


# ICOME 23 PROGRAMME

## INTERNATIONAL CONFERENCE ON MATERIALS & ENERGY

### International Conference 2023 - CASERTA Italy



<https://webhorloge.fr/heure/>

Central European local time CET	08:30	09:00 10:00	10:00 10:45	10:45 11:15	11:15 12:00	12:00 13:15	13:15 14:00	14:00 14:45	14:45	16:15	16:45	16:45 18:30	20:00
Tuesday May 30th	Registration	Opening Ceremony ICOME23 (Main Room)	Keynote N°1 <b>Y. Jaluria</b> Main Room Chair: Mohammed El Ganaoui	Coffee Break	Keynote N°2 <b>GL. Morini</b> Main Room Chair: Rachid Bennacer	Session A Energy Systems I Chair: A.Saad Room 7	Lunch Break	Keynote N°3 <b>F.J. Chatelon</b> Main Room Chair: Sekkat Zouhair	Symposium n.1 Fire physics and simulations Chair: S. Meradji Room 7		Session D Innovative Materials I Chair: S.Mounir Room 7	Relax	Gala Dinner
						Session B Biomaterials/ Bioarchitecture Chair: S. Morsli Room 8			Symposium n. 2 Waste derived biomaterials and biostimulants for sustainable agriculture Chair: P. Carillo Room 8	Session C Waste & Biomaterials Chair: D.Guilbert Room 8			
Wednesday May 31st	Registration	Keynote N°4 <b>M. Lappa</b> Main Room Chair: Biagio Morrone	Keynote N°5 <b>M. Minale</b> Main Room Chair: Helene Ageorges	Coffee Break	Session F Heat Mass Transfer in Buildings I Chair: M. Minale Room 7	Lunch Break	Lecturer: <b>Y. Mebouda Lamar</b> Session H Innovative Materials III Room 7	Online session OS I Chair: H. Benhamed Room 7	Relax		Guided Tour of the Royal Palace Caserta	Free evening	
					Session G Innovative Materials II Chair: H.Park Room 8				Lecturer: <b>B. Amghar</b> Session I Energy Systems II Room 8				
Thursday June 1st	Registration	Keynote N°6 <b>A. Runchal (Online)</b> Main Room Chair: Mohammed El Ganaoui	Keynote N°7 <b>M. Tabaa</b> Main Room Chair: Souad MORSLI	Coffee Break	Lecturer: <b>A. Merabtine</b> Session J Heat Mass Transfer in Buildings II Room 7	Lunch Break	Symposium n.3 Photonics for Energy Chair: J.M. Nunzi Chair H. Derbal Room 8	Session L Phase Change Materials & Energy Storage Chair: H. Mastouri Room 7		Online Session OS II Chair: S.Morsli Room 7	Student Award & Closing Ceremony Main Room		
					Lecturer: <b>A. Amirante</b> Session K Energy Systems III Room 8			Session M Other Topics Chair: A. Zaoui Room 8					

MAIN ROOM – Room 3 Ground Floor  
ROOMS 7 and 8 - First floor follow the signals



# SCHEDULED ID – SESSION

ID	Session	Code
1	OS	OnlineSession
2	OS	OnlineSession
3	OS	OnlineSession
4	E	CompMetME
5	E	CompMetME
6	H	InnoMatIII
7	K	EnSyst III
8	E	CompMetME
9	E	CompMetME
10	M	Other
11	OS II	OnlineSession II
12	L	PCMenStor
13	M	Other
14	E	CompMetME
15	OS II	OnlineSession II
16	F	HMTBuild I
17	Symp3	Symposium 3
18	L	PCMenStor
19	F	HMTBuild I
20	OS II	OnlineSession II
21	OS II	OnlineSession II
22	L	PCMenStor
23	F	HMTBuild I
24	D	InnoMat I
25	K	EnSyst III
26	B	BioMat
27	C	WasteDer
28	D	InnoMat I
29	K	EnSyst III
30	C	WasteDer
31	D	InnoMat I
33	OS	OnlineSession
34	OS	OnlineSession
35	K	EnSyst III
36	K	EnSyst III
37	B	BioMat
38	F	HMTBuild I
39	F	HMTBuild I
40	OS II	OnlineSession II
41	OS II	OnlineSession II
42	D	InnoMat I
43	F	HMTBuild I
44	B	BioMat
45	D	InnoMat I
46	OS II	OnlineSession II
47	M	Other
48	M	Other
49	OS	OnlineSession

ID	Session	Code
50	D	InnoMat I
51	K	EnSyst III
52	K	EnSyst III
53	B	BioMat
54	I	EnSyst II
55	M	Other
56	E	CompMetME
57	M	Other
58	C	WasteDer
59	C	WasteDer
60	E	CompMetME
61	I	EnSyst II
62	B	BioMat
63	I	EnSyst II
64	I	EnSyst II
65	B	BioMat
66	D	InnoMat I
67	M	Other
68	OS II	OnlineSession II
69	OS	OnlineSession
70	E	CompMetME
72	OS	OnlineSession
73	M	Other
74	M	Other
75	G	InnoMat II
76	I	EnSyst II
77	G	InnoMat II
78	E	CompMetME
79	B	BioMat
80	E	CompMetME
81	M	Other
82	H	InnoMat III
83	G	InnoMat II
84	J	HMTBuild II
85	G	InnoMat II
86	C	WasteDer
87	L	PCMenStor
88	I	EnSyst II
89	J	HMTBuild II
90	C	WasteDer
91	I	EnSyst II
92	A	EnSyst I
93	B	BioMat
94	I	EnSyst II
95	A	EnSyst I
96	A	EnSyst I
97	M	Other
98	G	InnoMat II

