

10–12 December 2019, <u>VMCC, IIT Bombay</u>, Mumbai, India <u>http://www.ese.iitb.ac.in/icaer2019 | icaer@iitb.ac.in</u>

Conference Schedule

Day 1, 10 Dec 2019

Time	Paper Id	Title
8:00 AM - 9:00 AM	Registration and Breakfast, Cafeteria, Ground floor	
9:15 AM - 9:55 AM	Inauguration, Main Auditorium, Ground floor	
10:00 AM - 11:00 AM	Invited talk	Prof. Diana Urge-Vorsatz, Main Auditorium, Ground floor
11:00 AM - 11:25 AM	Tea	a Break, Foyer, First floor & Cafeteria, Ground floor
11:30 AM - 1:00 PM		Session 1.1a: Solar PV, Room 11, First floor
11:30 AM - 11:45 AM	055	Power Management of non-conventional Energy resources based DC Microgrid supported by hybrid energy storage
11:45 AM - 12:00 PM	068	Performance Evaluation of Wind - Solar Hybrid Systems in Indian Context
12:00 PM - 12:15 PM	087	Investigation on Different Types of Electric Storage Batteries used in offgrid Solar Power Plants and Procedures for their Performance Improvement
12:15 PM - 12:30 PM	176	Correlating partial shading and operating conditions to the performance of PV panels
12:30 PM -12:45 PM	193	Assessment of Different Multiclass SVM Strategies for Fault Classification in a PV System
12:45 PM - 1:00 PM	214	Automated cleaning of PV panels using the comparative algorithm and Arduino
11:30 AM - 1:00 PM		Session 1.1b: Solar Thermal, Room 12, First floor
11:30 AM - 11:45 AM	018	Solar Energy for Meeting Service Hot Water Demand in Hotels: Potential and Economic Feasibility in India
11:45 AM - 12:00 PM	019	Techno-economic feasibility of condenser cooling options for solar thermal power plants in India
12:00 PM - 12:15 PM	020	Optical Modelling of Parabolic Trough Solar Collector
12:15 PM - 12:30 PM	037	Thermo-Hydrodynamic Modeling of Direct Steam Generation in Parabolic Trough Solar Collector
12:30 PM -12:45 PM	058	Sizing of a solar powered adsorption cooling system for room cooling needs
12:45 PM - 1:00 PM	078	Mathematical Analysis of Convection Heat Loss from Solar Cavity Receiver Dish Concentrator
11:30 AM - 1:00 PM	Ses	sion 1.1c: Biomass and Bio fuels, Room 13, First floor
11:30 AM - 11:45 AM	030	Development of an Improved Cookstove: An Experimental Study
11:45 AM - 12:00 PM	034	Double Dielectric Barrier Discharge-Assisted Conversion of Biogas to Synthesis Gas
12:00 PM - 12:15 PM	043	Hydrodeoxygenation of Bio-oil from Fast Hydropyrolysis of Pinewood over Various Catalysts



12:30 PM -12:45 PM	198	Extinction of non-premixed 'volatiles' flame: Experiments on single biomass particles and connection to counter-current flame propagation in packed beds
12:45 PM - 1:00 PM	209	Effect of Injection Pressure on the Performance Characteristics of Double Cylinder 4-Stroke CI Engine using Neem Biodiesel.
11:30 AM - 1:00 PM	Session 1.1d:	Energy policy, economics, management, Room 14, First floor
11:30 AM - 11:45 AM	023	The Human Dimension of Household Electricity Consumption: A Structural Equation Modelling Approach
11:45 AM - 12:00 PM	051	Environmental disclosure regulation and low carbon growth: Evidence from firm level data
12:00 PM - 12:15 PM	090	Study of effects of water inlet temperature and flow rate on the performance of Rotating Packed Bed
12:15 PM - 12:30 PM	111	Cost and Emission Trade-offs in Electricity Supply for the state of Maharashtra
12:30 PM -12:45 PM	273	Effective use of Existing Efficient Variable Frequency Drives (VFD) technology for HVAC systems – Consultative Research Case Studies
12:45 PM - 1:00 PM	275	Thermodynamic Analysis of a Combined Power and Cooling System Integrated with CO2 Capture Unit of a 500MWe SupC Coal- fired Power Plant
1:00 PM - 1:55 PM		Lunch, Second floor & Cafeteria, Ground floor
2:00 PM - 3:30 PM		Session 1.2a: Solar PV, Room 11, First floor
2:00 PM - 2:15 PM	247	Assessment of Floating Solar Photovoltaic (FSPV) Potential in India
2:15 PM - 2:30 PM	249	Policy intervention for promoting effective adaptation of rooftop solar PV systems
2:30 PM - 2:45 PM	254	A Simplified Non-Iterative Method for Extraction of Parameters of Photovoltaic Cell/Module
2:45 PM - 3:00 PM	262	Design and Fabrication of Grating based Filters for Micro- thermophotovoltaic Systems
3:00 PM - 3:15 PM	270	Analysis of Nature Inspired Spirals for Design of Solar Tree
3:15 PM - 3:30 PM	277	DFT studies on electronic and optical properties of inorganic CsPbI3 perovskite absorber for solar cell application
2:00 PM - 3:30 PM	S	Session 1.2 b: Solar Thermal, Room 12, First floor
2:00 PM - 2:30 PM	Invited Talk	Prof. Pradeep Dutta
2:30 PM - 2:45 PM	083	Effect of Top Loss and Imperfect Regeneration on Power Output and Thermal Efficiency of a Solar Low Delta-T Stirling Engine
2:45 PM - 3:00 PM	118	Desalination using Waste Heat Recovery with Active Solar Still
3:00 PM - 3:15 PM	137	Experimental Investigations of Drying Characteristics of Thompson Seedless Grapes using Solar Energy
3:15 PM - 3:30 PM	142	Performance assessment and parametric study of multiple effect evaporator
2:00 PM - 3:30 PM	S	ession 1.2 c: Nuclear Energy, Room 13, First floor



