



## **Conference Agenda**

# ICP 2021 - Sixth International Conference on Polygeneration

Date: Mo	nday, 04/Oct/2021		
8:30am	Opening: Opening &welcome		
- 9:00am			
9:00am 9:00am	Planany opening: Planany opening		
- 10:00am	Plenary opening: Plenary opening Plenary I: "Challenges of the State Research Agency" Enrique Playán. Director of the Spanish State Research Agency, Spain Plenary II: Smart Energy Systems and 4th Generation District Heating Henrik Lund - M.Sc.Eng., Ph.D., Dr.Techn. Professor in Energy Planning at		
10:00am	Aaiboig Oniversity, Denmark		
11:30am	Chair: Dr. Álvaro Campos-Celador, University of the Basque Country UPV/EHU, Spain Energy subsidies and Lleida, Spain Experimental Investigation of the Poisoning Characteristic Gaseous Impurity in		Technical University of Athens, Greece Prototype design and first tests of a linear beam-down solar field
	technological innovation: Policy issues for promoting polygeneration systems Shahadat Hosan, Md. Matiar Rahman, Shamal Chandra	Gaseous Impurity in La0.9Ce0.1Ni5 based Hydrogen Storage and Purification system Alok Kumar, Nithin N Raju, Muthukumar P	Sebastián Taramona, Alexander López, Alessandro Gallo, Jesús Gómez-Hernández
	Karmaker, Bidyut Baran Saha Mathematical Optimisation Model for Regional Planning of Rural Electrification <u>Nor Nazeelah Saleem</u> , Sarah Farhana Shahrom, Viknesh Andiappan, Denny K. S. Ng	A Novel Compression-assisted Absorption Thermal Energy Storage Heat Transformer for Low-grade Energy Utilization Zhixiong Ding, Wei Wu, Simin Huang	Solar Trigeneration System Based on ORC and Absorption Refrigeration Cycle Chittivolu Kranthi, Ghanta Sai Karthik, Praveen Kumar Govindasamy, Saravanan Rajagopal, i Salcedo Alberto Coronas
Simulation and ex data of innovative cogeneration DHW small island Samuele Ballistreri, I	Simulation and experimental data of innovative micro cogeneration DHW system for small island Samuele Ballistreri, Biagio Di Pietra, Mario Ragusa, Marco Beccali	Numerical investigations on the thermal performance of combined latent and sensible heat thermal energy storage system Tat Suraj Arun, Gurpreet Singh Sodhi, Muthukumar P	: Study of Air Flow Distribution and Cooling Performance on 20ft Solar Powered Cold Storage for Fishery Commodity Storage Oktandio Imamudien, Muhammad Arif Budiyanto
	Repercussions of biomass energy consumption on ecological footprint: Evidence from OCED countries Shamal Chandra Karmaker, Shahadat Hosan, Md. Matiar Rahman, Bidyut Baran Saha	Numerical study on heat transfer augmentation techniques in concrete storage module for solar-thermal applications Aswin Karthik, Muthukumar P	Hybrid Renewable Energy Systems for Off-Grid Desalination Gaurav Maurya, T Lalith Kumar, Chittivolu Kranthi, Govindasamy Praveen Kumar, Duraisamy Sakthivadivel, Ashish Alex Sam
11:30am	BN 1: Break-Networking		
- 12:00pm			
12:00pm	ES 2: Energy Storage 2	POEE 1: Polygeneration optimization	SC 2: Solar Cogeneration 2
1:30pm	Chair: <b>Prof. Srinivasa Murthy S</b> , Indian Institute of Science, Bangalore, India, India	and energy efficiency 1 Chair: Prof. José Linares, Universidad Pontificia Comillas, Spain	Chair: <b>Prof. M. Prakash Maiya</b> , Indian Institute of Technology Madras, India



