COBEM 2021

26th International Congress of Mechanical Engineering

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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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 / Informative lectures	Symposium poster sessions / Keynote speaker	Symposium poster sessions / Keynote speaker	Symposium poster sessions / 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	

COBEM 2021 26th International Congress of Mechanical Engineering

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 - Tailoring 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
17:05 - 18:05	Informative lecture 1: ABCM - Da Fundação à Consolidação (In Portuguese) Chair: Henrique Simas, UFSC	Prof. Sergio Viçosa Möller, UFRGS (ROOM 8)
	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 1**
Time	Title	Speakers
13:30 - 14:20	Keynote speaker: Modelling, Simulation, and Experimental Research for System Development Chairs: Prof. Victor J. De Negri, UFSC ; Prof. Emilia Villani, ITA	Prof. Fernando Catalano, USP-SC Prof. Petter Krus, LiU
17:05 - 18:05	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 Sessions		
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	

General Sessions		
Thursday 25		**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 Sessions		
Friday 26		**Room 1**
Time	Code	Presenter
13:30 - 14:20	Keynote speaker:Towards future mobility; safer and more sustainable transportation Chair: Prof. Milton Pereira, UFSC	Dr. Lisa Abom, Nira Dynamics
17:05 - 18:05	Closing Session	Prof. Sergio L. Gagioni, UFSC Prof. Henrique Simas, UFSC

Short Courses			
Tuesday 23			
Time	Title	Lecturer	Room
07:30 - 08:30	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
	Patent search methods and tools (Course in Portuguese)	Prof. Estevan Hideki Murai, UFSC	3
	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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Time	Title	Lecturer	Room
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ABCM Committee Meetings			
Monday 22			
Time	ABCM Committee	Chair	Room
18:10 - 19:10	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
	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			
Tuesday 23			
Time	ABCM Committee	Chair	Room
18:10 - 19:10	Aerospace Engineering	Elmer M. Gennaro Talita Possamai	2
	Bioengineering	Rodrigo Roesler Edson Capello Sousa	3
	Dynamics	Paulo Roberto G. Kurka Andre Fujarra	4
	Manufacturing Engineering	Pablo Deivid Valle Joao Carlos Espindola Ferreira	9
	Nuclear Engineering	Renato Machado Cotta	6
	Offshore and Petroleum Engineering	Celso Morooka Emilio Paladino	10
	Smart Materials and Structures	Marcelo Amorim Savi Paulo Wendhausen	8
	Thermal Sciences	Felipe Roman Centeno Marcia Mantelli	5
	Uncertainty Quantification and Stochastic Modeling	Rubens Sampaio Rafael Holdorf Lopez	11

Program Overview and Aerospace Engineering

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08:35 - 09:40		Aerospace Engineering	Aerospace Engineering	Aerospace Engineering	Aerospace Engineering
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	
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14:25 - 15:45	Aerospace Engineering	Aerospace Engineering	5 min break Aerospace Engineering	Aerospace Engineering	
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15:55 - 17:00	Aerospace Engineering	Aerospace Engineering	Aerospace Engineering	Aerospace Engineering	
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AERO - Aerospace Engineering			
Monday 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	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 E-Poster		Aerodynamics & Aerospace Structures	Chair: Talita Possamai
17:05 to 18:05	0959	BLADE ELEMENT MOMENTUM SIMULATIONS USING POLARS EXTRACTED FROM WIND-TURBINE-MODEL EXPERIMENTS	Pedro Trombini Rodrigues
	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 Schurgelies de Sá
	1940	AEROTERMODYNAMIC HEATING IN THE COMPRESSION SECTION OF A SCRAMJET DEMONSTRATOR UNDER BALLISTIC TRAJECTORY	Pedro Paulo Batista de Araújo
	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 Fernandes

AERO - Aerospace Engineering			
Tuesday 23			**Room 2**
Time	**Code**	**Title**	**Presenter**
AERO Tu1		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 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 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 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 Braga 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 Sohsten
15:25	1901	THERMODYNAMIC ANALYSIS OF THE HYPERSONIC FLOW OVER A SCRAMJET DEMONSTRATOR CONSIDERING DIFFERENT GAS MODELS	Ramon Carneiro
AERO Tu5		Aerodynamics & Aerospace Structures	Chair: Alysson Nunes Diógenes
15:55	1978	RECEPTIVITY OF ACOUSTIC WAVES ON LOCALIZED ROUGHNESS IN COMPRESSIBLE LAMINAR BOUNDARY LAYERS	Pedro Henrique Rosa dos Santos
16:10	2265	EXPERIMENTAL STUDY OF THE TRANSIENT RESPONSE OF A LAMINAR SEPARATION BUBBLE	omar elias horna pinedo
16:25	0478	NUMERICAL NON-LINEAR STRUCTURAL ANALYSIS OF A ROTARY BLADE UNDER AERODYNAMIC LOAD	André Florentino Ribeiro
16:40	0519	APPLICATION OF ARTIFICIAL NEURAL NETWORKS IN DAMAGE DETECTION	Matheus Janczkowski Fogaça
AERO E-Poster		Flight Dynamics & Propulsion	Chair: Antonio Dourado
17:05 to 18:05	0158	OPTIMAL TIME-FIXED EARTH-MOON TRAJECTORIES	Luiz Arthur Gagg Filho
	0159	SEMI-ANALYTIC FIRST-ORDER SOLUTION FOR OPTIMAL LOW-THRUST TRAJECTORIES AROUND MOON	Sandro da Silva Fernandes
	0598	MODELING, SIMULATION AND CONTROL OF QUADROTOR FOR TRANSPORTATION OF A LOAD SUSPENDED BY A CABLE.	Gabriel Gomes Passos
	0157	NUMERICAL ANALYSIS OF A SCRAMJET COMBUSTION CHAMBER	João Vitor Siqueira
	0506	STUDY OF THE REGRESSION RATE IN HYBRID PROPELLANT ROCKET ENGINES USING A CFD TOOL	Matheus Henrique Pacheco

17:05 to 18:05	0883	MEASUREMENT OF THE REGRESSION RATE IN A LAB-SCALE HYBRID ROCKET MOTOR BY ACQUIRING THE HELMHOLTZ FREQUENCY IN THE COMBUSTION CHAMBER	Isabel Matos
	1020	COMPARATIVE ANALYSIS OF THE FLOW INSIDE A SUPERSONIC COMBUSTION TEST BENCH USING TWO DIFFERENT LENGTHS FOR THEIR VICIATED AIR GENERATOR	Taiana Cortes

Wednesday 24			Room 2
Time	**Code**	**Title**	**Presenter**
AERO 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 Possamai
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 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 CONTROL	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 - Aerospace Engineering			
Thursday 25			**Room 2**
Time	**Code**	**Title**	**Presenter**
AERO Th1		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 Th2		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 OPTIMIZATION TOOL	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 Th3		Flight Dynamics & Propulsion	Chair: Diego Fernando Moro
11:15	0858	NEURAL NETWORKS FOR AERODYNAMIC MODELING IN FLIGHT SIMULATIONS	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 Chaves
AERO Th4		Propulsion	Chair: Alysson Nunes Diógenes
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 Janene 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 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 - Aerospace Engineering			
Friday 26			**Room 2**
Time	**Code**	**Title**	**Presenter**
AERO 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	0495	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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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	