2:00 PM - 2:30 PM	Invited Talk	Prof. Carlos Alberto Dorao
2:30 PM - 2:45 PM	017	Does the criteria of instability thresholds during Density Wave Oscillations need to be redefined?
2:45 PM - 3:00 PM	100	Computation of Higher Eigenmodes using Subspace iteration scheme and its application to Flux Mapping System of AHWR
3:00 PM - 3:15 PM	280	Safety Analysis of Loss of NPP off-site power with failure of Reactor SCRAM (ATWS) for VVER-1000
3:15 PM - 3:30 PM	336	Comparison of Physics Characteristics of Pressurized Water Reactor Type Advanced Light Water Reactors
2:00 PM - 3:30 PM	Ses	sion 1.2d: Biomass and biofuels, Room 14, First floor
2:00 PM - 2:15 PM	231	Experimental Investigation of a biogas fueled diesel engine at different biogas flow rates
2:15 PM - 2:30 PM	245	A comparative experimental investigation of improved biomass cookstoves for higher efficiency with lower emissions
2:30 PM - 2:45 PM	259	Carbon deposition on the anode of a solid oxide fuel cell fueled by syngas – A thermodynamic analysis
2:45 PM - 3:00 PM	279	Bio-ethanol production from carbohydrate-rich microalgal biomass: Scenedesmus obliquus
3:00 PM - 3:15 PM	298	Performance and Emission Characteristics of CI Engine Fueled With Plastic Oil blended with Jatropha Oil And Diesel
3:15 PM - 3:30 PM	306	Thermochemical conversion of tomato plant waste for liquid fuel production
3:30 PM - 4:00 PM	Те	a Break, Foyer, First floor & Cafeteria, Ground floor
4:00 PM - 5:30 PM		ion 1.3a: Electrochemical storage, Room 11, First floor
4:00 PM - 5:30 PM	Sess	ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li-
4:00 PM - 5:30 PM 4:00 PM - 4:15 PM	Sess 072	ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li- Electrolyte Development of a dynamic battery model and estimation of
4:00 PM - 5:30 PM 4:00 PM - 4:15 PM 4:15 PM - 4:30 PM	072 125	ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li- Electrolyte Development of a dynamic battery model and estimation of equivalent electrical circuit parameters
4:00 PM - 5:30 PM 4:00 PM - 4:15 PM 4:15 PM - 4:30 PM 4:30 PM - 4:45 PM	072 125 206	ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li- Electrolyte Development of a dynamic battery model and estimation of equivalent electrical circuit parameters Studies on the Use of Thorium in PWR Characteristics of an Indigenously Developed 1 kW Vanadium
4:00 PM - 5:30 PM 4:00 PM - 4:15 PM 4:15 PM - 4:30 PM 4:30 PM - 4:45 PM 4:45 PM - 5:00 PM	Sess: 072 125 206 236	ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li- Electrolyte Development of a dynamic battery model and estimation of equivalent electrical circuit parameters Studies on the Use of Thorium in PWR Characteristics of an Indigenously Developed 1 kW Vanadium Redox Flow Battery Stack Electrodeposition of Cu2O: Determination of limiting potential
4:00 PM - 5:30 PM 4:00 PM - 4:15 PM 4:15 PM - 4:30 PM 4:30 PM - 4:45 PM 4:45 PM - 5:00 PM 5:00 PM- 5:15 PM	Sess 072 125 206 236 288	ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li- Electrolyte Development of a dynamic battery model and estimation of equivalent electrical circuit parameters Studies on the Use of Thorium in PWR Characteristics of an Indigenously Developed 1 kW Vanadium Redox Flow Battery Stack Electrodeposition of Cu2O: Determination of limiting potential towards solar water splitting Highly Stable Pt/CVD-Graphene Coated Superstrate Cu2O
4:00 PM - 5:30 PM 4:00 PM - 4:15 PM 4:15 PM - 4:30 PM 4:30 PM - 4:45 PM 4:45 PM - 5:00 PM 5:00 PM- 5:15 PM	Sess 072 125 206 236 288	ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li- Electrolyte Development of a dynamic battery model and estimation of equivalent electrical circuit parameters Studies on the Use of Thorium in PWR Characteristics of an Indigenously Developed 1 kW Vanadium Redox Flow Battery Stack Electrodeposition of Cu2O: Determination of limiting potential towards solar water splitting Highly Stable Pt/CVD-Graphene Coated Superstrate Cu2O
4:00 PM - 5:30 PM 4:00 PM - 4:15 PM 4:15 PM - 4:30 PM 4:30 PM - 4:45 PM 4:45 PM - 5:00 PM 5:00 PM- 5:15 PM 5:15 PM - 5:30 PM	Sess 072 125 206 236 288	 ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li- Electrolyte Development of a dynamic battery model and estimation of equivalent electrical circuit parameters Studies on the Use of Thorium in PWR Characteristics of an Indigenously Developed 1 kW Vanadium Redox Flow Battery Stack Electrodeposition of Cu2O: Determination of limiting potential towards solar water splitting Highly Stable Pt/CVD-Graphene Coated Superstrate Cu2O Photocathode for Water Reduction Session 1.3 b: Energy policy, economics, management, Room 12,
4:00 PM - 5:30 PM 4:00 PM - 4:15 PM 4:15 PM - 4:30 PM 4:30 PM - 4:45 PM 4:45 PM - 5:00 PM 5:00 PM- 5:15 PM 5:15 PM - 5:30 PM	Sess: 072 125 206 236 288 356	ion 1.3a: Electrochemical storage, Room 11, First floor Structural, Electrical and Cell Performance Study on Lithium Germanium Phosphate Glass-Ceramics based Solid State Li- Electrolyte Development of a dynamic battery model and estimation of equivalent electrical circuit parameters Studies on the Use of Thorium in PWR Characteristics of an Indigenously Developed 1 kW Vanadium Redox Flow Battery Stack Electrodeposition of Cu2O: Determination of limiting potential towards solar water splitting Highly Stable Pt/CVD-Graphene Coated Superstrate Cu2O Photocathode for Water Reduction Session 1.3 b: Energy policy, economics, management, Room 12, First Floor Incorporating battery degradation in stand-alone PV microgrid with