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	Application of Mg-30wt% LaNi5 and LaNi4.7Al0.3 for thermochemical energy storage using coupled metal hydride beds Sarath Babu K, Anil Kumar E, Srinivasa Murthy S	A feasibility study of a small- scale photovoltaic-powered reverse osmosis desalination plant for potable water and salt production in Madura Island: a techno-economic evaluation Habibie Muhammad Ega, Dereje S. Ayou, Nizar Amir, Alberto Coronas	Selection of Solar Dryers for Winter Drying of Agricultural Products Sureandhar G, Nayanita Kalita, Srinivasan G, Muthukumar P Experimental Investigations on a Solar Assisted Packed Bed		
Finned-Tube Adso Indonesian Natura Heat Storage App Dyah Arum Wuland Zulys, Yuni Krisyun Krisnandi, M. Idrus Nasruddin Nasrudd Numerical study of air energy storago systems for deter optimum operatin for different scale	Experimental Study of the Finned-Tube Adsorber with Indonesian Natural Zeolite for Heat Storage Applications Dyah Arum Wulandari, Agustino Zulys, Yuni Krisyuningsih Krisnandi, M. Idrus Alhamid, Nasruddin Nasruddin	PRESSURE SWING ADSORPTION INTEGRATED MED CYCLE <u>Muhammad Wakil Shahzad</u> , Kim Choon Ng, Ben Bin Xu, Doskhan Ybyraiymkul	Regeneration Systems Using a Binary Desiccant Solution Mrinal Bhowmik, Juri Sonowal, <u>Muthukumar P</u> , Anandalakshmi R Experimental and numerical		
	Numerical study of compressed air energy storage (CAES) systems for determination of optimum operating parameters for different scales of application.	Optimization of the sizing of biodigesters by the PDLB method Isabella Afonso de Campos, Ana Paula Mattos	investigations of LiCl regeneration for greenhouse air conditioning applications. Paris Pasqualin, Philip Davies ANALYSIS OF THE EXERGY PERFORMANCE OF A SOLAR-		
	Ankit Ray, T.N.C. Anand, Varunkumar S.	Comparative assessment of multi-effect distillation and reverse osmosis processes coupled to solar-driven high- temperature power cycles Patricia Palenzuela, Diego-César Alarcón-Padilla, Bartolomé Ortega- Delgado, Guillermo Zaragoza	POWERED COGENERATION SYSTEM Larbi AFIF, Nahla BOUAZIZ		
	Experimental performance analysis on an adsorption themal storage system using Indonesian natural zeolite adsorbent with Na+ counterbalanced				
	<u>Euis Djubaedah</u> , Yuni Krisyuningsih Krisnandi, Agustino Zulys, Muhammad Idrus Alhamid, Nasruddin Nasruddin				
1:30pm	pm BN 2: Break-Networking				
2:30pm		_			
2:30pm - 4:00pm	PE 1: Power Engines 1 Chair: Dr. Antonio Atienza-Márquez, Universidad de Málaga, Spain Practical cases of electricity production through different	PPA 1: Polygeneration plants and application 1 Chair: Prof. Ana M Blanco-Marigorta, Universidad de Las Palmas de Gran Canaria, Spain	SC 3: Solar Cogeneration 3 Chair: Prof. Luis María Serra, Universidad de Zaragoza - 13A, Spain Characterization of the energy potential of		
	renewable energy and waste heat sources with Organic Rankine Cycle technology Joaquín Navarro-Esbrí, Francisco Molés-Ribera, Adrián Mota-Babiloni, Roberto Collado-Puig, Manuel González-Piquer, José Pascual Martí-Mata	Polygeneration systems driven by renewable energy sources – A critical mini review for the units with organic Rankine cycles Evangelos Bellos, Christos Tzivanidis	potential of photovoltaic/thermal systems using the finite difference method to meet demand in northeastern Brazil Álvaro Augusto Soares Lima, Matheus Henrique de Oliveira Demetrio, Carlos Antônio Cabral dos Santos, Héber Cláudius Nunes		
		Yearly dynamic investigation of a solar-trigeneration unit in	Silva, José Ângelo Peixoto da Costa, Chigueru Tiba, Edywin Gabriel Carvalho de Oliveira, Gustavo de Novaes Pires Leite, Alvaro Antonio Ochoa Villa		