COBEM 2021 26th International Congress of Mechanical Engineering

BIOE - Bioengineering			
Monday 22			**Room 3**
Time	**Code**	**Title**	**Presenter**
BIOE Mo1		Biofluids Dynamics e Bioheat Transfer	Chair: Carlos Rodrigo de Mello Roesler
11:15	0889	ANALYSIS OF DEFORMATION IN A REAL ARTERIOVENOUS FISTULA: IN SILICO STUDY	Jonhattan Ferreira Rangel
11:30	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 Mo2		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 Mo3		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	Iago Lessa de Oliveira
BIOE E-Poster		Biofluids Dynamics e Bioheat Transfer & Biomaterials and Biotribology & Biorobotics and Artificial Intelligence	Chair: Prof. Eduardo Guy Perpétuo Bock
17:05 to 18:05	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
	1388	HEMODYNAMICS ALTERATIONS INDUCED BY CENTRAL VENOUS CATHETER IN VASCULAR ACCESS FOR HEMODIALYSIS	Saulo Gonçalves
	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

BIOE - Bioengineering			
Tuesday 23			**Room 3**
Time	**Code**	**Title**	**Presenter**
BIOE Tu1		Biomechanics	Chair: Prof. Jakson Manfredini
08:35	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
09:05	1002	DEVELOPMENT OF A SYSTEM FOR BIOMECHANICAL ASSESSMENT OF HUMAN GAIT IN CLINICAL SETTINGS	Claysson Vimieiro
09:20	1122	VISCOELASTIC MODELING OF PORCINE LIGAMENTS	Bruno Mello Silveira
BIOE Tu2		Biomechanics & Biorobotics and Artificial Intelligence	Chair: Prof. Jakson Manfredini
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			
BIOE Tu3		Biorobotics and Artificial Intelligence	Chair: Prof. Daniel Ponce
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 Tu4		Implants, Orthoses and Prostheses	Chair: Prof. Daniel Ponce
14:25	1037	ELBOW MODULE VALIDATION OF A ROBOTIC ORTHOSIS FOR STROKE REHABILITATION	Guilherme de Paula Rúbio
14:40	1282	MYOELECTRIC HAND PROSTHESIS CONTROL CONSIDERING INTERPHALANGEAL STIFFNESS	Jean Mendes Nascimento
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			
BIOE Tu5		Biomechanics	Chair: Prof. Daniel Ponce
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

17:05 to 18:05	0234	EXPERIMENTAL PROCEDURE FOR ESTIMATION OF POISSON FUNCTION OF HIPERELASTIC ANISOTROPIC MATERIAL	João Carlos Andrade de Deus 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
	0456	PARAMETRIC ANALYSIS OF A UNITARY DENTAL PROSTHESIS OVER-IMPLANT USING FINITE ELEMENT MODELS	Matheus Andrade
	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

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08:30 - 08:35	Opening session: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40			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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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 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	

COMB - Combustion			
Wednesday 24			**Room 3**
Time	**Code**	**Title**	**Presenter**
COMB 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
COMB We2		Chemical Kinetics and Modeling & Turbulent Flames	Chair: Loreto Pizzuti
09:45			
10:00	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**
COMB 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 Campos
COMB We4		Combustion, Pyrolisis and Gasification of Solids and Liquids	Chair: PAULO ROBERTO WANDER
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
COMB 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
COMB E-Poste		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-CONVERSION	Letícia Colletta

17:05 to 18:05	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
	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 - Combustion			
Thursday 25			**Room 3**
Time	**Code**	**Title**	**Presenter**
COMB Th1		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**
COMB Th4		Solid Fuel Combustion & Soot, Nanomaterials, and Large Molecules & Stationary Combustion Systems and Control of Greenhouse Gas Emissions	Chair: Fernando Sacomano
14:25	0343	EXPERIMENTAL AND NUMERICAL STUDY OF COAL AND BIOMASS CO-FIRING IN A DROP TUBE FURNACE	Amanda Tavares de Oliveira
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 GENERATOR UNIT: A CASE STUDY	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 Overview and Dynamics, Control, Vibrations, and Acoustics

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08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		5 min break	5 min break
14:25 - 15:45	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	5 min break Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	Dynamics, Control, Vibrations, and Acoustics	
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COBEM 2021 26th International Congress of Mechanical Engineering

DCVA - Dynamics, Control, Vibrations, and Acoustics			
Monday 22			**Room 4**
Time	**Code**	**Title**	**Presenter**
DCVA Mo1		Acoustics and vibroacoustics	Chair: José Maria (FEM/UNICAMP)
11:15	0197	LOW-FREQUENCY SOUND ABSORPTION WITH BANDWIDTH	Erasmo Felipe Vergara
11:30	0989	EVALUATION OF ESTABLISHED AND NOVEL METHODS USED IN COMPLEX VIBRO-ACOUSTICS ANALYSIS	Thiago Morhy
11:45	1053	DIFFERENTIAL EVOLUTION OPTIMIZATION OF PERIODIC MICRO-PERFORATED CHAMBER MUFFLERS FOR LOW-FREQUENCY SOUND ATTENUATION	Adriano Goto
12:00	1087	ASSESSMENT OF DEEP TRANSFER LEARNING FOR SPEECH TRANSMISSION INDEX PREDICTION	Eriberto Oliveira do Nascimento
DCVA Mo2		Acoustics and vibroacoustics	Chair: José Roberto Arruda (FEM/UNICAMP)
14:25			
14:40	1343	TRANSMISSION LOSS OF DECORATED MEMBRANE RESONATORS PANELS USING MODAL-BASED NUMERICAL METHODS: A COMPARISON	Pedro Cerântola
14:55	1928	INFLUENCE OF HIGH INFLOW TURBULENCE ON THE AIRFOIL BOUNDARY LAYER AND WALL PRESSURE SPECTRUM	Jose Rendón-Arredondo
15:10	1934	AERODYNAMIC AND ACOUSTIC CHARACTERIZATION OF A 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**
DCVA Mo3		Control of Mechanical Systems	Chair: Tiago Machado (FEM/UNICAMP)
15:55	0026	DESIGN AND MANUFACTURE OF A TEST BENCH FOR INDUCING RESONANT REGIMES IN BEAMS OF ROTARY MACHINERY SUPPORT	Alexandre de Macêdo Wahrhaftig
16:10	0297	A ROBUST STRATEGY TO STABILIZE AIRCRAFT LANDING GEAR SHIMMY UNDER STRUCTURAL UNCERTAINTIES	Luis Eduardo Prado Pereira
16:25	0601	OPTIMAL CONTROL BASED ON THE REDUCED-ORDER MODEL OF A PARALLEL MANIPULATOR WITH FLEXIBLE LINKS	Fernanda Thaís Colombo
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		Acoustics and vibroacoustics & Control of Mechanical Systems & Dynamics of Mechanical Systems & Rotordynamics & Structural dynamics and vibrations	Chair: Tiago Machado
17:05 to 18:05	0742	ANALYSIS AND CLASSIFICATION OF THE CAVITATION LEVEL IN CENTRIFUGAL PUMPS USING ARTIFICIAL NEURAL NETWORKS OF	Tobias Anderson Guimarães
	0796	PARAMETRIC STUDY OF HELMHOLTZ RESONATORS IN ACOUSTIC CAVITIES	Derick Fernandes
	1082	QUANTIFICATION OF CLASSROOM DESIGN OVER SPEECH INTELLIGIBILITY INDEX AND REVERBERATION TIME THROUGH DEEP 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
	1074	PERFORMANCE AND ROBUSTNESS COMPARISON OF FUZZY TYPE-2 AND OPTIMAL CONTROLLERS IN ROBOTIC JOINT POSITIONING	Renato Aguiar
	2006	THE DESTRUCTIVE POWER OF UNBALANCE ON ROTATING MACHINES - CASE STUDY AND EXPERIMENTAL APPLICATIONS	Marcelo dos Reis Farias
	0861	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