4:45 PM - 5:00 PM	148	Model for Economic Optin Energy Systems	nization of Nuclear – Renewable Hybrid	
5:00 PM- 5:15 PM	253	Mining representative load	profiles in commercial buildings	
5:15 PM - 5:30 PM	257	Viability study of stand alo base station	one hybrid energy systems for telecom	
4:00 PM - 5:30 PM		Session 1.3 c: Wast	e-to-energy, Room 13, First Floor	
4:00 PM - 4:15 PM	015	Exergy based comparison of and Naphtha-RFG mixture as fuels	of two Gas Turbine Plants with Naphtha	
4:15 PM - 4:30 PM	016	Decentralized solid waster residential campus: A pilot	nanagement for educational-cum-	
4:30 PM - 4:45 PM	224	Waste to Energy: Issues, C Utilization in Indian Cement Industry	hallenges, and Opportunities for RDF	
4:45 PM - 5:00 PM	358	Thermodynamic Studies or Generation of Synthesis Ga using Coke Oven Gas (CO		
5:00 PM- 5:15 PM	361	Methanol Adsorption	Influence Of Bed Temperature On Performance Of Silicagel	
5:15 PM - 5:30 PM	363	Experimental investigation using enriched biogas in S-I engine for stable rural electrification		
5:30 PM -5:45 PM	278	Biowaste Derived Highly F	Porous Carbon for Energy Storage	
4:00 PM - 5:30 PM		Session 1.3 d: Fu	uel Cells, Room 14, First Floor	
4:00 PM - 4:15 PM	080	Performance Study of a An Application	ode Flow Field Design used in PEMFC	
4:15 PM - 4:30 PM	158		of a 500 MWe Coal Fired Supercritical rated with Molten Carbonate Fuel Cell in its Flue Gas Stream	
4:30 PM - 4:45 PM	266	Cellulose Nanocrystals Inc for Fuel Cell Application	orporated Proton Exchange Membranes	
4:45 PM - 5:00 PM	267	Study of the effect of biom in microbial fuel cell	ass derived N-self doped porous carbon	
5:00 PM- 5:15 PM	369	Numerical investigation on concentration on the perfor	the influence of reactant gas mance of a PEM fuel cell	
5:30 PM - 6:30 F	M	93,141,186,187,195,242,251 269,290,304,314,318,374, 378,383,384,385,387,389 91,395,399,401,404,405,410 411,412,414,415,416	Interaction over Tea for Poster Presentation, Foyer, First floor	