ID	Session	Code
99	OS II	OnlineSession II
100	G	InnoMat II
102	J	HMTBuild II
103	G	InnoMat II
104	M	Other
105	L	PCMenStor
106	G	InnoMat II
107	M	Other
108	H	InnoMat III
109	H	InnoMat III
110	J	HMTBuild II
111	C	WasteDer
112	A	EnSyst I
113	L	PCMenStor
114	M	Other
115	L	PCMenStor
116	OS	OnlineSession
117	OS II	OnlineSession II
118	A	EnSyst I
119	F	HMTBuild I
120	M	Other
121	OS	OnlineSession
122	Symp1	Symposium1
123	M	Other
124	B	BioMat
125	L	PCMenStor
126	J	HMTBuild II
127	OS II	OnlineSession II
128	Symp1	Symposium1
129	OS II	OnlineSession II
130	OS II	OnlineSession II
131	Symp1	Symposium1
132	Symp1	Symposium1
133	Symp3	Symposium3
134	H	InnoMat III
135	Symp3	Symposium3
136	B	BioMat
137	OS	OnlineSession
138	Symp1	Symposium1
139	J	HMTBuild II
140	OS	OnlineSession
141	Symp3	Symposium3
142	Symp3	Symposium3
143	L	PCMenStor
144	H	InnoMat III
145	A	EnSyst I
146	M	Other
147	A	EnSyst I
148	A	EnSyst I
149	E	CompMetME

# DETAILED PROGRAMME

ID	Authors	Title	Session Code
<b>Energy Systems</b>			
<b>EnSyst I (Chair: A. Saad )</b>			
96	Feriel Mustapha,Damien Guilbert	A Comprehensive Review Of Emerging Energy Storage Technologies For Renewable Energy Sources And Transportation Applications	A
92	Wafaa Yahya,Hassan Radoine,Hicham Mastouri	Positioning Of Green Hydrogen In The New Green City Of Bengrir, Morocco	A
95	Pamela Ramirez Vidal,Marco Avila Lopez,Victor Hugo Cantu Medrano	Modelling The Hydrogen Production By Methane Pyrolysis	A
112	Antonio Mariani,Andrea Unich,Mario Minale	A Multizone Combustion Model For Hcci Engines Fuelled By Biogas Containing Hydrogen	A
118	Alaa Elouazani Dahak,Taha Yassine Samir,Abdelghani El Asli,Hicham Mastouri	Green Building Certification	A
145	Pasquale Contestabile,Gaetano Crispino,Antonio Mariani,Luigi Rubino,Antonio Panico,Andrea Unich,Corrado Gisonni,Furio Cascetta,Diego Vicinanza	Optimal Siting Of Obrec Wave Farms: A Case Study In West Of Sardinia (Italy)	A
147	Luigi Sequino,Bianca Maria Vaglieco	Comparative Analysis Of Innovative Cooling Systems For Li-Ion Cells Using Carbon-Graphene Coatings, Metal Foams And 3D Printing	A
148	Christian Antetomaso,Adrian Irimescu,Elio Jannelli,Simona Silvia Merola,Bianca Maria Vaglieco	Relevance Of The Gdl Design On Water Removal In Pem Fuel Cells	A
<b>EnSyst II (Chair : B. Amghar)</b>			
54	Wissal Herra,Hicham Mastouri,Abdelghani El Asli,Manuel Carlos Gameiro Da Silva,Claudio Del Pero,Hassan Radoine	Inferential Monitoring-Based Study Of Indoor Air Quality Assessment For Biobased Heating System In Mountainous Cold Climate	I
61	Lamine Arfang Sarr,Pape Moussa Touré,Vincent Sambou	Photovoltaic Production And Energy Consumption Of A Residential Building	I
63	Noussaiba Rharbi,Abdelghani El Asli,Hassan Radoine,Hicham Mastouri,Manuel Carlos Gameiro Da Silva	The Suitability Of Adapting Certification Tools For Moroccan Context: A Study Case Of Ifrane And Benguerir Cities	I
64	Leslie Ayagapin - Bertil	Can Electric Vehicles Be A "Sustainable" Solution For Insular Territories? A Life Cycle By Analysis Approach	I
76	Badr Chegari,Mohammed El Ganaoui	Optimal Energy Management Of A Hybrid Renewable Energy System	I
88	Khawla El Hadri,Bassam Moujalled,Hicham Mastouri,Abdelkader Outzourhit,Hassan Radoine	Summer Comfort And Passive Cooling Techniques By Natural Ventilation: Case Study Of Um6P Classrooms	I
91	Mourad Benfares,Mohammed Benbrahim,Izeddine Zorkani	Climate Change Effect On The Performance Of The Different Grid-Connected Photovoltaic Systems	I
94	Assunta Andreozzi,Bernardo Buonomo,Yogesh Jaluria,Oronzio Manca	Transient Analysis Of External Ambient Effect In Summer And Winter Conditions On Ventilated Roof	I
<b>EnSyst III (Chair : A. Amirante )</b>			
25	Soumia Mounir,Youssef Maaloufa,Badr Saad Alotaibi,Abdelhamid Khabbazi,Elina Mohd Husini,Syala Nurul Abdul Latip,Yakubu Aminu Dodo,Mohammed Awad Abuhussain,Sara Ibn Lhaj,Mina Amzal,Asmae Souidi,Abmed Abaroune	Energy Efficiency Of A Proposed Solar Green Building Model In Dry Climates	K
7	Sarir Nouredine,Sebaa Morsli,Allaoui Tayeb	Improvement Of Electric Power Quality In The Grid-Connected Wind Generation Using Heuristic Method	K
29	Amira Mhadhbi,Mohammed El Ganaoui,Haikel Ben Hamed,Amenallah Guizani	Numerical Study Of The Effect Of Non-Newtonian Behavior Of Al2O3/Water Nanofluids On Their Heat Transfer In An H-Shaped Enclosure	K
35	Biagio Morrone,Domenico Cirillo,Maurizio La Villetta,Carmine Caputo,Paolo Bracciano	Exergy And Economic Analysis Of A M-Cogeneration System Coupled With Biomass Gasifier	K
36	Mame Cheikh Diouf,Mactar Faye,Ababacar Thiam,Vincent Sambou	Modelisation Of Module Temperature Using The Response Surface Method (Rsm)	K
51	Hind Sarghini,Sara Ibn-Elhaj,Yassine Ennaciri,Sara Ladouy,Abdelhamid Khabbazi	Experimental Investigation Of Humidification Deshumidification Desalination System Coupled With Heat Pump	K
52	Latra Boumaraf,Chérifa Abid	Influence Of The Position Of An Ihx On The Performance Of A Double Evaporator Ejector Refrigeration System	K