DCVA - Dynamics, Control, Vibrations, and Acoustics			
Tuesday 23			**Room 4**
Time	**Code**	**Title**	**Presenter**
DCVA Tu1		Control of Mechanical Systems	Chair: Ely Paiva
08:35	0702	DISTURBANCE OBSERVER OF AN UAV WITH A SUSPENDED PAYLOAD	Renan Silva
08:50	0713	SELF-SENSING ACTIVE VIBRATIONS CONTROL USING 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
09:20	**0994**	**Session Speaker: FORMATION GUIDANCE OF FULLY ACTUATED MULTIROTOR AERIAL VEHICLES USING GLOBAL SLIDING MODES**	**Jorge Antonio Ricardo Junior**
DCVA Tu2		Control of Mechanical Systems & Dynamics of Mechanical Systems	Chair: Ely Paiva
09:45	1808	SYSTEM IDENTIFICATION AND CONTROLLER DESIGN FOR THE HIGH-DYNAMIC DOUBLE-CRYSTAL MONOCHROMATOR AT SIRIUS	Niederauer Mastelari
10:00	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
11:30	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
14:25	0891	STATIC EQUILIBRIUM ANALYSIS OF A DISTRIBUTION LINE RIDING ROBOT WITH PASSIVE BALANCING SYSTEM	Gustavo Fernandes
14:40	1681	INTRODUCTION OF CONCEPTS AND REVIEW OF THE FREE PISTON 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 CONNECTED BY BOLTS-JOINT	Jefferson Coelho
16:25	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

17:05 to 18:05	2325	ON THE FREQUENCIES FOR STRUCTURAL HEALTH MONITORING IN PLATES WITH SYMMETRICAL DAMAGE: AN ANALYTICAL APPROACH	Kayc Wayhs Lopes
	2330	QUARTER-WAVELENGTH RESONATOR METAMATERIAL MODELING VIA WAVE FINITE ELEMENT METHOD	BRENNO VICTOR LIMA CAMPOS
	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 - Dynamics, Control, Vibrations, and Acoustics			
Wednesday 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	Iago 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 - Dynamics, Control, Vibrations, and Acoustics			
Thursday 25			**Room 4**
Time	**Code**	**Title**	**Presenter**
DCVA Th1		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 Th2		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 Th3		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 Th4		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 Th5		Structural dynamics and vibrations & Vehicle dynamics	Chair: Rodrigo Nicoletti
15:55	2336	ELASTIC WAVE BAND GAPS IN 2D FRACTAL PHONONIC CRYSTALS	Victor Gustavo Ramos Costa 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 - Dynamics, Control, Vibrations, and Acoustics			
Friday 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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		5 min break	5 min break
14:25 - 15:45	Energy and Thermal Sciences (two rooms)	Energy and Thermal Sciences	5 min break Energy and Thermal Sciences	Energy and Thermal Sciences	Energy and Thermal Sciences
15:45 - 15:55	10 min break	10 min break		10 min break	10 min break
15:55 - 17:00	Energy and Thermal Sciences (two rooms)	Energy and Thermal Sciences	Energy and Thermal Sciences	Energy and Thermal Sciences	Energy and Thermal Sciences
17:00 - 17:05	5 min break	5 min break	5 min break	5 min break	5 min break
17:05 - 18:05	Energy and Thermal Sciences / Informative lectures	Energy and Thermal Sciences / Keynote speaker	Energy and Thermal Sciences / 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	

COBEM 2021 26th International Congress of Mechanical Engineering

ENTS - Energy and Thermal Sciences			
Monday 22			**Room 5**
Time	**Code**	**Title**	**Presenter**
ENTS Mo1		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	COMMISSIONING OF AN EXPERIMENTAL BENCH TO DETERMINE THE INTERNAL HEAT TRANSFER COEFFICIENT IN ROTATING TUBES DURING THE QUENCHING PROCESS	Kássio Nogueira Cançado
12:00	0941	EFFICIENCY ESTIMATION OF A CAPACITIVE DISCHARGE WELDING PROCESS IN THERMOCOUPLES	Fabio Faria
ENTS 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 Mo3		Applied Heat and Mass Transfer	Chair: Marcia Mantelli
15:55	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**	**Larissa Krambeck**
ENTS E-Poster		Applied Heat and Mass Transfer & Heat and Mass Transfer Fundamentals & Nuclear Energy & Numerical Heat Transfer	Chair: Kleber Lisboa
17:05 to 18:05	1205	THEORETICAL ANALYSIS AND DETERMINATION OF HYDRODYNAMIC AND THERMAL BOUNDARY LAYERS THROUGH OF GENERALIZED INTEGRAL TRANSFORM TECHNIQUE	Marinaldo Medeiros
	1239	COMPARATIVE ANALYSIS OF VITRIFICATION TECHNIQUES WITH SLUSH NITROGEN AND LIQUID NITROGEN USING NUMERIC SIMULATIONS (CFD)	Massoxi Cuiêca
	1454	THERMAL ANALYSIS OF BRAKE DISCS OF A BAJA SAE PROTOTYPE	Jéssica Santos de Oliveira
	1986	IDENTIFICATION OF CONTACT FAILURES IN COMPOSITE MATERIALS VIA BAYESIAN INFERENCE AND REDUCED MODELS	Luiz A. S. Abreu
	2054	NUMERICAL SIMULATION OF THE INFLUENCE OF THERMAL SOURCE ON THERMAL ABLATION	Lucas Gouveia Bontempo
	1203	PROGRESS OF THE ENHANCED CONDUCTIVITY FUELS USING UO2-GRAPHENE	daniel de souza gomes
	1315	ASSESSMENT OF ADVANCED FERRITIC ALLOYS USED AS CLADDING MATERIALS IN NUCLEAR POWER REACTORS	daniel de souza gomes
	1332	PERFORMANCE OF THORIUM BASED FUEL UNDER REGULAR CONDITIONS AND ACCIDENT SCENARIOS IN POWER REACTORS	daniel de souza gomes
	0092	THERMAL NUMERICAL ANALYSIS OF AN AIRCRAFT WING USING AN UNSTRUCTURED MESH IN CUDA-C	Durval Marques de Queiroz Neto
	0648	NUMERICAL COMPARATIVE STUDY OF HEAT EXCHANGER COILS	Ramon Carneiro
	1024	MATHEMATICAL MODELING OF RECUPERATIVE HEAT EXCHANGER	Diego de Lima Sousa