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Day 2, 11 Dec 2019

Time	Paper Id	Title
8:00 AM - 8:50 AM	Breakfast, Cafeteria, Ground floor	
9:00 AM - 10:00 AM	Invited talk	Prof. Ravi Silva, Room 21, Second floor
10:10 AM - 11:10 AM		ession 2.1 a: Fuel Cells, Room 11, First floor
10:10 AM - 10:40 AM	Invited Talk	Prof. Prakash Chandra Ghosh
10:40 AM - 10:55 AM	169	Actuator Fault Detection and Isolation for PEM Fuel Cell Systems using Unknown Input Observers
10:55 AM - 11:10 AM	202	Modeling Polarization Losses in HTPEM Fuel Cells
10:10 AM - 11:10 AM	Session 2	.1b: Electrochemical Storage, Room 12, First floor
10:10 AM - 10:25 AM	177	Engineering of O2 Electrodes by Surface Modification for Corrosion Resistance in Zinc-Air Batteries
10:25 AM - 10:40 AM	258	Effect of temperature and salt concentration on the properties of electrolyte for sodium ion batteries
10:40 AM - 10:55 AM	316	Pseudocapacitive energy storage in Copper Oxide and Hydroxide Nanostructures casted over Nickel-foam
10:10 AM - 11:10 AM	Session	2.1 c: Biomass and biofuels, Room 13, First floor
10:10 AM - 10:40 AM	Invited Talk	Prof. Sandeep Kumar
10:40 AM - 10:55 AM	308	Single particle analysis of thermally thick wood particles in O_2,N_2 [,CO]_2 atmosphere
10:55 AM - 11:10 AM	320	Processing thermogravimetric analysis data for pyrolysis kinetic study of microalgae biomass
11:10 AM -11:25 AM	075	Microalgae growth study with High CO2 Concentration stream- Experience with native species
11:25 AM -11:40 AM	108	Performance Evaluation of Gasifire Type Biomass Cookstove Models: An Experimental Study
10:10 AM - 11:10 AM	Session 2.1	d: Energy, environment, society, Room 14, First floor
10:10 AM - 10:25 AM	021	Cooling energy saving potential of naturally ventilated interior design in low-income tenement unit
10:25 AM - 10:40 AM	105	ESCO model for energy efficient pump installation scheme: A case study
10:40 AM - 10:55 AM	178	Energy Farming - A Green Solution For Indian Cement Industry
10:55 AM - 11:10 AM	205	A non-parametric approach to investigate the effect of energy consumption on CO2 emissions: Evidence from a panel of South Asian countries
11:10 AM - 11:25 AM		Tea Break, Foyer, First floor