<b>Materials &amp; Applications</b>			
<b>BioMat (Chair : S.Morsli)</b>			
37	Noussaiba Rharbi,Abdelkader Outzourhit,Hicham Mastouri,Abdelghani El Asl,Hassan Radoine	Impact Of Design, Construction, And Usage Stages On Building Performance: Case Of Marrakech Prefecture Headquarters	B
62	Safae Oulmouden,Hassan Radoine,Hicham Mastouri,Brahim Benhamou	Building Systems Optimization And Strategy Assessment For An Energy Efficient Model Of Buildings: Case Study Of Residential Building In Benguerir City In Morocco.	B
65	Loubna Ait Lahsen,Hicham Mastouri,Mohamed El Mankibi,Hassan Radoine	Evaluation & Optimization Of The Amount Of Solar Energy Received By The Envelope Of Rural Buildings During Winter Season : Case Study Of High Atlas Mountains In Morocco	B
79	Khaoula Benaomar,Abdelkader Outzourhit,Hicham Mastouri,Mohamed El Mankibi,Karim Limam	Building A Climate-Resilient Future: Examining The Interaction Between Built Environment And Energy Use	B
136	Laghrouch Loubna,Taha Yassine Samir,Abdelghani El Asli,Hicham Mastouri	Construction Net Zero (Riba, Leti...) Et Solutions Pour Les Pays En Voie De Developpement	B
26	Oumaima Khachchane,Soumia Mounir,Abdelhamid Khabbazi,Sara Ibn Lhaj,Youssef Maaloufa	Thermo-Mechanical Characterization Of A New Ecological Material Based On Reed And Clay	B
44	Yamna Soussi,Houda Er-Retby	The Impact Of Bio-Sourced Materials On Indoor Thermal Comfort In A Semi-Arid Climate	B
53	Doha Belfadil,Soudad Zyade	Extraction Processes Of Chitosan From Shrimp Shell Waste From Morocco Local Market	B
93	Saray Perez-Robles,Claudia Carotenuto,Mario Minale	Hydroxypropyl(Methyl)Cellulose Hydrogel Stability For Thermal-Enhanced Oil Recovery	B
124	Salma Kouzzi,Salma Lahmar,Mohammed El Ganaoui,Mohammed Lhassane Lahlaoui	Optimization Of Insulation Thickness Of Eco-Materials In Building'S External Wall Using Trnsys Simulation	B
<b>InnoMat I (Chair: S. Mounir)</b>			
24	Youssef Maaloufa,Soumia Mounir,Sara Ibnl'haj,Mohammed Awad Abuhussain,Abdelhamid Khabbazi,Yakubu Aminu Dodo,Badr Saad Alotaibi,Asma Souidi,Mina Amzal,Naima Ben Brahim,Malika Atigui,Ahmed Aharoune	Thermomechanical Characterization Of Hollow Concrete Brick With Sheep Wool	D
28	Hajar Dahhan,Kettani Kamal	Experimental Studies Of A New Composite Material Based On Plaster And Ppe Waste	D
31	Naima Ben Brahim,Youssef Maaloufa,Soumia Mounir,Abdelhamid Khabbazi,Sara Ibn Elhaj,Hind Sarghini,Oumaima Khachchane	Thermomechanical Study Of A New Composite Material Based On Plaster And Natural Additives: Sheep Wool And Cork	D
42	Walid Laifa,Tahar Ali Boucetta,Mourad Behim	Effect Of Fibers On The Behavior Of Self-Compacting Concrete	D
45	Mimane Ziraoui,Hicham Mastouri,Hassan Radoine,Hassan Cherouami,Widad Dahbi,Youssef Tamraoui,Brahim Benhamou,Abdelkader Outzourhit,Gaetano Spadito,Salma Maaloufa,Mourad Boudiaf,Salma El-Filali	Low-Cost Panels From Natural Fibers For Improved Buildings Thermal Performance: Inferential Review	D
50	Sara Ibn-Elhaj,Fatima Zohra El Wardi,Soumia Mounir,Hind Sarghini,Abdelhamid Khabbazi	Study Of Thermal Inertia And Insulation Of An Ecological Material Based On Clay	D
66	Naima Ben Brahim,Youssef Maaloufa,Soumia Mounir,Abdelhamid Khabbazi,Sara Ibn Elhaj,Hind Sarghini,Oumaima Khachchane	Thermomechanical Characterization Of A New Composite Material Based On Plaster And Natural Additives: Sheep Wool And Cork:	D
<b>InnoMat II (Chair: H.Park)</b>			
75	Najah Majouri,Jalila Sghaier,Mohamed El Mankibi	Thermal And Physical Characterization Of Earthen Bricks Made From Clay And Date Palm Fibers Intended For The Thermal Insulation Of Buildings.	G
77	Abdelmalek Kriba,Farid Mechighel,Mohammed El Ganaoui	Numerical Modeling Of The Influence Of Sps Device Geometry On Thermoelectric And Mechanical Behavior	G
83	El Mehdi El M'Harmache,Hicham Mastouri,Hassan Radoine,Claudio Del Pero,Niccolo' Aste	Green City Of Benguerir: Toward A Sustainable And Eco-Friendly Model Of An Innovative Built Environment	G
85	Ibrahimia Diaw,Mactar Faye,Stéphane Hans,Frédéric Sallet,Seckou Bodian,Vincent Sambou	Influence Of Gum Arabic And Recycled Lime On The Mechanical Performance Of Typha-Cement Concrete.	G
98	Raffaella Griffo,Arianna Parisi,Gianluigi De Falco,Mariano Sirignano,Francesco Di Natale,Mario Minale,Claudia Carotenuto	Wettability And Morphological Properties Of In-Flame Deposited Carbon Nanofilms.	G
100	Fabiana Graziano,Ciro Tortora,Sara Coppola,Veronica Vespini,Simonetta Grilli,Pietro Ferraro	Fluid Manipulation Using Innovative Materials: P-Jet And Polymeric Thin Films	G
103	Adel Boulemaizet	Value-Added Reinforcement With Plastic Waste Sheets In Reclaimed Asphalt Pavement Performances	G
106	Walid Khelifi,Ismahen Zaid	Comparative Study On The Properties Of High Performance Concrete Based On Expanded Clay Aggregate And Natural Aggregate	G
<b>InnoMat III (Chair : Y Mebouda)</b>			
108	Ismahen Zaid,Mouloud Merzoud,Amar Benazzouk	Effect Of Diss Fibers Addition On The Mechanical Behavior Of Lime Composite	H
109	Najah Majouri,Jalila Sghaier,Mohamed El Mankibi	Thermal And Physical Characterization Of Earthen Bricks Made From Clay And Date Palm Fibers Intended For The Thermal Insulation Of Buildings	H
6	Hajar Nassiri,Youssef Messouss,Rachid El Bouayadi	Precipitation Synthesis Of Cr Doped Tio2 For Dye-Sensitized Solar Cell Application	H
82	Wendong Li,Mourad Rahim,Mohammed El Ganaoui,Rachid Bennacer	The Dynamic Strategy Of Phase Change Materials Integrated Into The Building Envelope For Improving The Building's Thermal Performance	H
134	Marcin Maleta,Wojciech Gluchowski,Zbigniew Rdzawski,Marek Lagoda,Justyna Domagala-Dubiel	Effect Of Recycling Copper Addition And Semi-Continuous Casting Speed On Crystal Size And Mechanical Properties Of Copper	H
144	Walid Khelifi,Ismahen Zaid	Comparative Study On The Properties Of High Performance Concrete Based On Expanded Clay Aggregate And Natural Aggregate.	H