	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

ENTS - Energy and Thermal Sciences			
Tuesday 23			**Room 5**
Time	**Code**	**Title**	**Presenter**
ENTS Tu1		Applied Heat and Mass Transfer	Chair: Alexandre Kupka
08:35	1248	DEVELOPMENT OF A TEST SECTION FOR DETERMINATION OF LOCAL HEAT TRANSFER COEFFICIENT DURING IN-TUBE FLOW	Brunno Abreu da Fonseca Vargas
08:50	1337	THERMAL ANALYSIS OF A PERMANENT MAGNET SYNCHRONOUS GENERATOR FOR A 10 MW WIND TURBINE	Gabriel Fernandes Bravo
09:05		**Symposium Speaker: Loop heat pipes – highly efficient heat transfer devices: development and application**	**Prof. Yury Maydanik**
09:20		**Symposium Speaker: Loop heat pipes – highly efficient heat transfer devices: development and application**	**Prof. Yury Maydanik**
ENTS Tu2		Applied Heat and Mass Transfer & Computational Intelligence Applied to Thermal Systems	Chair: Felipe Centeno
09:45	0125	IMPLEMENTATION OF A SUPERVISORY SYSTEM WITH LAMBDA WIDEBAND SENSOR FOR ANALYSIS OF OXYGEN CONCENTRATION IN INDUSTRIAL COMBUSTION PROCESSES	João Vitor Silva
10:00	2257	APPLICATIONS OF NEURAL NETWORKS INTO HEAT EXHANGERS TYPE PCHE	Lucas Rangel Freire
10:15	1784	UNCERTAINTIES ASSESSMENT ON THE INFRARED THERMOGRAPHY CALIBRATION TECHNIQUES	Victor Eduardo Corte Baptistella
10:30	1827	INTERACTION BETWEEN NATURAL CONVECTION AND SURFACE RADIATION IN A LOW ASPECT RATIO RECTANGULAR ENCLOSURE WITH DIFFERENT WALL EMISSIVITIES	Eduardo Güths
10:45	**2258**	**Session Speaker: THERMODYNAMIC-BASED, ONE-DIMENSIONAL PIPELINE WAX DEPOSITION MODEL**	**Fabio Junior**
ENTS Tu3		Heat and Mass Transfer Fundamentals	Chair: Felipe Centeno
11:15	0010	ON THE CONJUGATED HEAT TRANSFER PROBLEMS INVOLVING FILM CONDENSATION IN THE PRESENCE OF A NONCONDENSABLE GAS	Karoline da Costa Rocha Fernandes Ferreira
11:30	0291	GENERATION OF C-DISTRIBUTIONS FOR THE BANDED-SLW MODEL	Guilherme Fraga
11:45	0529	HEAT TRANSFER ANALYSIS OF A SOLID-PROPELLANT ROCKET COMBUSTION CHAMBER	José Felipe Alves Avelino
12:00	0683	AN EXPERIMENTAL TECHNIQUE FOR THE SIMULTANEOUS ESTIMATION OF THERMAL PROPERTIES OF METALS AS FUNCTIONS OF TEMPERATURE	Mariana de Melo Antunes
ENTS Tu4		Heat and Mass Transfer Fundamentals & Nuclear Energy	Chair: Felipe Centeno
14:25	0887	DEVELOPMENT AND COMPARISON OF EXPERIMENTAL EMISSIVITY MEASUREMENT METHODS: APPLICATION TO SURFACES FOUND IN OFFSHORE FLARES	Pedro Oliveira
14:40	1708	DISCRETIZATION OF A BI-FLUX DIFFUSION EQUATION USING THE FINITE VOLUME METHOD	Gisele Moraes Marinho
14:55	1961	EXPERIMENTAL EVALUATION OF THERMAL PERFORMANCE AND INTERNAL PRESSURE OF THERMOSYPHONS USING GRAPHENE OXIDE NANOFLUID	Victor Vaurek Dimbarre
15:10	0475	AUTOMATED MACHINE LEARNING APPROACH APPLIED TO NUCLEAR ENERGY GENERATION SHORT-TERM FORECASTING	Jorge Gustavo Sandoval Simão
15:25	1891	TRANSIENT THERMAL DIFFUSION AND TEMPERATURE DISTRIBUTION OF A CYLINDRICAL FUEL PALLET SHIFTED RADIALLY IN A PRESSURIZED WATER REACTOR	Felipe Timoteo
ENTS Tu5		Numerical Heat Transfer	Chair: Kleber Lisboa
15:55	0085	DETERMINATION OF HEATING AND COOLING RATES OF HEAT AFFECTED ZONE (HAZ) IN LASER WELDING PROCESSES	Ariel Flores Monteiro de Oliveira
16:10	0145	CONSTRUCTAL DESIGN APPLIED TO A MICROCHANNEL WITH TWO MOUNTED TRAPEZOIDAL BLOCKS SUBJECTED TO LAMINAR BOILING FLOWS	Bruno Feijó
16:25	0149	CFD ANALYSIS OF A SHELL AND TUBE HEAT EXCHANGER AS THERMAL ENERGY STORAGE UNIT	Diogo Zidan
16:40	0210	MULTI-BLOCK LATTICE BOLTZMANN METHOD APPLIED TO CONDUCTION IN TWO SOLIDS WITH LARGE DIFFERENCE BETWEEN THERMAL DIFFUSIVITIES	Ivan Martins
ENTS E-Poster		Renewable Energy & Thermodynamics and Thermal Systems	Chair: Saulo Guths
	0021	HYDROGEN GENERATION THROUGH ELECTROLYSIS OF WATER INDUCED BY SOLAR ENERGY	Diego Jhovanny Mariños Rosado

17:05 to 18:05	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
	0302	COMPARISON OF LIPID EXTRACTION USING PURE HEXANE AND A MIXTURE OF HEXANE AND ETHANOL AS EXTRACTION SOLVENTS FOR MICROALGAE	Heloísa da Silva
	0303	USE OF EXHAUST GASES FOR SUGARCANE BAGASSE DRYING	Ramires Silva
	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 - Energy and Thermal Sciences			
Wednesday 24			**Room 5**
Time	**Code**	**Title**	**Presenter**
ENTS We1		Numerical Heat Transfer	Chair: Kleber Lisboa
08:35	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 We2		Numerical Heat Transfer	Chair: Kleber Lisboa
09:45	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
10:45	0982	A NUMERICAL STUDY ON THE INFLUENCE OF THE ATMOSPHERIC WIND IN THE FIRE DYNAMICS AND HEAT TRANSFER IN A COMPARTMENT FIRE	Calisa Lemmertz
ENTS We3		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 We4		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
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 We5		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
16:40	0235	ECONOMIC ANALYSIS OF PV-T COLLECTORS IN BRAZIL	Matheus Buss
ENTS E-Poster		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
	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 RESOURCES IN INDUSTRIAL FACILITIES - A REVIEW	Michelle Moreira
	1951	MATHEMATICAL MODELING AND SIMULATION OF MICROALGAE GROWTH IN SERIAL AIRLIFT PHOTOBIOREACTOR	Murilo Gasparin Rampi

17:05 to 18:05	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
	2046	FEASIBILITY ANALYSIS AND IMPLEMENTATION OF AN ALTERNATIVE SOLAR HEATER FOR LOW AND MIDDLE INCOME FAMILIES IN THE ABAETÃ© REGION	Franciane Cristina Rodrigues Carvalho
	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 and Thermal Sciences			
Thursday 25			**Room 5**
Time	**Code**	**Title**	**Presenter**
ENTS Th1		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 Th2		Renewable Energy	Chair: Julio Passos
09:45	0359	EXERGY ANALYSIS OF A HYDROGEN PRODUCTION PLANT WITH CO2 CAPTURE	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 Th3		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 Neumann
12:00	1000	CFD SIMULATION OF FLOATINGÂˆBODY DYNAMICS FOR ENERGY CONVERSION USING OPENFOAM	Nicollas Freitas
ENTS Th4		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 Neto
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 IRRADIANCE SPECIFICATION METHODS	João Humberto Serafim Martins
15:25	1222	EXPERIMENTAL INVESTIGATION ABOUT EDISON TYPE THERMOMAGNETIC MOTORS BEHAVIOR OPERATING WITH A SMALL TEMPERATURE GRADIENT	Carlos Vinicius Xavier Bessa
ENTS Th5		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