11:30 AM- 1:00 PM	S	Session 2.2 a: Solar PV, Room 11, First floor	
11:30 AM - 12:00 PM	Invited Talk	Prof. Jatin Rath	
12:00 PM - 12:15 PM	310	An Analysis for Management of End-of-Life Solar PV in India	
12:15 PM - 12:30 PM	324	Photovoltaic Thermal Collectors with Phase Change Material for Southeast of England	
12:30 PM - 12:45 PM	339	Evaluation of annual electrical energy through semitransparent (glass to glass) and opaque photovoltaic module in clear sky condition at composite climate: A comparative study	
12:45 PM - 1:00 PM	351	Co-sensitization of perovskite solar cells by organometallic compounds: Mechanism and photovoltaic characterization	
11:30 AM- 1:00 PM	Soco	ion 2.2 b: Nuclear Energy, Room 12, First floor	
11:30 AM - 12:00 PM	Invited Talk	Dr. Umasankari Kannan	
12:00 PM - 12:15 PM	337	Development Of A Python Module "SARRA" For Refuelling Analysis of MSR Using DRAGON Code	
12:15 PM - 12:30 PM	340	Current Practices and Emerging Trends in Safety Analysis of NPPs	
12:30 PM - 12:45 PM	352	Nuclear Power Plants and Human Resources Development in South Asia	
12:45 PM - 1:00 PM	359	Reactivity Initiated Transients for 700MWe PHWR	
11:30 AM- 1:00 PM	Session 2.2 c: Transportation, Room 13, First floor		
11:30 AM - 12:00 PM	Invited Talk	Prof. A.S. Ramadhas	
12:00 PM - 12:15 PM	229	Predict the Effect of Combustion Parameter on Performance & Combustion Characteristics of Small Single Cylinder Diesel Engine	
12:15 PM - 12:30 PM	334	Numerical Investigation on the Effect of EGR in a Premixed Natural Gas SI Engine	
12:30 PM - 12:45 PM	348	Platooning of Flat Solar Panel Mounted Mini Bus Model – A Numerical Investigation	
12:45 PM - 1:00 PM	372	Design and Analysis of a Solid Oxide Electrolyser Plant for the production of Ammonia from Excess Renewable Electricity	
11:30 AM- 1:00 PM	Sess	sion 2.2 d: Solar Thermal, Room 14, First floor	
11:30 AM - 11:45 AM	076	Optimization in the Operation of Cabinet Type Solar Dryer for Industrial Applications	
11:45 AM- 12:00 PM	109	Transient numerical model for natural convection flow in flat plate solar collector	
12:00 PM - 12:15 PM	200	Performance Analysis of Double Glass Water Based Photovoltaic/Thermal System	
12:15 PM - 12:30 PM	210	Experimental study of a helical coil receiver using Fresnel lens	
		A systematic investigation on evaporation, condensation and	



12:45 PM - 1:00 PM	265	Novel design of PV integrated solar still for cogeneration of power and sustainable water using PV-T technology
1:00 PM - 1:55 PM	Lunc	h Break, Second floor & Cafeteria, Ground floor
2:30 PM - 5:00 PM	Rountable session	n on "Future of Coal Research", Board Room, Fourth floor
2:00 PM -3:30 PM	Session 2.3 a: Ei	nergy policy, economics, management + Energy Education, Room 11, First floor
2:00 PM - 2:15 PM	089	Saving electricity, one consumer at a time
2:15 PM - 2:30 PM	146	Energy Education for sustainable future - A Review
2:30 PM - 2:45 PM	166	Bamboo Plant Intellect Deeds Optimization Algorithm for Solving Optimal Reactive Power Problem
2:45 PM - 3:00 PM	171	Analysis of Heating and Cooling Energy Demand of School Buildings
3:00 PM - 3:15 PM	221	Energy Literacy of University Graduate Students: A Multidimensional Assessment in terms of Content Knowledge, Attitude and Behaviour
3:15 PM - 3:30 PM	342	Internalizing the external cost of Gaseous and Particulate matter emissions from the coal-based thermal power plants in India
2:00 PM -3:30 PM		Session 2.3 b: Transportation, Room12, First floor
2:00 PM - 2:15 PM	059	Experimental Evaluation of Common Rail Direct Injection Compression Ignition Engine with EGR using Biodiesel
2:15 PM - 2:30 PM	123	Numerical Investigations on the Flow Characteristics in a Compression Ignition Engine with Vortex Tube at Inlet
2:30 PM - 2:45 PM	159	Influence of Fuel Injection Pressure and Injection Timing on Nano-Particle Emission in Gasoline/Diesel RCCI Engine
2:45 PM - 3:00 PM	204	Effect of Diesel Injection Timings on the Nature of Cyclic Combustion Variations in a RCCI Engine
3:00 PM - 3:15 PM	208	Co-axial Thermal Probe for High Frequency Periodic Response in an IC Engine Test Rig
3:15 PM - 3:30 PM	213	Optimization of Injector location on the Cylinder Head in a Direct Injection Spark Ignition Engine
2:00 PM -3:30 PM		Session 2.3 c: Solar thermal, Room 13, First floor
2:00 PM - 2:30 PM	Invited talk	Prof. Keith Lovegrove
2:30 PM - 2:45 PM	149	Exergy analysis and cost optimization of solar flat pate collector for a two stage absorption refrigeration system with water- lithium bromide as a working pair
2:45 PM - 3:00 PM	151	Design and Development of Concentrated Solar Cooker with Parabolic Dish Concentrator
3:00 PM - 3:15 PM	154	Thermal and Electrical Performance Assessment of Elongated Compound Parabolic Concentrator
3:15 PM - 3:30 PM	180	Energetic and Exergetic Performance Comparison of a Hybrid Solar Kalina Cycle at Solar and Solar Storage Mode of Operations