WasteDer (Chair: D. Guilbert )			
58	Giovanna Marta Fusco,Rosalinda Nicastro,Youssef Roupheal,Petronia Carillo	Protein Hydrolysates From Food Waste May Sustainable Boost Agriculture Yield And Quality	C
59	Rosalinda Nicastro,Christophe El-Nakhel,Giovanna Marta Fusco,Danny Geelen,Youssef Roupheal,Stefania De Pascale,Petronia Carillo	Use Of Urine Derivatives For Sustainable Agriculture	C
86	Souheila Hangri,Grazia Policastro,Ouiem Baatache,Antonio Panico,Ludovico Pontoni,Kerroum Derbal,Massimiliano Fabbricino	Combining Pretreatments As Successful Approach To Maximize Biohydrogen Production From Dairy Cow Manure	C
27	Annalinda Capone,Biagio Morrone,Maria Laura Mastellone,Lucio Zaccariello	Sewage Sludge Bio-Hydrogen Production Boost By Anaerobic Fermentation Using Htc Liquid	C
30	Larbi Belagraa,Nassima Bakir,Ammar Noui,Oussama Kessa,Inda Nor	Valorization Of Industrial Slag Addition For Sustainable Mortar Formulation Based On A Prepared Sand And Admixture	C
111	Lucio Zaccariello,Maria Laura Mastellone,Biagio Morrone,Annalinda Capone	Preliminary Test Of Sewage Sludge Hydrothermal Carbonization In A Pilot-Scale Reactor	C
90	Imane Mannan,Hassan Radoine,Hicham Mastouri	Multistage Implementation To Improve Bioenergy From Wastewater Treatment In African Housing	C
Heat and Mass Transfer			
HMTBuild I (Chair: M. Minale)			
16	Chahrazed Abdellahoum,Amina Mataoui	Numerical Comparison Of Forced Convection With Hybrid Cu-Al2O3 Nanofluids Traversing A Rectangular Cavity With K-Wsst Turbulent Modeling	F
19	Hanane Sghouri El Idrissi,Mohammed Taibi,Izeddine Zorkani	Experimental Study Of The Thermal And Acoustic Properties Of Oil Shale From Timahdit-Morocco	F
23	Molka El Maghraoui,Rasul Mohebbi,Majdi Hazami	Free Convection Heat Transfer Of CuO/H2O Nanofluids In A Square Cavity With A Conductive Separation Using The Lattice Boltzmann Method.	F
38	Khaled Mahdi,Nadir Bellel,Khalida Bekrentchir	Cfd Simulation And Optimisation Of The Efficiency Of A Spiral Tube Under Focused Beam By A Solar Dish	F
39	Mohameth Dia,Mamadou Salif Diallo,Vincent Sambou	Consideration Of The Convection Coefficient On The Estimation Of Thermophysical Parameters Of Materials By The Hot Plate Method	F
43	Ikram Mostefa Tounsi,Amina Sabeur,Mustapha Boussoufi,Mohamed El Ganaoui	Impact Of The Inlet Flow Angle And Outlet Placement On The Indoor Air Quality	F
119	Herie Park,Rachid Bennacer	Influence of Hybrid Ventilation on Energy Consumption and Air Quality of Buildings	F
HMTBuild II (Chair: A. Merabteine)			
84	Najwa Ben Bouchaib,Hicham Mastouri,Hassan Chehouani,Hassan Radoine,Claudio Del Pero,Niccolo' Aste	Convective Heat Transfer Coefficient Measurement In Modern Moroccan Buildings	J
89	Victor Cantu Medrano,Florian Puel,Pamela Ramirez Vidal,Marco Avila Lopez	Simulation Tool And Optimization Approach For Hydrogen Supply Chain Design In France 2030	J
102	Yasmine Hamrioui,Zouhira Hireche,Lyes Nasserri,Rachid Nebbali,Rachid Bennacer,Djamel Eddine Ameziani	Lbm Simulation Of The Residence Time Of Polluting Particles In A Ventilated Chamber	J
110	Lahoucine Gourdo,Hicham Fatnassi,Khadija Achgar,Hassan Demrati,Ahmed Wifaya	Heating Requirements For A Canarian Greenhouse	J
126	Khalid Chtaibi,Mohammed Hasnaoui,Haikel Hamed,Abdelkhalek Amahmid,Youssef Dahani	Dual Mrt-Lbm Analysis Of The Magnetic Field Effect On Natural Convection Of A Non-Newtonian Ferro-Fluid Confined Between Square And Circular Cylinders	J
139	Assia Arab,Zouhira Hireche,Nabil Himrane,Djamel Eddine Ameziani	The Effect Of The Porous Separation Height On The Pollutant Removal In Ventilated Rooms: Lbm-Mrt	J