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	INTERNATIONAL COMPERANCE ON POLYSEMERATION		
	Modelling and simulation of the thermal processes of magnetic heat exchangers Alisson Cocci de Sousa, Suellen	Athens by using TRNSYS software Evangelos Bellos, Christos Tzivanidis	Adaptation of residential solar systems for DHW to hybrid ORC distributed generation
	Crisitna Sousa Alcântara, José Ângelo Peixoto da Costa, Alvaro Antonio Ochoa Villa, Paula Suemy Arruda Michima	Renewable heat powered Polygeneration System based	D.A Rodriguez-Pastor, R. Chacartegui, J.A Becerra
		on an advanced absorption cycle for rural communities Praveen Kumar Govindasamy, Dereje Sendeku Ayou, Narendran Chidambaram, Saravanan Rajagopal, Maiya Manoor Prakash, Albert Coronas i Salcedo	HYBRID THERMOSOLAR-LPG DEHYDRATING PLANT INSTALLED IN XOCHITEPEC, MORELOS Octavio García-Valladares, Isaac Pilatowsky Figueroa, Alfredo
		Ground-coupled Heat Pump Driven by CHP Engine Fuelled by WWTP Biomethane to Meet the Energy Demand of a District Heating and Cooling Network. Case Study in Spain Lorenzo Serrat, <u>José Ignacio Linares</u> , María del Mar Cledera, Carlos Morales	Domínguez Niño, Ana Lilia César Munguía, José Jassón Flores Prieto, Jose Rodolfo Pérez Epinoza
			Atmospheric water harvest using desiccant solar still <u>Neerai Paul Maneill</u> , Johnty W Ryan, Prakash M Maiya, Nitesh Kumar, Sourav Mitra, Durga Das
4:00pm	Workshop HYDROGEN: Workshop:	HYDROGEN: Potential energy vector in	n polygeneration systems

6:00pm









### Date: Tuesday, 05/Oct/2021

9:00am	Plenary: Plenary III Can Climate Change be Avoided? Vision of a Hydrogen-Electricity Energy Economy Manfred Gröll - Prof. Formerly. Institute for Nuclear			
9:30am	Technology and Energy Systems (IKE), University Stuttgart, Stuttgart, Germany.			
9:30am - 11:00am	EHT 1: Emerging and hybrid technologies 1 Chair: Prof. Anutosh Chakraborty, Nanyang Technological University, Bangladesh, People's Republic of	ES 3: Energy Storage 3 Chair: Dr. José A. Almendros-Ibáñez, Castilla-La Mancha University, Spain	PPA 2: Polygeneration plants and application 2 Chair: Prof. Joaquín Navarro-Esbrí, University Jaume I, Spain	
	A novel cogeneration system with ALLAM cycle and heat pump <u>Meina Xie</u> , Longxiang Chen, Jian Lin, Shan Xie, Yingru Zhao	CONSTRUCTAL DESIGN OF WEIGHT OPTIMIZED METAL HYDRIDE STORAGE DEVICE EMBEDDED WITH RIBBED HONEYCOMB Martin George, Mohan G	Performance Analysis of CO2/Natural Refrigerants for Cascade Refrigeration System Vinod Laguri, <u>Kundan Kumar</u> , Pramod Kumar, Rajkumar P Kamath, Maniam B Venkateswaran, Nagahari Krishna Lokanadham, Armin Hafner	
	Comparison between the main hydrogen storage technologies in a small and light manned full electric aircraft propelled by means of a hybrid fuel cell- battery power system Francisco Javier Sánchez- Castañeda, Teresa J. Leo, Emilio Navarro, Oscar Santiago	Molten Salt Storage Tank for District Heating and Cooling <u>Alberto Abánades</u> , Javier Rodriguez-Martín, Juan José Roncal, Francisca Galindo, Adrián Caraballo	Polygeneration at work: turbine inlet air cooling and increased mechanical power from waste heat <u>Jonathan Perez-Blanco</u> , William J. Jones	
	Experimental and Numerical analysis and comparison of Distillate output between simple solar still and solar still with Pyrex glass quantum Dot as basin material Pranav kumar Singh, Shailendra Kumar Shukla, B. B. Kale	Application of seasonal borehole thermal energy storages into solar hybrid heating and cooling networks serving residential buildings in the Campania region of Italy: impact of meteorological data and underground characteristics <u>Antonio Rosato</u> , Antonio Ciervo, Atsushi Akisawa, Vincenzo Capozzi, Giannetta Fusco, Giovanni Ciampi, Michelangelo Scorpio, Sergio Sibilio	Proposed novel geothermal multigeneration system to produce electricity, liquefied natural gas, hydrogen, cooling, and fresh water with multi- objective optimization located in Cisukarame, West Java, Indonesia <u>Yophie Dikaimana Dikaimana</u> , Budi Ismoyo, M. Idrus Alhamid, M. Aziz, N. Nasruddin	
	Experimental investigation and study of effect of solar still's glass cover tilt angle in winter season <u>Vikash Kumar Chauhan</u> , Shailendra Kumar Shukla, Pushpendra Kumar Singh Rathore	Studies on seasonal and buffer modes of operation of thermal energy storage system using coupled metal hydrides Malleswararao K, Aswin N, Srinivasa Murthy S, Pradip Dutta	A COMPARATIVE THERMODYNAMIC ANALYSIS OF SOLAR DRIVEN COMBINED COOLING, HEATING, AND POWER SYSTEMS BASED ON ORC AND ABSORPTION HEAT- PUMP Jesús García-Domínguez, J. Daniel Marcos	
11:00am	BN 3: Break-Networking		-	
- 11:30am				
11:30am - 1:00pm	ES 4: Energy Storage 4 Chair: Dr. Kiran Naik Bukke, National Institute of Technology Rourkela, India	HT 1: Heat transformers 1 Chair: Prof. Eduardo Antonio Pina, Universidad de Zaragoza - I3A, Spain	POEE 2: Polygeneration optimization and energy efficiency 2 Chair: Dr. Patricia Palenzuela, CIEMAT- Plataforma Solar de Almería, Spain	
	Effects of surface chemistry on water adsorption onto MOFs Tahmid Hasan Rupam, Mujib L. Palash, Bidyut Baran Saha	Temperature-Entropy Analysis for Performance Evaluation of Metal Organic Frameworks	TRNSYS modeling of solar cooling systems with air- conditioning with separated	
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#### (MOFs) Assisted Adsorption Desalination System Anutosh Chakraborty, Bo Han