2:00 PM -3:30 PM		Session 2.3 d: Wind, hydro, and ocean energy , Room 14, First floor
2:00 PM - 2:15 PM	150	Experimental Investigation on Near Wake Vortex Shedding for Horizontal Axis Wind Turbine
2:15 PM - 2:30 PM	252	Numerical Investigation of the Performance of Pump as Turbine with Back Cavity Filling
2:30 PM - 2:45 PM	260	Numerical Study on CO2 injection in Indian Geothermal reservoirs using COMSOL Multiphysics 5.2a
2:45 PM - 3:00 PM	261	Modification in the Rotor of Savonius Turbine to Reduce Reverse Force on the Returning Blade
3:00 PM - 3:15 PM	303	Performance Assessment of Pelton Turbine with Traditional and Novel Hooped Runner by Experimental Investigation
3:15 PM - 3:30 PM	330	Performance Enhancement of Savonius Hydrokinetic Turbine with a Unique Vane Shape : An Experimental Investigation
3:30 PM - 4:00 PM	Tea B	reak, Foyer, First floor & Cafeteria, Ground floor
4:00 PM - 5:00 PM		Session 2.4 a: Thermal storage + Coal, Room 11, First floor
4:00 PM - 4:15 PM	061	Emission Measurement Considerations for Power Industry
4:15 PM - 4:30 PM	164	Three dimensional investigation on energy separation in a Ranque-Hilsch vortex tube
4:30 PM - 4:45 PM	226	Enhancement of Thermal Performance of ZrO2 Nanofluid Flow in a Tube with Staggered Conical Strip Inserts
4:45 PM - 5:00 PM	004	Determination of steam energy factor for wort kettle as a tool for optimisation of the steam energy
4:00 PM - 5:15 PM		Session 2.4 b: Grid integration of renewables + EV, Room 12, First floor
4:00 PM - 4:30 PM	Invited Talk	Prof. G. Narayanan
4:30 PM - 4:45 PM	032	Challenges, Opportunities for Demand Response Implementation on Renewable Energy and Smart Grids in India: - A Review
4:45 PM - 5:00 PM	097	Integrated Thermal Analysis of an All-Electric Vehicle
5:00 PM - 5:15 PM	128	A Novel Switched Inductor Switched Capacitor based quasi Switched Boost Inverter
4:00 PM - 5:00 PM		Session 2.4 c: Energy, environment, society, Room 13, First floor
4:00 PM - 4:15 PM	117	Enhancement in Product Value of Potato Through Chemical Pre-treatment and Drying Process
4:15 PM - 4:30 PM	302	Flow Improvement Aspect with Stagger Angle Variation of the Subsequent Rotor in Contra- rotating Axial Flow Turbine
4:30 PM - 4:45 PM	344	Electrochemical Reduction of CO2 On Ionic Liquid Stabilized Reverse Pulse Electrodeposited Copper Oxides.
4:45 PM - 5:00 PM	370	Energy Efficiency Analyses of a Building Envelope: A Case Study
4:45 PM - 5:00 PM	370	



5:10 PM - 6:10 PM		Session 2.5 a: Biom	ass and biofuels, Room 11, First floor
5:10 PM - 5:40 PM	Invited Talk	Prof. Pramod Kumbhar	
5:40 PM - 5:55 PM	327	Modeling and Simulation of Hollow Membrane Biocatalyst Membrane Reactor	
5:55 PM - 6:10 PM	329		oxide Pretreatment of Sterculia foetida tion of Reducing Sugar: Effect of Process Removal
6:10 PM-6:25 PM	331	Techno-economic Ana Green diesel from Mice	lysis for Production of Biodiesel and roalgal oil
5:10 PM - 6:10 PM		Session 2.5 b: Nu	iclear Energy, Room 12, First floor
5:10 PM - 5:25 PM	240	Transient Analysis of H Open for 700 MWe PH	Pressurizer Steam Bleed Valves Stuck IWRs
5:25 PM - 5:40 PM	241	Transient Analysis of M IPHWRs	Net Load Rejection for 700 MWe
5:40 PM - 5:55 PM	281	Orifice Enabled Flow S at Lower Inclinations	Stabilization of Natural Circulation Loop
5:55 PM - 6:10 PM	317	Validation of computer code based on Nodal Integral Method against KAPS-2 Phase-B data	
6:10 PM - 6:25 PM	345	Performance of Flux M induced oscillations in	lapping System during spatial xenon PHWRs
5:10 PM - 6:10 PM		Session 2.5 c: Micro	grids and smart grids, Room 13, First floor
5:10 PM - 5:25 PM	014	Development of Power Based on Renewable E	Supply to Isolated Territories of Russia Energy Sources
5:25 PM - 5:40 PM	101	Multiple Distributed G with Change of Load	eneration units in Distribution Network
5:40 PM - 5:55 PM	138		ward Control of Dual Active Bridge DC- eneralized Average Modelling
5:55 PM - 6:10 PM	256	Design, Analysis and H Bipolar Solid-State Ma	Hardware Implementation of Modified Irx Generator
6:15 PM - 7:00 Pl	269,290 VI 378,38 391,395,3	186,187,195,242,251 0,304,314,318,374, 3,384,385,387,389 399,401,404,405,410 412,414,415,416	Interaction over Tea for Poster Presentation, Foyer, First floor
7:30 PM - 10:00 PM		Gala I	Dinner, Gulmohar Lawn