17:05 to 18:05	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
	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
	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 and Thermal Sciences			
Friday 26			**Room 5**
Time	**Code**	**Title**	**Presenter**
ENTS Fr1		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 Fr2		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 PLANTS	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 Fr3		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 Fr4		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
15:10	0228	INTENSIFICATION OF THE THERMO-PHYSICAL PROPERTIES OF HYDRATED LIME AND GYPSUM COMPOSITES WITH GRAPHITE MICRO-SCALE PARTICLES	Ítalo Guilherme
15:25			
ENTS Fr5		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 CYCLES THROUGH THE SECOND LAW OF THERMODYNAMICS	Vinicius Akyo Matsuda
16:40	0605	AN EXTENDED AXIAL MOMENTUM ANALYSIS FOR STEAM TURBINES	Davi Oliveira

ENTS - Energy and Thermal Sciences			
Monday 22			**Room 6**
Time	**Code**	**Title**	**Presenter**
ENTS Mo1		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 Mo2		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 INHIBITED BY ISOPROPANOL AND SODIUM CHLORIDE	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 Mo3		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 Meneghel Lino
16:40	1714	DEVELOPMENT OF HEAT AND MASS TRANSFER MODELLING FOR COUNTER-FLOW COOLING TOWER	Andre Chun

ENTS - Energy and Thermal Sciences			
Tuesday 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 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 - Energy and Thermal Sciences			
Thursday 25			**Room 6**
Time	**Code**	**Title**	**Presenter**
ENTS E-Poster		Thermo-Economic Analysis and Energy Policy & Renewable Energy	Chair: Marcia Mantelli
17:05 to 18:05	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 SÃƑO MATEUS Â€“ ESÂ€¯	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
	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
	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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40			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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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 Design / 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	

COBEM 2021 26th International Congress of Mechanical Engineering

ENGD - Engineering Design			
Wednesday 24			**Room 6**
Time	**Code**	**Title**	**Presenter**
ENGD We1		Case Studies and Industrial Experiences in Engineering	Chair: Zilda de Castro Silveira
08:35			
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 FOR ADDITIVE MANUFACTURING	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
10:30	**2353**	**Symposium Speaker: Digital technologies in a machining automotive 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			
14:55	0675	MATHEMATICAL MODELLING, COMPUTATIONAL FLUID DYNAMICS WITH ANSYS CFX AND EXPERIMENTAL ANALYSIS OF A HOVERCRAFT PROTOTYPEÂ€™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 Janene 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 ACTIVITIES	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 Project Management & Design Process, Methodology, Methods, and Tools	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 SÃƑO MATEUS	Bruno de Oliveira Schneider

17:05 to 18:05	2150	HYDRAULIC SYSTEM SIZING FOR GREYWATER REUSE IN TOILET FLUSHING	Igor Silveira
	2061	MAGNETIC REFRIGERATOR	Edigar Botelho
	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 Â€“ ADAPTION OF VAN FOR ELECTRIC PROPULSION AND DESIGN OF STEERING, COOLING AND BRAKING ASSISTANCE SUBSYSTEMS	João Wohlgemuth

ENGD - Engineering Design			
Thursday 25			**Room 6**
Time	**Code**	**Title**	**Presenter**
ENGD 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	Ivi 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 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 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 Th4		Design Process, Methodology, Methods, and Tools & Engineering Design + AI and Industry 4.0	Chair: Cristiano Vasconcellos Ferreira
14:25	1812	AN INTEGRATED SPACE SYSTEM DESIGN TOOL KIT FOR THE ITA SPACE CENTERÂ€™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 Caldas
15:25	**0037**	**Session Speaker: A NEW MULTI-OBJECTIVE OPTIMIZATION ALGORITHM INSPIRED BY LICHTENBERG FIGURES APPLIED TO ISOGRID STRUCURES**	**João Luiz Junho Pereira**
ENGD 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 - Engineering Design			
Friday 26			**Room 6**
Time	**Code**	**Title**	**Presenter**
ENGD 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 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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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 / Informative lectures	Fluid Mech. and Rheology / 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	

COBEM 2021 26th International Congress of Mechanical Engineering

FLMR - Fluid Mechanics and Rheology			
Monday 22			**Room 7**
Time	**Code**	**Title**	**Presenter**
FLMR Mo1		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 Mo2		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 Mo3		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-Poster		Computational Fluid Dynamics	Chair: Luís Orlando Emerich dos Santos
17:05 to 18:05	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 PUMPÂ€™S NUMERICAL SIMULATIONS FOR LIBRÂ€“H2O ABSORPTION REFRIGERATIONÂ€™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
	0265	NUMERICAL ANALYSIS OF A SAVONIUS TURBINE INSERTED IN OSCILLATING WATER COLUMN WAVE ENERGY CONVERTER	Andrei Santos
	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 Mechanics and Rheology			
Tuesday 23			**Room 7**
Time	**Code**	**Title**	**Presenter**
FLMR 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 ISOLATED VUGS	Monique Feitosa Dali
09:05	0409	COMPARISON BETWEEN AXISYMMETRIC AND 3D MODELS FOR THE EVALUATION OF DRAG ON SUBMARINE HULLS	Eduardo de Bittencourt Ribeiro
09:20	**0398**	**Session Speaker: NUMERICAL ANALYSIS OF FLOW IN A SUPERSONIC SEPARATOR NOZZLE WITH CENTRAL BODY**	**Thomaz Faccioli**
FLMR Tu2		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 Tu3		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
FLMR Tu4		Computational Fluid Dynamics	Chair: Juan Salazar
14:25	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 IN UNIFORM FLOW USING OPENFOAM	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 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-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

17:05 to 18:05	1744	CFD ANALYSIS OF PRESSURE VARIATIONS ON THE WASTE VALVE OF A HYDRAULIC RAM PUMP	Pedro Bottlender
	1943	INFLUENCE OF ASPECT RATIO AND WALL TEMPERATURE ON SMOKE EXHAUSTION IN A PRE-CHAMBER OF A SMOKE-PROOF STAIRCASE.	Airque Assis
	1952	ANALYSIS OF THE FLUID DYNAMICS OF A SPOUTED BED WITH AND WITHOUT DRAFT TUBE: MODELING AND SIMULATION	Ana Clara Nery
	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 Mechanics and Rheology			
Wednesday 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	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 Perocco
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 dos 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 Santos
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 Mechanics and Rheology			
Thursday 25			**Room 7**
Time	**Code**	**Title**	**Presenter**
FLMR Th1		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 Th2		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 Th3		Multi-phase Flow	Chair: Rafael F.L. de Cerqueira - UNICAMP
11:15	0809	NUMERICAL SIMULATION OF FLUID FLOW IN 2-D NATURALLY FRACTURED RESERVOIRS TENSORS USING THE EMBEDDED DISCRETE 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 de Cerqueira
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
FLMR Th4		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
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
15:25	1377	GAS-SOLID FLUIDIZED BEDS IN NARROW TUBES	Karlo Rocha
FLMR Th5		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 FORMATION AND DECAY	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 Mechanics and Rheology			
Friday 26			**Room 7**
Time	**Code**	**Title**	**Presenter**
FLMR Fr1		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 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 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 CARBOPOLÂ® 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 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 Carvalho
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 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 - Fluid Mechanics and Rheology			
Monday 22			**Room 11**
Time	**Code**	**Title**	**Presenter**
FLMR Mo1		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 Mo2		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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40				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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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	
18:10 - 19:10	ABCM committee meetings	ABCM committee meetings	Leonardo Goldstein Prize	ABCM Plenary	

