IRSEC'14

IEEE Conference

2014 International Renewable and Sustainable Energy Conference

Congress Palace, Ouarzazate - Morocco

October 17-19, 2014

Program and useful information

Topics

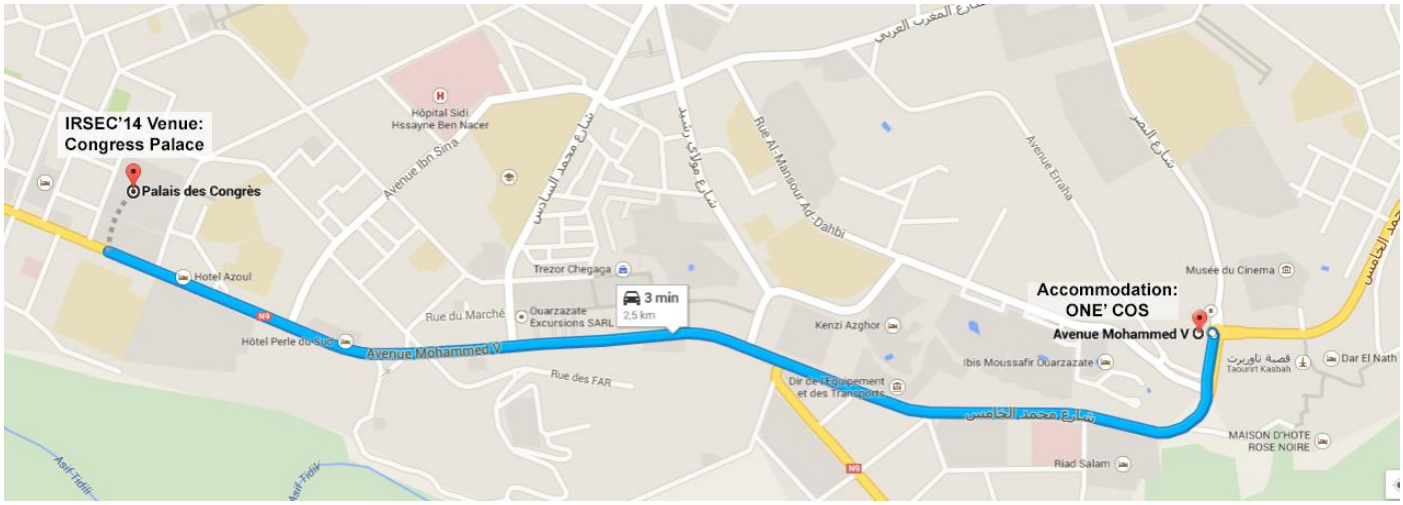
S-I	**Solar Energy**	- Photovoltaic
		- Thermal
		- Tracking
		- Modelling
		- Case Study
S-II	**Wind Energy**	
S-III	**Eco-Design**	
	Energy Efficiency	
S-IV	**Distribution Power System**	
	Transportation Generation	
S-V	**Thermal and Recycling**	
	Green Technology	
	Biomass	
S-VI	**Renewable Energy for IT Equipments**	
	Smart Grid	
W-A	**Workshop A : AB initio for Solar Energy**	
W-B	**Workshop B : Next-generation Li-ion batteries**	

Program overview

IRSEC'14 Venue: Congress palace, Ouarzazate

(Palais des Congrès)