Mixed valance metal doped MOF 801 for adsorption heat pumps Israt Jahan, Tahmid Hasan Rupam, M. L. Palash, Bidyut Baran Saha

Activated carbon and carbon nanotube based composite adsorbents for adsorption cooling systems

Kaiser Ahmed Rocky, Israt Jahan, Animesh Pal, Bidyut Baran Saha

Research on xylitol crystallization. A rheological investigation

<u>Miguel Navarro</u>, Ana Lázaro, Monica Delgado, Severine A.E. Boyer, Edith Peuvrel-Disdier Evaluation on the Performances of Adsorption Assisted Heat Transformation (AHT) System for Cooling, Heat Pump and Desalination employing various Metal Organic Frameworks (MOFs) + Water Pairs

Anutosh Chakraborty, Bo Han

Experimental investigation of double effect adsorption cycle with adsorption heat recovery Masahiro KONO, Atsushi AKISAWA

Study on the Cooling Performance of Modular Fish Hold for 30 GT Fishing Vessel Muhammad Arif Budiyanto, Fadhil Azharrisman, Achmad Fatchur Utama

High temperature heat pumps as a feasible technology towards decarbonization. Evaluation of a two stage cascade system as alternative to the use of fossil fuels

Joaquín Navarro-Esbrí, Carlos Mateu-Royo, Adrián Mota-Babiloni, Francisco Molés-Ribera



sensible and latent heat treatment

<u>Tendo Shirakawa</u>, Atsushi Akisawa, Antonio Ciervo, Antonio Rosato

#### A COMMON PLATFORM FOR EVALUATING ENERGY EFFICIENCY OF DESALINATION PLANTS

Kim Choon Ng, Muhammad Burhan, Qian Chen, Doskhan Ybyraiymkul, Faheem akhtar, M Kum ja, Raid AlRowais, Muhammad Wakil Shahzad

#### Optimum Kinetic Model for gassolid Physical Adsorption Employing Statistical Approach

Md. Matiar Rahman, Mahua Jahan Rupa, Shamal Chandra Karmaker, Shahadat Hosan, Bidyut Baran Saha

#### Numerical investigation of heat transfer and pressure drop characteristics of single-phase flow in wavy fins using CFD

<u>Sai Madhav Maddi</u>, Sankaraiah Mada, Rahul Agrawal, Vasudeva Madav, Ashok Babu T P

#### 1:00pm Plenary IV: Plenary IV

**BN 4: Break-Networking** 

Brazilian Sugar Cane Industry – a Survey on Future Improvements in the Process Energy Management Silvia A. Nebra Prof. Energy Engineering Modeling and Simulation Laboratory, Federal University of ABC; Interdisciplinary Centre for Energy Planning, University of Campinas, Brazil