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Day 3, 12 Dec 2019

Time	Paper Id	Title
8:00 AM - 8:50 AM	Breakfast, Cafeteria, Ground floor	
9:00 AM- 9:30 AM	Invited talk	A. K. Balasubrahmanian, Room 11, First floor
9:30 AM- 10:00 AM	Invited talk	Prof. Jacques Huot, Room 11, First floor
10:10 AM - 11:10 AM	Ses	sion 3.1 a: Oil and Natural Gas, Room 11, First floor
10:10 AM - 10:25 AM	013	CMG Based Simulation Study of Water Flooding Of Petroleum Reservoir
10:25 AM - 10:40 AM	039	Fouling Mitigation in Shell and Tube Heat Exchanger through CFD Simulation
10:40 AM - 10:55 AM	086	Investigations on recovery of apparent viscosity of crude oil after magnetic fluid conditioning
10:55 AM - 11:10 AM	286	Pressure Propagation and Flow Restart in the Subsea Pipeline Network
10:10 AM - 11:10 AM		Session 3.1 b: Solar PV, Room 12, First floor
10:10 AM - 10:25 AM	077	Modeling of Solar Photovoltaic assisted Electrolyzer-Polymer Electrolyte Membrane Fuel Cell to Charge Nissan Leaf Battery of Lithium Ion Type of Electric Vehicle
10:25 AM - 10:40 AM	121	Simulation Studies on Design and Performance Evaluation of SAPV System for Domestic Application
10:40 AM - 10:55 AM	220	Performance and Degradation Analysis of SunPower SPV modules under Composite Climatic Condition
10:55 AM - 11:10 AM	315	Localized Energy Self Sufficiency (Energy Swaraj) for Energy Sustainability and Mitigating Climate Change
10:10 AM - 11:10 AM	Session	3.1 c: Energy, environment, society, Room 13, First floor
10:10 AM - 10:25 AM	133	Addressing Last Mile Electricity Distribution Problems: Study of Performance of SHGs in Odisha
10:25 AM - 10:40 AM	248	Effect Of Non-Revenue Water Reduction In The Life Cycle Of Water-Energy Nexus: A Case study
10:40 AM - 10:55 AM	294	Design and development of an economical and reliable Solar Powered Trash Compactor
10:55 AM - 11:10 AM	031	Techno-Economic Optimization Of Isolated Hybrid Energy System
10:10 AM - 11:10 AM		Session 3.1 d: Solar thermal, Room 14, First floor
10:10 AM - 10:25 AM	102	Novel synthesis of Al2O3 nanoflakes for Ni-Al2O3 composite solar selective coatings
10:25 AM - 10:40 AM	296	Techno-economic analysis of solar tri-generation system based concentrated photovoltaic/thermal collector



