0919	STUDY OF THE AERODYNAMIC AND STRUCTURAL BEHAVIOR OF AN ARCHED BAMBOO GREENHOUSE	Felipe Frizon
15:10	1868	PROBABILISTIC STUDIES OF THE COLLAPSE PRESSURE OF OVALIZED PIPELINES WITH CORROSION DEFECTS OBTAINED VIA SEMIEMPIRICAL METHODS AGAINST FEM.	Vinícius Moura
15:25	0385	Session Speaker: UNCERTAINTY PROPAGATION AND RELIABILITY ANALYSIS OF CONVENTIONAL AND TOW-STEERED COMPOSITE PLATES	Henrique Santos
SOLM 1	ſu5	Optimization of Materials, Fluids and Structures	Chair: Pablo Andrés Muñoz Rojas
15:55	0313	ANALYSIS OF PRESTRESSED CABLE STRUCTURE THROUGH AN ENERGY MINIMIZATION TECHNIQUE	Kaique Moreira Matos Magalhães
16:10	0435	MULTI-MATERIAL TOPOLOGY OPTIMIZATION WITH STRESS	Rodrigo Amaral
16:25	0969	TOPOLOGY OPTIMIZATION APPLIED TO TOOLING PLANTS IN THE AUTOMOTIVE INDUSTRY	Bruno da Silva Sales

	1		
16:40	1301	BIDIRECTIONAL EVOLUTIONARY STRUCTURAL OPTIMIZATION FOR STRUCTURES UNDER MULTIPLE DYNAMIC LOADS	Herbert Gomes
SOLM I		Numerical Methods: FEM, XFEM, GFEM, BEM and other methods & Nonlinear Analyses: Buckling, Post-Buckling and Contact Analyses & Optimization of Materials, Fluids and Structures	Chair: Volnei Tita
17:05 to 18:05	0317	ANALYTICAL AND NUMERICAL STUDY OF THE CONTACT STRESS FIELD BETWEEN TWO CURVED SURFACES WITH AN ELLIPTICAL SHAPE IN A CROWNED GEAR	geraldo cesar rosario de oliveira
	1667	ROLLER BRAKE DESIGN METHODOLOGY FOR APPLICATION ON LIFTING MACHINES	SERGIO LUIS RABELO DE ALMEIDA
	1720	BAJA SAE VEHICLE BRAKE DISC DESIGN THROUGH A THERMO- STRUCTURAL ANALYSIS USING THE FINITE ELEMENT METHOD	Mateus Feitosa Camboim
	1723	OPTIMIZATION OF THE GEAR RATIO OF A FORMULA SAE CAR THROUGH THE FIREFLY COLONY ALGORITHM	Lucas Melo Queiroz Barbosa

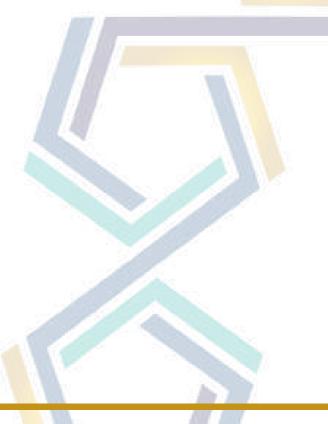


SOLM	- Solid	Mechanics	
Wedr	nesday	24	Room 8
Time	Code	Title	Presenter
SOLM We1		Structural Statics and Dynamics & Viscoelasticity and Viscoplasticity: Models, Experiments and Applications & Wave Propagation	Chair: Paulo Pedro Kenedi
08:35	1401	STUDY OF THE INTEGRITY OF MOORING SYSTEMS FOR OIL EXPLORATION PLATFORMS	Felipe Hansen
08:50	1835	DEVELOPMENT OF A DEFECT DETECTION METHODOLOGY IN BEAMS USING MODAL ANALYSIS DATA IN OPTIMIZED ARTIFICIAL NEURAL NETWORKS.	Wesley Homem
09:05	0012	TRANSIENT ANALYSES OF VISCOELASTIC SYSTEMS BASED ON AN IMPROVED FRACTIONAL DERIVATIVE MODEL AND A REDUCTION TECHNIQUE	Erivaldo Pereira Nunes
09:20	1098	NUMERIC-EXPERIMENTAL STUDY OF THERMOPLASTICS SUBJECT TO DIFFERENT WATER ABSORPTION RATIOS, DIFFERENT TEMPERATURES AND ITS EFFECTS ON VISCOELASTIC BEHAVIOR	Mateus Pescador
SOLM	We2	Wave Propagation	Chair: Paulo Pedro Kenedi
09:45	2229	INVESTIGATION OF DAMPING EFFECTS IN MONOCOUPLED PHONONIC CRYSTALS AND METAMATERIALS	Emanuel Victor Borges de Morais Cruvinel
10:00			
10:15			
10:30			
10:45			