FFSI - Fracture, Fatigue, and Structural Integrity			
Thursday 25			**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 Th2		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 Th3		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 da Silva Brasil
12:00	**1561**	**Session Speaker: FRETTING FATIGUE OF 6201 ALUMINUM ALLOY WIRES UNDER VARIABLE AMPLITUDE LOADING**	**Ian Matos**

FFSI - Fracture, Fatigue, and Structural Integrity			
Friday 26			**Room 11**
Time	**Code**	**Title**	**Presenter**
FFSI Fr1		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 Fr3		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 TRUCKÂ€™S CHASSIS	Tarcísio Augusto Santos Almeida
12:00	1696	SIMILARITY-BASED MODELS FOR TESTING VEHICLE ROOFS AGAINST CRUSHING DURING IMPACT EVENTS	João Marcos Hilário Júnior
FFSI Fr4		Structural Integrity	Chair: Chair: Carlos Chaves 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	Rodrigo Braga da silva
15:10		**Symposium Speaker: Fatigue Assessment and Stress Corrosion Cracking Challenges in Flexible Pipes for Oil and Gas Industry**	**Prof. Marcelo Favaro Borges**
15:25		**Symposium Speaker: Fatigue Assessment and Stress Corrosion Cracking Challenges in Flexible Pipes for Oil and Gas Industry**	**Prof. Marcelo Favaro Borges**

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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40				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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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. / 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	

COBEM 2021 26th International Congress of Mechanical Engineering

HVAR - Heat., Vent., Air-Cond., and Refrig.			
Wednesday 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 E-Poster		Ventilation & Refrigeration	Chair: Diogo Lôndero - UFSC
17:05 to 18:05	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
	0700	PARAMETRIC ANALYSES OF AN ABSORPTION REFRIGERATION SYSTEM WITH WATER AND LITHIUM BROMIDE IN STEADY STATE POWERED BY SOLAR ENERGY	Vitor Prendin
	0974	A REVIEW OF MECHANOCALORIC REFRIGERATION DEVICES FROM 2012 TO 2020	Gabriel Lucas Foleis
	0547	MODELING AND COMPUTATIONAL SIMULATION OF VAPOR COMPRESSION REFRIGERATION SYSTEMS IN THE QUASI-STEADY STATE REGIME	Leonardo Cavalheiro Martinez
	1662	PROJECT OF INSTALLATION ABSORPTION REFRIGERATOR 5 TR FOR THE CLIMATE OF A BUILDING	Flavio Junior Santiago Silva
	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.			
Thursday 25			**Room 8**
Time	**Code**	**Title**	**Presenter**
HVAR 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 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 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 INDUSTRIAL AIR-CONDITIONING SYSTEMS	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 e Silva
HVAR Th4		Air-conditioning & Ventilation	Chair: Christian Hermes - 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			

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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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. / Informative lectures	Materials and Manuf. Eng. / Keynote speaker	Materials and Manuf. Eng. / Keynote speaker	Materials and Manuf. Eng. / 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	

COBEM 2021 26th International Congress of Mechanical Engineering

MMEN - Materials and Manuf. Eng.			
Monday 22			**Room 9**
Time	**Code**	**Title**	**Presenter**
MMEN Mo1		Additive Manufacturing	Chair: Milton Pereira
11:15	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 PRODUCED BY ADDITIVE MANUFACTURING AS A FUNCTION OF PRINTING SPEEDS AND NUMBER OF PARTS PER CYCLE	Lucas Resende Gomes
12:00	0053	**Session Speaker: MILLING AND MAGNETIC ABRASIVE FINISHING OF DIRECTED ENERGY DEPOSITED-316L STAINLESS STEELS**	**Adriel Magalhães Souza**
MMEN 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
16:25	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
17:05 to 18:05	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 Â€ŒENGINEERING-TO-ORDERÂ€ IN COMMERCIAL VEHICLES SEGMENT	Andre Luiz Mota
	1359	PREDICTIVE ASSESSMENT OF THE TURNING TOOL WEAR USING ARTIFICIAL INTELLIGENCE	Vanessa Seriacopi
	1555	FLEXIBLE SUPPLY SYSTEM FOR AN ASSEMBLY LINE: A CASE STUDY TO OPTIMIZE THE FLOWS IN THE MANUFACTURING OF TRUCK CABINS	Carolina Sacramento
	1945	APPLICATION OF MAINTENANCE CONTROL AND PLANNING TOOLS IN A MANROD MILLER Â€“ MR 205	Matheus Gonçalves de Ataide
	0480	SUSTAINABLE PRODUCTION AND MECHANICAL CHARACTERIZATION OF EXTRUDED WOOD-PLASTIC COMPOSITE MADE FROM HDPE AND BABASSU FIBER	Felipe dos Anjos Rodrigues Campos
	0999	CHARACTERIZATION OF TI-35NB ALLOY OBTAINED BY POWDER METALLURGY USING HIGH PRESSURES	Thailler Machado Nunes da Silva
	0986	STUDY OF TI-35NB ALLOY PROCESSED BY POWDER METALLURGY USING CONVENTIONAL PRESSURES	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 - Materials and Manuf. Eng.			
Tuesday 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 DEPOSITION BEADS GEOMETRIES	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			
MMEN Tu3		Manufacturing Management & Materials Characterization and Processing	Chair: João Carlos Espíndola 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	Daniel Pezza Tchernov
15:25	0775	EVALUATION OF CEMENTED CARBIDE/HIGH SPEED STEEL COMPOSITE SINTERED BY PECS	Daniella Gualberto Caldeira de Paula
MMEN Tu5		Materials Characterization and Processing	Chair: Armando Albertazzi
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
16:25	1292	EFFECT OF LASER POWER MODULATION ON POROSITY AND RESIDUAL STRESSES OF SAE 1020 AND 4140 STEEL WELDS	Francisco Cavilha Neto

16:40	1295	CHARACTERIZATION OF HIGH MANGANESE STEEL (FE27MN1SI) SUBMITTED TO ABRASION WEAR TEST AND SOLUTION HEAT TREATMENT	Rafaela Luna Alencar
MMEN E-Poster		Materials Characterization and Processing	Chair: Armando Albertazzi
17:05 to 18:05	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 950Â°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
	1727	MATERIAL CHARACTERIZATION AND ANALYSIS OF CRITICAL FAILURE IN EGR COMPONENT FOR DIESEL PICKUP TRUCKS	Felipe dos Anjos Rodrigues Campos
	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 Reis
	2310	ASSESSMENT OF THE RESISTANCE OF A HARDOXÂ® 450 STEEL TO REDUCE THE WEAR OF A CENTRIFUGAL PUMP USED IN THE WATER TREATMENT PROCESS WITH MICRO-SAND	Marcus Galdino

MMEN - Materials and Manuf. Eng.			
Wednesday 24			**Room 9**
Time	**Code**	**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	Carla Tainara de Oliveira Lima
09:20	1479	IMPROVEMENT IN FIBER / MATRIX ADHESION THROUGH CHEMICAL TREATMENTS: A REVIEW	MICHEL GIFFONI SANTOS
MMEN We2		Materials Characterization and Processing	Chair:
09:45			
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	1923	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	André Chicoski
11:45	2137	CORROSION RESISTANCE OF COLD-DRAWN ZK60A MG-ALLOY AS A FUNCTION OF STRAIN-HARDENING	Pedro Brito
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:
14:40	2149	PROCESSING NIOBIUM SILICIDES COATINGS MODIFIED WITH COPPER	Beatriz Aparecida Pinto
14:55	1055	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	2083	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 INSPECTION OF AERONAUTICAL MATERIALS	José Faria
MMEN E-Poster		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 ABRASIVE WEAR IN THERMALLY TREATED AISI M2 STEEL	Matheus Gonçalves de Ataide