Plan from the Congress Palace to ONE'COS



Keynote Talks

K01 (Room 1)		**Status and perspectives of lithium ion battery research** *Rachid Yazami, Nanyang Technological University – Singapore*	Friday 09:15-10:00
K02 (Room 1)		**Energy Storage Initiative at Argonne National Laboratory** *Emilio Bunel, Argonne National Laboratory, IL – USA*	Friday 10:30-11:15
K03 (Room 3)		**Modeling and Simulation of Thermal and Efficiency Behavior of Solar Panels** *Said Ahzi, Qatar Environment & Energy Research Institute - Qatar*	Friday 11:15-11:45
K04 (Room 3)		**Self-Assembly of Organic 2D Materials on Transition Metal Surfaces** *Abdelkader Kara, University of Central Florida – USA*	Friday 11:45-12:15
K05 (Room 1)		**Preparing advanced III-V multi junction solar cells on different substrates** *Thomas Hannappel, Institute of Physics, Ilmenau University of Technology - Germany*	Friday 12:15-12:45
K06 (Room 1)		**Energy and water security grand challenges: approach, advances and solutions** *Mohammad Ahmed Khaleel, Qatar Environment & Energy Research Institute - Qatar*	Friday 12:45-13:30
K07 (Room 2)		**Prospective Anode Materials for Li ion Batteries – Two materials with two different mechanisms versus lithium** *Barbara Laïk, Paris Est Créteil University – France*	Friday 14:45 - 15:15
K08 (Room 2)		**Next Generation Lithium Ion batteries** *Khalil Amine, Argonne National Laboratory, IL – USA*	Friday 15:15 - 15:45
K09 (Room 1)		**Design and synthesis of new solid catalysts as an integral part to the solutions of today's and the future's energy problems** *Hadi-Nur, Ibnu Sina Institute for Fundamental Science Studies, UTM Skudai, Johor - Malaysia*	Friday 15:45 - 16:15
K10 (Room 3)		**The ab initio calculations and their applications to materials for photovoltaic conversion** *El-Kebir Hlil, University of Joseph Fourier, Grenoble – France*	Friday 16:45 - 17:15
K12 (Room 3)		**High Voltage Cathode Materials for Lithium Ion Batteries** *Margret Wohlfahrt-Mehrens, ZSW, Ulm –Germany*	Saturday 09:00 - 09:30
K14 (Room 1)		**Building Integrated Photovoltaics (BIPV) in Morocco – a niche market with ample opportunities** *Ahmed Ennaoui, Helmholtz-Zentrum Berlin für Materialien und Energie - Germany*	Saturday 10:30 - 11:15
K15 (Room 3)		**Nuclear probes for battery materials investigations** *Raphael Hermann, JCNS, Forschungszentrum Jülich GmbH - Germany*	Saturday 12:15 - 12:45
K16 (Room 3)		**Rechargeable Na-ion batteries for large format applications** *Shinichi Komaba, Tokyo University of Science – Japan*	Saturday 12:45 - 13:15
K17 (Room 1)		**Nanomaterial Design: Toward the Improvement of DSSC Solar Cell Efficiency** *Abdelhafid Taleb, Chimie ParisTech, Pierre & Marie Curie University, Paris - France*	Saturday 14:15 - 14:45
K18 (Room 3)		**First Principles Calculations: a Powerful Tool to Better Understand Electrode Materials for Li (or Na)-ion Batteries** *Dany Carlier, University of Bordeaux – France*	Saturday 14:45 - 15:15
K19 (Room 1)		**Surface and interface characterization of chalcopyrite and related thin-film solar cell materials and structures using x-ray based spectroscopy** *Iver Lauermann, Helmholtz-Zentrum Berlin für Materialien und Energie - Germany*	Saturday 15:45 - 16:15
K20 (Room 3)		**Ionic Liquids as Electrolytes for Li Air Batteries** *Peter J. Hall, University of Sheffield, Sheffield – UK*	Saturday 16:45 - 17:15

Presentation guidelines:

- All presentations **should be in English**.
- The time provided for oral presentations is 15 min (10 min for the presentation and 5 min for discussion).
- The speakers should give their slides to the session chair before the beginning of each session.
- For poster presentations, the posters should be displayed one hour before the beginning of the poster session and any explanation required should be provided to session chairs and visitors.