1:30pm 1:30pm

-2:30pm 2:30pm

2:30pm	DES 2: Distributed Energy Systems	LCATS 1: Life cycle analysis and thermoeconomic studies 1	PPA 3: applica
4.1111nm	Chair: <b>Prof. Joan Carles Bruno</b> , Universitat Rovira i Virgili, Spain	Chair: <b>Prof. Alberto Coronas</b> , Universidad Rovira i Virgili, Spain	Chair: Dr Instituto Mexico
	Role of the Geographic Information Systems (GIS) for District Heating Network Design Mikel Lumbreras, Alvaro Campos- Celador, Gonzalo Diarce, Pello Larrinaga, Koldobika Martin	A thermo-economic analysis of solar domestic hot-water systems in compliance with Spanish energy code requirements. Feasible minimum size to meet operating and maintenance costs.	Energy introdu coolin fermer and et Milagro

Juan F. Belmonte, F. Javier Ramírez, José A. Almendros-Ibáñez

# PPA 3: Polygeneration plants and application 3

Chair: **Dr. Octavio García-Valladares**, Instituto de Energías Renovables UNAM, Mexico

Energy evaluation of the introduction of an ejector cooling system to improve the fermentation process in a sugar and ethanol production process

Milagros Cecilia Palacios Bereche, Reynaldo Palacios Bereche, Antonio Garrido Gallego, <u>Silvia Azucena</u> <u>Nebra</u>



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Wind energy potential

assessment of selected







	locations at two major cities in Dominican Republic, toward energy matrix decarbonisation. <u>Alexander Vallejo Díaz</u> , Idalberto Herrera, Alexeis Fernández	Conventional and Advanced 4E Analysis of a Hybrid Solar- Geothermal Power Plant M. Moghaddam, M.H. Khoshgoftar- Manesh, Ana M Blanco-Marigorta	Expe Emb Hydi Cool
	Potential Maps for Combined Nocturnal Radiative Cooling and Diurnal Solar Heating Applications. Cases of Spain, Switzerland, Germany and Sweden Roger Vilà, Lídia Rincón, Marc Medrano, Albert Castell	Environmental assessment of two medium size solar cogeneration plants Silvia Guillén-Lambea, Eduardo A. Pina, Luis M. Serra, Miguel A. Lozano, Ana Lazaro	Saya Muth Integ sola bion cool in M
	Integrated energy system model Alejandra Queralt Soriano, Raimon Argemí Puigdoménech	Proposal and Thermoeconomic Analysis of a Multiple Configuration Energy Trigeneration System: Case Study of the Energy Demand of a Laboratory in a University Campus Suellen Cristina Sousa Alcântara, Daniel Rodolfo Souza da Silva, Alvaro Antonio Ochoa Villa, José Ângelo Peixoto da Costa, Héber Cláudius Nunes Silva, Eduardo José Cidade Cavalcanti, Paula Suemy Arruda Michima	Juan F Ajnanı Olmo,
		Optimal design of trigeneration systems for buildings considering cooperative game theory for allocating production cost to energy services Miguel A. Lozano, <u>Luis M. Serra</u> ,	
)pm -	Workshop Solar Cogeneration: Work	Eduardo Antonio Pina shop Solar Cogeneration	
)pm			

Experimental studies on Embedded Cooling Tube Metal Hydride Reactor for Heating and Cooling Applications Sayantan Jana, Nithin N Raju, Muthukumar P

Integration of a system with solar thermal energy and biomass for the heating and cooling control of a greenhouse in Mediterranean climates