Computational Methods			
CompMeth (Chairs : B.Chegari)			
4	Marouane Essahraoui,Rachid El Bouayadi,Mohammed El Ganaoui,Aouatif Saad	Numerical Analysis Of The Effect Of Three Slats Distributed Along The Rear Windward And Leeward Of Ahmed Body	E
5	Marco Avila Lopez,Leila Aklouche,Victor Hugo Cantu Medrano	Pem Fuel Cell System Modelling For Aircraft Vehicle At Cruise Conditions	E
8	Achrif Sakout Andaloussi	Different Fouling Thickness Effect On Outlet Temperature In Counter Flow Heat Exchanger	E
9	Daniele Ricci,Michele Ferraiuolo,Francesco Battista,Manrico Fragiaco	Thermal And Thermo-Structural Analyses Regarding The Hyprob Lox/Lch4 Demonstrator Manufactured By Means Of Electroplating Process	E
14	Asmaa Bouich,Najat Rafalia,Jaafar Abouchabaka	Prediction Of World Energy Consumption By Using Ai	E
56	Houda Er-Retby,Zineb Zoubir,Mohamed Oualid Mghazli,Mohamed El Mankibi	Indoor Environment'S Quality Ieq Forecasting For A Residential Building Using Machine Learning Models	E
60	Bilal Amghar,Asma Achnib,Heri Park	Optimal Control Of Decentralized Smart-Grids Systems	E
70	Hamza Benzine,Yasmine Achour,Hicham Labrim,El Houssaine Ouabida,Ahmed Ait Errouhi,Aouatif Saad,Rachid El Bouayadi,Driss Zejli	Development Of A Microclimate Control Model For Optimized Agricultural Greenhouse Design	E
78	Renato Zona,Luca Esposito,Simone Palladino,Vincenzo Minutolo	Shakedown Of Elastic-Plastic Pipelines Through Melā N'S Lower Bound Finite Element Procedure.	E
80	Mohammed Said,Noura Nait Bouda,Souad Harmand	A Numerical Approach Of Taylor Flow In Microchannel: A Comparative Study.	E
149	Abdelkarim Ou-Khouya,Adil Houba,Imane Ait Brahim,Hassane Mes-Adi,Mohamed Tahiri	The Effect Of Chalcogens-Doped With Dilation Strain On The Electronic, Optic, And Thermoelectric Properties Of Perovskite Basio3 Compound	E
Phase Change Materials & Energy Storage			
PCM&EnStor (Chair: H. Mastouri)			
11	Samy Alami,Abderrahman Nait Alla,Lahcen Bammou,Monssif Najim,M'Barek Feddaoui	Salt Water Film Evaporation With Combined Heat And Mass Transfer In The Presence Of Nanoparticles Within A Vertical Flow Channel	L
12	Majid El Kassaoui,Abdelilah Benyoussef,Abdallah El Kenz,Mohammed Louidi,Omar Mounkachi	Solid-State Materials As A Promising Hydrogen Storage Medium	L
15	Abdeljalil Belazreg,Abderrahmane Aissa,Mohammed Sahnoun,Zied Driss,Mohammed El Ganaoui	Effects Of A Tree-Shaped Fin Design On Shell-And-Tube Npcm In A Thermal Energy Storage Unit For Waste Heat Recovery	L
18	Saif Serag,Biagio Morrone,Adil Echchelh	Hydroelectric And Hydrogen Storage Systems For Electric Energy From Renewable Sources	L
22	Mourad Abed,Abderrahmane Aissa,Mohammed El Ganaoui,Zied Driss,Salah Abid	Numerical Study Of The Melting Process In A Customized Shell-And-Tube Phase Change Material Heat Storage System	L
87	Oumaima Zga,Hassan Radoine,Hicham Mastouri	Geothermal Potentials Of Improving Energy Efficiency In Buildings In Semi-Arid Climate: The Pebbles Bed Thermal Storage	L
105	Ibtissam El Aouni,Yasmine Achour,El Houssaine Ouabida,Ahmed Ait Errouhi,Hicham Labrim,Aouatif Saad,Rachid El Bouayadi,Driss Zejli	An Optimization Of A Humidification-Dehumidification Desalination System Driven By Renewable Energy	L
113	Hicham Mastouri,Abdelghani El Asli,Zaineb Chouaib,Khawla Rouis	Edge Green Building Certification For A Clinic In Taounat, Morocco	L
115	Sanaa Mazouar,Hafida Ziouani,Abdelilah Taoufik,El Mostafa Khechoubi,Mahmoud Ettakni	Structural Polymorphism In Hybrid Material Perovskite	L
125	Said Laasri,Mourad Rkhis,Samira Touhtouh,El-Kébir Hlil,Abdelouahed Hajjaji	Computational Design Of Zirconium-Nickel Based Materials For Hydrogen Storage Applications	L