17:05 to 18:05	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 LIMAÃ‡ON APPROXIMATION AND A LIGHT DETECTION AND RANGING (LIDAR) SYSTEM	Vinicius Conti da Costa
	1015	DETERMINATION OF PHYSICAL COEFFICIENTS BY MONITORING DEFORMATION	Fernanda Novaes Santos
	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

MMEN - Materials and Manuf. Eng.			
Thursday 25			**Room 9**
Time	**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
09:20	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 Â®	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 Â€“ 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 Th4		Processes with Material Removal	Chair: Laurence Colares 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 França
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 32Â® 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 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 EXPECTROMETER FOR IN-SITU TRIBOLOGICAL ANALYSIS	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 E-Poster		Processes with Material Removal & Tribology & Union and Assembly Processes	Chair:

17:05 to 18:05	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
	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
	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 - 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 ROBOTSÂ€™ 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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40			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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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	

COBEM 2021 26th International Congress of Mechanical Engineering

MECH - Mechatronics and Automation			
Wednesday 24			**Room 10**
Time	**Code**	**Title**	**Presenter**
MECH We1		Robotics and Mechanisms	Chair: Daniel Martins
08:35	0467	GAIN ADJUSTMENT METHOD TO AVOID JACKKNIFE OF A MARV WITH TWO PASSIVE TRAILERS IN BACKWARD MOVEMENTS	Diego Bertolani
08:50	0557	LOW-COST DATA GLOVE FOR ROBOTIC HAND-FOREARM TELEOPERATION SYSTEMS APPLICATIONS	Lukas Gabriel Dias Gomes
09:05	1869	DIMENSIONAL OPTIMIZATION OF A PASSIVE GRIPPER FOR UAV 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**
MECH We2		Robotics and Mechanisms	Chair: Rogério Sales Gonçalves
09:45	0032	GLOBAL KINEMATIC RELIABILITY INDEX OF ROBOTIC MANIPULATORS	Fabian Andres Lara-Molina
10:00	0045	DESIGN OF A LOW-COST 3D PRINTED EDUCATIONAL ROBOT	Julio Cesar Frantz
10:15	0059	COMPARISON BETWEEN TWO SINGULARITY AVOIDANCE INDICES FOR PLANAR PARALLEL KINEMATICALLY REDUNDANT MANIPULATORS	Felipe Marques Farias Filho
10:30		**Symposium Speaker: Role and impact of Mechanism Design for robots**	**Prof. Marco Ceccarelli**
10:45		**Symposium Speaker: Role and impact of Mechanism Design for robots**	**Prof. Marco Ceccarelli**
MECH We3		Robotics and Mechanisms	Chair: Daniel Martins
11:15	0075	COMPARISON OF PATH PLANNING TECHNIQUES FOR AUTONOMOUS MOBILE ROBOTS	Arnaldo Roberto Rady Peron
11:30	0156	A ROBOTIC DEVICE FOR INSPECTING SMALL DIAMETER PIPES	Luiz Guilherme Dias de Barros
11:45	0424	IMPROVING COLLABORATION IN INDUSTRIAL ROBOTS FOR AERONAUTICAL MANUFACTURING TASKS	Glauco Caurin
12:00	0620	DEVELOPMENT OF A HIGH FIDELITY SPACE ROBOT GAZEBO-BASED SIMULATOR FOR SPACE CLOSE-PROXIMITY OPERATIONS EXPERIMENTS	Luiz Manoel Santos Santana
MECH We4		Robotics and Mechanisms	Chair: Jocarly P. de Souza (UPF)
14:40	0855	CHALLENGES AND OPPORTUNITIES OF ROBOTIZATION IN AGRICULTURAL GREENHOUSES	Lucas Bernardon Machado
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 MECHANISM	Reynaldo Santos de Lima
15:25	0908	DRIVING MOTIONS FOR WHEELED-LEGGED ROBOTS IN ROUGH TERRAIN USING 2D TRAJECTORY OPTIMIZATION	Vivian Suzano Medeiros
MECH We5		Robotics and Mechanisms	Chair: Lucas Weihmann
15:55	0978	ACCURACY ANALYSIS OF MULTIBODY SYSTEMS WITH JOINT CLEARANCE IN FOUR-BAR MECHANISMS	Rogério Sales Gonçalves
16:10	1080	HUMANOID WALKING FOR A ROBOT WITH CURVED FEET	Caroline Silva
16:25	1096	OPTIMIZING SWING FOOT TRAJECTORY OF HUMANOID ROBOT WALKING FOR ENERGY EFFICIENCY	Caroline Silva
16:40	1147	MODELING AND SIMULATING A COMMERCIAL ROBOTIC MANIPULATOR USING COPPELIASIM	Amanda Kozlowski de Morais

MECH - Mechatronics and Automation			
Thursday 25			**Room 10**
Time	**Code**	**Title**	**Presenter**
MECH Th1		Robotics and Mechanisms	Chair: Marcos Paulo Nostrani
08:35	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
09:05	1193	GRASP SYNTHESIS FOR A SPATIAL 6 DOF GRIPPER BASED ON ITS WRENCH CAPABILITY.	Leonardo Mejia Rincon
09:20	1243	DESIGN ASPECTS OF A SYSTEM FOR RESEARCH OF INTEGRATION OF COMPUTER VISION AND MACHINE LEARNING IN ROBOTICS	Carlos Rodrigues Rocha
MECH Th2		Robotics and Mechanisms	Chair: Rogério Sales Gonçalves
09:45	1375	A FOUR LEG ROBOT STABILITY ANALYSIS THROUGH A VIRTUAL ENVIRONMENT SIMULATION BASED IN DIRECT AND INVERSE KINEMATICS	Frederico Gomes Pires Azzolini
10:00	1494	VIRTUAL REALITY APPLICATION FOR SQUAT EXERCISE WITH ROBOTIC EXOSKELETON	David Zink
10:15	1576	COMPARATIVE ANALYSIS OF DIFFERENT MODELING APPROACHES ON CABLE-SUSPENDED PARALLEL ROBOTS	Fabiola da Silva Rosa
10:30	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
MECH Th3		Robotics and Mechanisms & Artificial Intelligent Applications	Chair: Estevan Murai
11:15	1826	CHALLENGES AND OPPORTUNITIES FOR PSEUDO-CONTINUUM ROBOTS IN SINGLE PORT ACCESS, TRANSLUMINAL AND INTRALUMINAL SURGERIES	Gabriel Klein Lunkes
11:30	2068	DEVELOPMENT OF ROBOTIC SYSTEM IN OPEN-SOURCE PLATFORM FOR MOBILE ROBOT.	Everton Silva Libânio
11:45	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
14:25	0579	STATISTICAL INDICATORS-BASED MACHINE LEARNING METHOD FOR CLASSIFICATION OF VIBRATION SIGNALS	Gisele de Fátima Lima Camargo
14:40	0728	MODULAR, SCALABLE AND GENERIC DIGITAL TWIN APPROACH FOR DYNAMIC MANUFACTURING PROCESSES	Matheus Antonio Nogueira de Andrade
14:55	0981	DEEP CONVOLUTIONAL NEURAL NETWORKS FOR IMAGE CLASSIFICATION: A CASE STUDY IN AN ELECTRIC UTILITY WAREHOUSE	Paulo Piratelo
15:10	0985	STANDARDS CLASSIFIER: APPLICATION TO OPERATIONAL SUPERVISION OF DIESEL GENERATING UNITS	Rafael Novais Lacerda de Oliveira
15:25	**0853**	**Session Speaker: CONE DETECTION WITH CONVOLUTIONAL NEURAL NETWORKS FOR AN AUTONOMOUS FORMULA STUDENT RACE CAR**	**Laíza Milena Scheid Parizotto**
MECH Th5		Artificial Intelligent Applications & Assistive Technologies	Chair: Lucas Weihmann
15:55	1499	THE APPLICATIONS OF ARTIFICIAL INTELLIGENCE TO THE CONTAINMENT OF COVID-19 IN TIMES OF PANDEMIC	Bárbara Silva
16:10	0972	DEVELOPMENT OF A SERIOUS GAME FOR HUMAN GAIT REHABILITATION	Rogério Sales Gonçalves
16:25	1608	USE OF ARTIFICIAL NEURAL NETWORKS IN FAULT DETECTION AND DIAGNOSIS IN THREE-PHASE INDUCTION MOTORS	Guilherme de Oliveira
16:40	**1704**	**Session Speaker: APPLICATION OF SINUSOIDAL ANALYSIS TO FEATURE EXTRACTION IN ROTATING MACHINE VIBRATION SIGNALS**	**Dionisio Martins**
MECH E-Poster		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