Program Overview and Uncertainty Quantification and Stochastic Modeling (two roc					
Time	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
07:30 - 08:30	Entrance to COBEM2021	Short Courses	Short Courses	Short Courses	Short Courses
08:30 - 08:35	Opening session:	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40	Celebrating COBEM's 50th anniversary		Uncertainty Quant. and Stochastic Modeling		
09:40 - 09:45	5 min break	5 min break	5 min break	5 min break	5 min break
09:45 - 11:05	Conference speaker: Mechanical Engineering - Tailoring the future		Uncertainty Quant. and Stochastic Modeling		
11:05 - 11:15	10 min break	10 min break	10 min break	10 min break	10 min break
11:15 - 12:20			Uncertainty Quant. and Stochastic Modeling		
12:20 - 13:30	lunch	lunch	lunch	lunch	lunch
13:30 - 14:20	Keynote speaker	Keynote speaker	Round table: The mechanical engineer	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break	for the future 13:30 - 14:35	5 min break	5 min break
14:25 - 15:45			5 min break		
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00					
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Informative lectures	Keynote speaker	Keynote speaker	ABCM/ EMBRAER Prize	Closing session
18:05 - 18:10	5 min break	5 min break	5 min break	5 min break	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	





UQSM - Uncertainty Quant. and Stochastic Modeling					
Wedn	Wednesday 24 Room 11				
Time	Code	Title	Presenter		
UQSM We1		Bayesian, Fuzzy, and Interval Methods & Probabilistic Modelling and Analysis, Simulation, and Soft Computing	Chair: Roberta de Queiroz Lima		
08:35	1621	QUANTIFYING SPATIAL UNCERTAINTY AND INFERRING THE STOCHASTIC WAVE ATTENUATION IN PERIODIC FRAME STRUCTURES	Luiz Henrique Marra da Silva Ribeiro		
08:50	1669	BAYESIAN PROBABILISTIC APPROACH FOR RAILWAY BRIDGE MODEL UPDATING	Thiago Fernandes		
09:05	0249	RESERVOIR CHARACTERIZATION COMPARING DIFFERENT ENSEMBLES METHODS	Vinicius Mattoso Reis Da Silva		
09:20	1152	VERIFYING EXPLAINABILITY OF STEAM GENERATOR EFFICIENCY PREDICTION WITH SHAP VALUE INTERPRETATION	Lara Werncke Vieira		
UQSM	We2	Probabilistic Modelling and Analysis, Simulation, and Soft Computing & Risk Analysis and Risk Management	Chair: Rafael Holdorf Lopez		
09:45	1309	STEAM GENERATOR EFFICIENCY SIMULATION WITH A MULTI- FIDELITY APPROACH	Augusto Delavald Marques		
10:00	2133	ENGINEERING RELIABILITY APPLIED TO A LINE OF PACKING MACHINES	André Miranda		
10:15	0870	STATISTICAL CONTROL AND FAILURE ANALYSIS IN AGRICULTURAL MACHINERY FLEET	Felipe Corrêa de Melo		
10:30		Symposium Speaker: Decision-theoretic global sensitivity analysis	Prof. Daniel Straub		
10:45		Symposium Speaker: Decision-theoretic global sensitivity analysis	Prof. Daniel Straub		
UQSM	We3	Probabilistic Modelling and Analysis, Simulation, and Soft Computing & Industrial Application of Uncertainty Quantification	Chair: Adriano Fabro		
11:15	2312	PARAMETRIC PROBABILISTIC MODELS FOR PREDICTING CREEP REMAINING USEFUL LIFE	Victor Maudonet		
11:30					
11:45					
12:00					