Other Topics			
OthTop (Chair: A. Zaoui)			
55	Sabrina Oussalah, Mohammed El -Ganaoui, Olivier Caspary	Internet Of Things And Habitat "Application On Eco-Chalet Of Lut Of Longwy"	M
67	Ikram Belmehti, Mohamed Djermouni, Boumedienne Beladjine	Evaluation Of The Co2 Capture Technology In Steam Methane Reforming For Hydrogen Production	M
73	Meryem Oulad Goumi, Meriem Bamaarouf, Laila Saafadi	Hydrodynamic Study Of A New Geometric Shape Of The High Efficiency Algal Reactor	M
97	Simona Moliterno, Pasquale Marino, Elio Coppola, Roberto Greco, Claudia Carotenuto, Mario Minale	How Rainfalls Modify The Organic Carbon Content Of A Soil Affecting The Rheology Of Its Slurry	M
10	Abdelkader Boutra, Abderrahmane Bourada, Youb Khaled Benkahia, Rachid Bennacer	Multiple-Relaxation-Time Lattice Boltzmann Approach For Flow And Convective Heat Transfer In Open Cavity With Circular Heat-Generating Obstacle	M
13	Osman Adiguzel	Lattice Reactions And Structural Changes Governing Reversibility In Shape Memory Alloys	M
146	Radouane En-Nadir, Haddou El-Ghazi, Hassan Abboudi, Jeddine Zorkani	Nonlinear Dynamics Of Ingan/Gan Heterostructure Inharmonic Oscillator Under Applied Electric Field And Intense Laser Field	M
120	Jihad Louafi, Lhaj Hachemi Omari	Structural And Optical Properties Of Lafewo6 Double Perovskite-Type Oxide	M
48	Ahmed Sbaibi, Youssef Bandadi, Rachid Saadani	Receptivity And Control Of Tollmien Schlichting Waves In A Subsonic Boundary Layer	M
74	Asma Souidi, Youssef Maaloufa, Mina Amazal, Malika Atigui, Slimane Oubeddou, Aicha Idoum, Soumia Mounir, Ahmed Aharoune	Physical And Chemical Characterization Of Mussel Shells For Using In Construction Field	M
104	Aicha Idoum, Lahcen Bammou, Ahmed Aharoune	Thermal And Mechanical Behavior Of Calcareous Clay Bricks At High Sintering Temperature	M
107	Youssef El Mrini, Jamal Zerouaoui, Badia Ettaki	Energy Management Of An Hybrid System	M
114	Nassima Bakir, Larbi Belagraa, Khelifa Abbeche	Study Of The Effect Of The Addition Of Glass Fiber On The Variation Of The Capillary Pressure And Failure Of A Collapsible Soil	M
57	Bernardo Buonomo, Oronzio Manca, Sergio Nardini, Safa Sabet	Numerical Investigation On A Compact Heat Exchanger Filled With Metal Foam In Turbulent Regime	M
81	Arij Nasfia Hayder, Amal Kraiem, Mohammed Khalij, Abdelhamid Kheiri, Jalila Sghaier	Modeling On Heat And Mass Transfer In Grain Stored In A Metal Silo	M
123	Ghliym Maria	Monte Carlo investigation of the three-dimensional mixed spin Ising model with multispin coupling	M
47	Sara Afouzar, Sara Ibn-Elhaj Sara, Hind Sarghini, Ahmed Kabouri, Abdelhamid Khabbazi	Local Thermal Flash Method For Defect Detection In Materials	M
Online sessions			
OS I (Chair: H. Benhamed)			
2	Soukaina Ed-Dahri	Hysteresis Loops Of Magnetic Nanoparticles, Monte Carlo Approach	OS
3	Alexander Lukin	Improving the electron transport cooling efficiency by fine-tuning the collective atomic vibrations within the multilayer low-dimensional nanocarbon transition nano-enhanced interfaces	OS
33	Mactar Faye, Sidy Fall	Field Study On Thermal Comfort In Hot Tropical Zones	OS
69	Hamza Benzine, Yasmine Achour, Hicham Labrim, El Houssaine Ouabida, Ahmed Ait Errouhi, Aouatif Saad, Rachid El Bouayadi, Driss Zejji	Energy Design And Optimization Of Greenhouse By Natural Convection	OS
72	Mina Amazal, Soumia Monir, Asma Souidi, Malika Atigui, Slimane Oubeddou, Youssef Maaloufa, Ahmed Aharoune	Elaboration And Characterization Of A Composite Based On Plaster And Juncus Plant Fibers In Morocco	OS
116	Chaimaa Khouya, Rachida Idchabani, Abdelilah Jilbab, Chakib Bojji	Optimization Of Energetic And Environmental Performances Of A Building Using Lca Approach: A Moroccan Case	OS
34	Farah Zemani, Amina Sabeur	Heat Transfer By Natural Convection In An H-Shaped Cavity Filled With Al2O3 Water-Based Nanofluid With A W-Shaped Fin	OS
140	Yassine Rahib, Dominique Cancellieri, Valérie Leroy-Cancellieri, Jean-Louis Rossi, Jacky Fayad, Eric Leoni	Combustion characteristics of forest fuels with an emphasis on fire hazard evaluation	OS
49	Ramzi Fenouche, Ahmed Ouadha	Numerical Study On Flow Boiling Heat Transfer Characteristics Of Ammonia In Horizontal Tube	OS
1	Mahdi Goucem, Bilal Bouazzia, Abdelkader Seghier	Influence Of The Ambient Temperature On The Efficiency Of Gas Turbines	OS
121	Yousra Amellas, Mohammed Saidi Hassani Alaoui	The Study And Prediction Of The Behavior Of Meteorological Parameters In The Course Of Current Climate Change Using Artificial Intelligence Methods	OS
137	Abdou Raimi Olayimika Ichola Alakouko, Clarence Semassou	Development And Thermophysical Characteristics Of A Filling Concrete Reinforced With Cotton Ginning Clods	OS