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

MECH - Mechatronics and Automation			
Friday 26			**Room 10**
Time	**Code**	**Title**	**Presenter**
MECH Fr1		Computer Vision	Chair: Julio Frantz (UNIFEBE)
08:35	0806	AUTONOMOUS NAVIGATION WITHIN CORN PLANTATION USING COMPUTER VISION	Gabriel Araujo
08:50	1051	EFFICACY TEST OF THE VISUAL ODOMETRY METHOD ON TERRASENTIA ROBOT	Jorge Id Facuri Filho
09:05	1076	NEURAL NETWORKS AND COMPUTATIONAL VISION APPLICATION IN FEATURE RECOGNITION AT AGRICULTURAL FIELDS	Lucas Toschi de Oliveira
09:20	1707	MACHINE VISION ALGORITHM FOR CONTINUOUS COUNTING OF POULTRY IN SLAUGHTERHOUSES	Guilherme de Santana Weizenmann
MECH 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 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 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
14:40	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 Â€“ 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 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
16:40	0636	PHYSICAL MODELING AND PARAMETERS IDENTIFICATION OF THE MG995 SERVOMOTOR	Luiz Manoel Santos Santana

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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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	

COBEM 2021 26th International Congress of Mechanical Engineering

NMMS - Nano and Microfluidic and Microsystems			
Tuesday 23			**Room 11**
Time	**Code**	**Title**	**Presenter**
NMMS Tu1		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 Tu2		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 Tu3		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
11:45	1842	POST-PROCESSING OF TITANIUM MICROPARTS THROUGH ELECTROCHEMICAL AND CHEMICAL POLISHING	Ana Carolina Bomfim Rodrigues
12:00			

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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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	

COBEM 2021 26th International Congress of Mechanical Engineering

NLPH - Non-linear Phenomena			
Monday 22			**Room 10**
Time	**Code**	**Title**	**Presenter**
NLPH 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**	**Idin Nazzari**
NLPH 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 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 Machado dos Reis**

NLPH - Non-linear Phenomena			
Tuesday 23			**Room 10**
Time	**Code**	**Title**	**Presenter**
NLPH Tu1		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 POINCARÃ© MAP	Filipe Eduard Leite Ossege
08:50	0379	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	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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40					
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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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 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	

COBEM 2021 26th International Congress of Mechanical Engineering

OSPE - Offshore and Petroleum Engineering			
Tuesday 23			**Room 10**
Time	**Code**	**Title**	**Presenter**
OSPE Tu2		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	0868	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	0680 / 2104	ANALYSIS OF WATER ALTERNATING GAS (WAG) IN AN IMMISCIBLE RESERVOIR	Vinicius Rafael de Freitas
OSPE Tu3		Offshore and Petroleum Engineering	Chair: Celso P. Fernandez
11:15	0420	PERFORMANCE EVALUATION OF THE OPERATION OF TWIN-SCREW PUMPS OPERATING IN SERIAL ARRANGEMENT	Emilio Paladino
11:30	0749	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 Tu4		Offshore and Petroleum Engineering	Chair: Celso Morooka
14:25	1166	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 Tu5		Offshore and Petroleum Engineering	Chair: Rafael de Cerquira
15:55			
16:10	2231	FINITE ELEMENT ANALYSIS OF A DP-SLIP SYSTEM	Liping Tang
16:25	2269	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 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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40					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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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	

COBEM 2021 26th International Congress of Mechanical Engineering

SMST - Smart Materials and Structures			
Friday 26			**Room 8**
Time	**Code**	**Title**	**Presenter**
SMST Fr1		Active and Passive Structures & Magnetic Materials & Nonlinear Dynamics of Smart Systems & Shape Memory Alloys	Chair: Thiago Ritto
08:35	0933	INVESTIGATION OF THE PASSIVE VIBRATION CONTROL USING LOW-COST PIEZOELECTRIC CERAMICS AND A PURELY RESISTIVE SHUNT CIRCUIT	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 Fr2		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 Fr3		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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40		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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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 Mechanics / 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	

COBEM 2021 26th International Congress of Mechanical Engineering

SOLM - Solid Mechanics			
Monday 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 TSAIÂ€™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**
SOLM Mo3		Composite Materials and Structures & Elasticity, Plasticity, Damage and Fracture Mechanics: Models, Experiments and Applications	Chair: Pablo Andrés Muñoz Rojas
15:55			
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 Santos
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 Mechanics			
Tuesday 23			**Room 8**
Time	**Code**	**Title**	**Presenter**
SOLM Tu1		Numerical Methods: FEM, XFEM, GFEM, BEM and other methods & Fatigue and Failure Analyses	Chair: Paulo de Tarso Rocha de Mendonça
08:35	1028	PHASE-FIELD MODEL FOR STRESS CORROSION CRACKING BASED ON CONTINUUM MECHANICS AND THE CONCEPT OF MICROFORCES	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 Tu2		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 Tu3		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 de Moraes
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 Tu4		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 Sousa 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 Tu5		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 CONSTRAINTS	Rodrigo Amaral
16:25	0969	TOPOLOGY OPTIMIZATION APPLIED TO TOOLING PLANTS IN THE AUTOMOTIVE INDUSTRY	Bruno da Silva Sales

16:40	1301	BIDIRECTIONAL EVOLUTIONARY STRUCTURAL OPTIMIZATION FOR STRUCTURES UNDER MULTIPLE DYNAMIC LOADS	Herbert Gomes
SOLM E-Poster		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			
Wednesday 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 roo					
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: Celebrating COBEM's 50th anniversary	5 min break	5 min break	5 min break	5 min break
08:35 - 09:40			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 for the future 13:30 - 14:35	Keynote speaker	Keynote speaker
14:20 - 14:25	5 min break	5 min break		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	

COBEM 2021 26th International Congress of Mechanical Engineering

UQSM - Uncertainty Quant. and Stochastic Modeling			
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			