10:40 AM - 10:55 AM	307	An Experimental and CFD analysis on Heat Transfer and fluid flow characteristics of a tube equipped with X-shaped tape insert in a U-shaped heat exchanger	
11:10 AM - 11:25 AM	Tea	Break, Foyer, First floor & Cafeteria, Ground floor	
11:30 AM- 1:00 PM	Session :	3.2 a: Grid integration of renewable, Room 11, First floor	
11:30 AM - 11:45 AM	064	Impact of Growing Share of Renewable Energy Sources on Locational Marginal Prices	
11:45 AM - 12:00 PM	135	Transient Stability Analysis of Wind Integrated Power Network using STATCOM and Battery Energy Storage System using DIgSILENT Power Factory	
12:00 PM - 12:15 PM	239	Dynamic Demand Response through Decentralized Control of Resources	
12:15 PM - 12:30 PM	250	Improved Dispatchability of Solar Photovoltaic System with Battery Energy Storage	
12:30 PM - 12:45 PM	305	Evaluation of LVRT Control Strategies for Offshore Wind Farms	
12:45 PM - 1:00 PM	318	Bi-Polar DC Micro Grid based Wind Energy System	
1:00 PM - 1:15 PM	284	Voltage regulation and loss minimization in distribu-tion systems with capacitors and OLTC in presence of a PV penetration.	
11:30 AM- 1:00 PM	Session 2.2 h	, Thermochemical and hydrogen storage, Room 12, First floor	
11:30 AM - 12:00 PM	Invited Talk	Prof. Yoshitsugu Kojima	
12:00 PM - 12:15 PM	116	Effect of Temperature on the Hydrodynamics of Steam Reactor in Chemical Looping Reforming System	
12:15 PM - 12:30 PM	172	Thermodynamic performance analysis of adsorption cooling and resorption heating system	
12:30 PM - 12:45 PM	181	Enhanced Reversible Hydrogen Storage in Palladium Hollow Spheres	
11:30 AM- 1:00 PM		Session 3.2 c, Solar thermal, Room 13, First floor	
11:30 AM - 11:45 AM	114	Technological Interventions in Sun Drying of Grapes in Tropical Climatic for Enhanced and Hygienic Drying	
11:45 AM - 12:00 PM	338	The effect of Concentrator ratio and Thermocouples on Photovoltaic-Thermoelectric Hybrid Power Generation System	
11:45 AM - 12:00 PM 12:00 PM - 12:15 PM	338 360		
		Photovoltaic-Thermoelectric Hybrid Power Generation System Multi-Field Solar Thermal Power Plant with Linear Fresnel	
12:00 PM - 12:15 PM	360	Photovoltaic-Thermoelectric Hybrid Power Generation System Multi-Field Solar Thermal Power Plant with Linear Fresnel Reflector and Solar Power Tower Solar autoclave for rural hospitals using aerogel as transparent	
12:00 PM - 12:15 PM	360	Photovoltaic-Thermoelectric Hybrid Power Generation System Multi-Field Solar Thermal Power Plant with Linear Fresnel Reflector and Solar Power Tower Solar autoclave for rural hospitals using aerogel as transparent	
12:00 PM - 12:15 PM 12:15 PM - 12:30 PM	360	Photovoltaic-Thermoelectric Hybrid Power Generation System Multi-Field Solar Thermal Power Plant with Linear Fresnel Reflector and Solar Power Tower Solar autoclave for rural hospitals using aerogel as transparent insulation material Session 3.2 d, Solar PV, Room 14, First floor	
12:00 PM - 12:15 PM 12:15 PM - 12:30 PM 11:30 AM- 1:00 PM	360 364	 Photovoltaic-Thermoelectric Hybrid Power Generation System Multi-Field Solar Thermal Power Plant with Linear Fresnel Reflector and Solar Power Tower Solar autoclave for rural hospitals using aerogel as transparent insulation material Session 3.2 d, Solar PV, Room 14, First floor Adaptive Relaying Scheme for a Distribution Network with Highly 	



12:15 PM - 12:30 PM	300	Performance Analysis of Hybrid Photovoltaic Array Configurations under Randomly Distributed Shading Patterns
12:30 PM - 12:45 PM	335	Transitions in the Indian Electricity Sector: Impacts of High Renewable Share
12:45 PM - 1:00 PM	347	Forecasting of Electricity Demand and Renewable Energy Generation for Grid Stability
11:30 AM- 1:00 PM	Session 3	8.2 e, Wind, hydro, and ocean energy, Room 15, First floor
11:30 AM - 11:45 AM	009	Wind Speed Forecasting using k-Nearest Neighbour Method for Three Locations in Maharashtra, India
11:45 AM- 12:00 PM	022	Resilience of PV glass coatings to cleaning processes
12:00 PM - 12:15 PM	049	Simulation of Horizontal Axis Wind Turbines using NREL FAST
12:15 PM - 12:30 PM	094	Performance Assessment and Loss Forecasting of Grid Connected Solar PV System
12:30 PM - 12:45 PM	183	Design and Analysis of Hybrid Vertical Axis Giromill Wind Turbine
1:30 PM - 1:55 PM	Lu	ınch Break, Second floor & Cafeteria, Ground floor
2:00 PM - 3:30 PM	Sessi	ion 3.3 a, Industry presentations, Room 11, First floor
2:00 PM - 3:30 PM	Sessi	ion 3.3 b, Industry presentations, Room 12, First floor
3:30 PM - 4:00 PM		Tea Break, First floor foyer
4:00 PM - 5:30 PM	Panel Discussion	Energy Transitions and Energy Security, Main Auditorium, Ground floor
5:30 PM - 6:00 PM	Awards a	nd Concluding Ceremony, Main Auditorium, Ground floor