Juan Prieto, Rainanda M. Ajnannadhif, Pablo Fernández-del Olmo, Alberto Coronas

4:00pm -6:00pm







	POLSENERATION	Heating & cooling solutions
Date: We	ednesday, 06/Oct/2021	
9:00am - 10:00am	Plenary day 3: Plenary V & VI Plenary V: Food-Energy-Material Nexus – Next Generation Thermal Chemistry Department and Director of the Center for Environmental overview of metal hydride based thermal energy storage systems Pr Institute of Science. Bangalore, India.	Research at Çukurova University, Adana, Turkey. Plenary VI: An
10:00am - 11:30am	EHT 2: Emerging and hybrid technologies 2 Chair: Dr. Juan Prieto, Universitat Rovira i Virgili, Spain	PBDHC 1: Polygeneration in buildings and district system/Polygeneration in district energy networks 1 Chair: Prof. Joaquín Navarro-Esbrí, University Jaume I, Spain
	RCE as a device to produce heating and cooling. Transmittance and aging study for cover materials suitable for radiative cooling Ingrid Martorell, Jaume Camarasa, Roger Vilà, Cristian Solé, Albert Castell	Fuel cell powered air-cooled data centre: cogeneration solutions for District Heating Networks Paolo Taddeo, Joaquim Romaní, Aleksandar Ivancic, Jaume Salom
	Hollow Fiber Membrane-Based Liquid Desiccant Dehumidifier Performance Assessment for Air Conditioning/Drying Application Pedisetti Kumar Sai Tejes, Gaurav Priyadarshi, Bukke Kiran Naik	Hot water supply in hospitals: Performance analysis and evaluation of improvement strategies of a solar thermal system combined with boilers <u>Antonio Atienza-Márquez</u> , Fernando Domínguez-
	Entropy generation analysis of a novel CO2 based solar assisted trigeneration system for dairy application VUTUKURU RAVINDRA, PEGALLAPATI A SAIKIRAN, MADDALI RAMGOPAL	Muñoz, Francisco Fernández-Hernández, Pedro Quintero-Jiménez, José Manuel Cejudo-López Performance analysis of a reversible water/LiBr absorption heat pump connected to district heating network for space cooling, heating, and
	ENERGY CONSERVATION USING NATURAL LIGHTING IN BUILDINGS AT VARIOUS INDIAN CLIMATIC CONDITIONS	DHW provision in warm and cold climates Muhammad Fa'iq Vidi Wardhana, Dereje S. Ayou, Alberto Coronas
	Ashok Babu T P, <u>Jos Varghese Konikkara</u> , Azhar B Shibin, Abhishek C, Haroon B A	Techno-Economic Feasibility Study on Integration of Mobile Thermochemical Energy Storage with Building Space Cooling System Athul Pavangat, <u>Bukke Kiran Naik</u>
11:30am	BN 5: Break-Networking	-
- 12:00pm		
12:00pm - 1:30pm	EHT 3: Emerging and hybrid technologies 3 Chair: Prof. PRADIP DUTTA, Indian Institute of Science, India	PPA 4: Polygeneration plants and application 4 Chair: Dr. Paolo Taddeo, Institut de Recerca en Energia de Catalunya, Spain
·	Experimental study on absorption and desorption characteristics of La0.7Ce0.1Ca0.3Ni5 filled in an annular porous metal hydride reactor Sunku prasad J, SHUBHAM PARASHAR, <u>Muthukumar</u> P	Ammonia-based compression heat pumps for simultaneous heating and cooling applications in milk pasteurization processes: performance evaluation Reza Hargiyanto, Dereje S. Ayou, Alberto Coronas
	Evaluation of Sorption Kinetics of Micro- Encapsulated Sorbents and Thermal Kinetics of Micro-Encapsulated PCM for Low Temperature Thermal Energy Storage Application <u>Atif Amim</u> , Bukke Kiran Naik	Assessment of waste heat potential of an Algerian gas turbine power plant for electricity production and district heating Sofiane ABERKANE, Hamza SEMMARI, Abdelkader Filali, Mustapha BELKADI, Noura REBAI



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	Numerical simulation of the flow of a gas-particle dense suspension through a vertical tube for CSP applications Minerva Diaz-Heras, Juan I. Córcoles, María Fernández- Torrijos, José A. Almendros-Ibáñez	A parametric optimization of a nZEB building under the new Spanish Building Technical Code <u>Ane Goenaga-Pérez</u> , Milagros Álvarez-Sanz, Pello Larrinaga, Jon Terés-Zubiaga, Álvaro Campos-Celador	
	Implementation of ANFIS-AI Tool with ANN	Bio oil as cutter stock in fuel oil blends for industrial applications	
	Fuzzy Logic for Performance Prediction and Design Optimization of Desiccant Coated Energy Exchanger	Paul Gustavo Palmay Paredes, Joan Carles Bruno Argilaguet, Alberto Coronas Salcedo	
	<u>Gaurav Priyadarshi</u> , Kiran Naik Bukke		
		Performance of Solid State Hydrogen Storage assisted Stand-alone Polygeneration Microgrids for Various Climatic Zones of India	
		SRINIVASA MURTHY SRIKANTIAH, PRADIP DUTTA, RAKESH SHARMA, BADRI S RAO	
1:30pm	BN 6: Break-Networking		
- 2:30pm			
2:30pm	Workshop: renewable DHC: Workshop Smart and local renewable Energy district heating and cooling solutions for sustainable living		
4:30pm			
4:30pm - 5:30pm	Closing: Plenary, Awards &closing Plenary VII: "Review of technologies and new trends in polygeneration systems" Prof. Joan Carles Bruno, CREVER - Research Group on Applied Thermal Engineering Universitat Rovira i Virgili		