## Online session II

### OS II (Chair: S. Morsli)

<b>130</b>	Nour El Houda Ben Mustapha, Ibtissem Boumnijel, Mohamed El Ganaoui, Daoued Mihoubi	Development Of Physical Properties Of Potatoes During The Drying Process	<b>OS II</b>
<b>20</b>	Lina Wafaa Belhadj Senini, Moustapha Boussoufi, Amina Sabeur	Heat Transfer And Fluid Flow Simulation Of Different Nano-Fluids In Micro-Cylinder-Groups	<b>OS II</b>
<b>21</b>	Aissa Abderrahmane, Sahnoun, Mohammed El Ganaoui, Abid Salah, Zied Driss	A Numerical Study Of Nanofluid Mhd Natural Convection In A Complex-Shaped Porous Enclosure	<b>OS II</b>
<b>40</b>	Nassim Mahfoudh Sahraoui, Samir Houat, Mohammed El Ganaoui	Numerical Study Of Mixed Convection In An L-Shaped Enclosure	<b>OS II</b>
<b>41</b>	Nassim Mahfoudh Sahraoui, Samir Houat, Mohammed El Ganaoui	Multiple-Relaxation-Time Simulation Of Mixed Convection In An Open T-Shaped Cavity	<b>OS II</b>
<b>11</b>	Samy Alami, Abderrahman Nait Alla, Lahcen Bammou, Monssif Najim, M'Barek Feddaoui	Salt Water Film Evaporation With Combined Heat And Mass Transfer In The Presence Of Nanoparticles Within A Vertical Flow Channel	<b>OS II</b>
<b>68</b>	Lahoucine Ouhsaine, Mohammed El Ganaoui	Thermal Characterization Of Building Walls Using The Time Scaling Model: A Practical Approach To Heat Transfer Dynamics	<b>OS II</b>
<b>46</b>	Abdelkerim Kaddour, Ahmed Ouadha	Entropy Assessment Through Computational Investigation Of Cavitation In Venturi Tube	<b>OS II</b>
<b>99</b>	Mohamed Djermouni, Ahmed Ouadha	Feasibility Study Of An Orc Driven Reversed Osmosis High Pressure Pump	<b>OS II</b>
<b>117</b>	Farid Mechighel, Sadik Dost, Mohammed El Ganaoui	Numerical Simulations Of The Effect Of Presence Of Free Surface On The Solidification Of An Organic Phase Change Material Under Microgravity Conditions	<b>OS II</b>
<b>127</b>	Syrine Khadrawi, Fakhreddine Oueslati, Haikel Ben Hamed	Increase In Heat Transfer And Temperature Homogenization In A Solar Channel Partially Filled With Metal Foams	<b>OS II</b>
<b>129</b>	Ibtissem Mhamdi, Haykel Ben Hamed, Fakhri Segni Oueslati	3D Numerical Simulation Of A Salt Gradient Solar Pond	<b>OS II</b>
<b>143</b>	Karim Ragui, Lin Chen, Rachid Bennacer	Transient Dynamics Of Invaded Supercritical Carbon Dioxide With Cluster Of Pollutants In Porous Media	<b>OS II</b>



# SYMPOSIA PROGRAMME

<b>Fire Physics and Simulations (Symposium 1)</b>			
<b>Chair: S. Meradji</b>			
<b>122</b>	Jacky Fayad,Frédéric Morandini,Lucile Rossi,Gilbert Accary,Thierry Marcelli,François-Joseph Chatelon,Dominique Cancellieri,Dominique Morvan,Sofiane Meradji,Patrice Briot,René Costantini,Gilles Planelles,Jean-Louis Rossi	Investigation Of High Intensity Surface Fire Behaviors Across Corsican Shrubland Vegetation	<b>Symp1</b>
<b>131</b>	Frédéric Antoine-Santoni,Claude Devichi,Arielle Syssau-Vaccarella,Jean-Louis Rossi	Preparing Firefighters To Manage Emotions And Stress During Population Evacuations In Natural Disaster Situations	<b>Symp1</b>
<b>132</b>	Thierry Marcelli,Lucile Rossi,Jean-Louis Rossi,François-Joseph Chatelon,Jacky Fayad,Dominique Cancellieri,Valérie Cancellieri,Lila Ferrat,Frédéric Morandini,Antoine Pieri,Antoine Burglin,Dominique Morvan,Gilbert Accary,Sofiane Meradji,Michel Battesti,Vincent Ruiz,Sébastien Blanc,Patrice Briot,Gilles Planelles,René Costantini	Goliat, A Project To Improve Knowledge And Develop Tools For Firefighting And Land Use Planning	<b>Symp1</b>
<b>138</b>	Sofiane Meradji,Nicolas Frangieh,Gilbert Accary,Jean-Louis Rossi,Dominique Morvan,Thierry Marcelli,Joseph Chatelon	Fuelbreak effectiveness against wind-driven and plume-dominated fires: A 3D numerical study	<b>Symp1</b>
<b>128</b>	Jean-Louis Rossi,Jacky Fayad,François-Joseph Chatelon,Thierry Marcelli,Sofiane Meradji,Dominique Cancellieri,Yassine Rahib,Gilbert Accary,Dominique Morvan,Lucile Rossi,Patrice Briot,Antoine Pieri,Frédéric Morandini	Separation Safety Distances Assessment In Wildland Urban Interfaces	<b>Symp1</b>
<b>Waste-derived biomaterials and biostimulants (Symposium 2)</b>			
<b>Chairs: P. Carillo</b>			
	Petronia Carillo	Policy and legislation on waste-derived biomaterials for sustainable agriculture	<b>Symp2</b>
	Maria Antonietta Rao	Digestate transformation in vermicompost for a sustainable management of agricultural soils	<b>Symp2</b>
	Youssef Roupheal	Plant-derived biostimulants for sustainable agriculture: a global perspective	<b>Symp2</b>
<b>Energy Mat. &amp; photonic (Symposium 3)</b>			
<b>Chairs : H. Derbal, J. M. Nunzi</b>			
<b>17</b>	Izeddine Zorkani,Redouane En-Nadir,Haddou El-Ghazi	Theoretical Simulations of InGaN/GaN Multiple Quantum Wells for Photovoltaic and Optoelectronic application	<b>Symp3</b>
<b>133</b>	Dariusz Kolač,Wojciech Gluchowski,Zbigniew Rdzawski,Marek Lagoda,Marcin Maleta,Karol Krukowski	Effect of microadditives on selected properties of magnesium copper after deformation	<b>Symp3</b>
<b>135</b>	Zouheir Sekkat	Plasmonic Sensing And Switching: Fano, Pit And Mim Resonances	<b>Symp3</b>
<b>141</b>	Abdelkabar Zaitte,Naoual Belouaggadia,Cherifa Abid,Ahmed Kaiss,Oumaima Imghoure	Enhanced radiative cooling of solar cells by a combination of radiative and photovoltaic collectors	<b>Symp3</b>