Practice Workshop (Tutorial)	**Using the wave function :** **1- Calculations of the electronic structure of Al within the fcc structure. Analysis of the energy and the Density of State (DOS) will be presented,** **2- Calculations of the electronic and magnetic structures of ferromagnetic Fe within the bcc structure. The estimate of magnetic moment will be given as well,** **3- Calculations of the electronic and magnetic structures of the antiferromagnetic Fe within the bcc structure. The variation of the magnetic moment during the self-consistent calculations will be also analyzed,** **4- Calculations of the $Fe_{0.5}Al_{0.5}$ disordered material using the supercell approach.** ***El-Kebir Hlil**, University of Joseph Fourier, Grenoble – France*	Friday 17:15 - 18:30
Round Table	**Topic:** **- Curriculum, Competence, Syllabus and Learning in Master of Science: Photovoltaics and Electrical Power Engineering** **- From atom to modules & arrays** **- From simulation modeling to BIPV & grid integration** ***Mohammed Abd-Lefdil**, F. Cherkaoui El Moursli, FS Rabat - Morocco* ***Said Ahzi**, Qatar Environment & Energy Research Institute - Qatar and University of Strasbourg, Strasbourg - France* ***Abdelfettah Barhdadi,** ENS Rabat - Morocco* ***Ahmed Ennaoui**, Helmholtz-Zentrum Berlin für Materialien und Energie – Germany (Moderator)* ***Ahmed Ihlal**, FS Agadir,Ibn Zohr University – Morocco* ***Abdelkader Outzourhit**, FS Marrakech, Cady Ayyad University - Morocco* ***Verick Schick**, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH* ***Abdelhafid Taleb**, Chimie ParisTech, Pierre & Marie Curie University, Paris – France*	Saturday 11:15 - 12:15

Sessions Program

S-I (PV-1) (Room 1)	*Solar Energy – Photovoltaic*
	Chairs *: - **Ahmed Ennaoui**, Helmholtz-Zentrum Berlin für Materialien und Energie - Germany* *- **Marí Soucase Bernabé**, Universitat Politècnica de València - Spain*
Friday 11 :15 - 12:15 14 :45 - 15 :45 16 :45 - 18 :30 4+4+7	**Experimental analysis of genetic algorithms based MPPT for PV systems (ID: 42)** *Slimane HADJI, Jean-Paul GAUBERT, Fateh KRIM* **Sliding Mode Control Optimization and Comparison between PI, Fuzzy and Fuzzy PI controllers Photovoltaic current injected to Grid (ID: 44)** *Abdelhalim Borni, Layachi Zaghba* **Study of New Configuration Photovoltaic Pumping System (ID: 48)** *Mehdi Ouada,Mohamed Salah Meridjet, Merwan Saad Saoud , Nada Derradji* **Modeling and Search of Global Power Peak Under Partial shading Conditions on PV Array (ID: 52)** *M. Saad saoud, H.A. Abbassi, S. Kermiche, D. Nada* **The MPPT Control of PV System by Using Neural Networks Based on Newton Raphson Method (ID: 61)** *NAOUFEL KHALDI, HASSAN MAHMOUDI, MALIKA ZAZI,YOUSSEF BARRADI* **Modeling and Simulation of Photovoltaic Array with Different Interconnection Configurations under Partial Shading Conditions for Fill Factor Evaluation (ID: 63)** *S. Hamdi, D. Saigaa, M. Drif* **Optimization of a ZnO/PbS Depleted Heterojunction Quantum Dot Photovoltaic Cell (ID: 67)** *Matthew Philip, Nick Cowern* **Energy Production in PV plants regarded as economic investments** **An assessment for PV investments in Germany, Spain and Morocco. (ID: 98)** *Inmaculada Guaita-Pradas, Bernabé Marí Soucase* **Analytical Calculation of Photocurrent Density in CIGS Double Graded Solar Cell (ID: 139)** *El hassane Ihalane, Lahoucine Atourki, Lahbib Alahyane, Lahcen Boulkaddat, El houcine El hamri, Hassan Kirou, Ahmed Ihlal, Khalid Bouabid* **Effect of cracking and aggregation on the efficiency of DSSC (ID: 153)** *Abdelhafed Taleb, Frederic Mesguish, Xue Yanpeng* **A Fuzzy Logic MPPT for Photovoltaic Systems using Single Sensor (ID: 168)** *Abdourraziq Mohamed Amine, Maaroufi Mohamed, Mohammed Ouassaid* **Effect of substrate temperature on physical properties of In_2S_3 films with [S]/[In] =3 ratio (ID: 176)** *Samira Elfarrass, Bouchaib Hartiti, Samira Elfarrass, Abderraouf Ridah, Philippe Thevenin* **Preparation and characterization of Al doped ZnO thin films by spray pyrolysis (ID: 225)** *Adil Hadri, Mohamed Loghmarti, Ahmed Mzerd, Mhamed Taibi* **Characterization of ZnO Thin Films Grown by Linear Sweep Voltammetry (ID: 240)** *Lahoucine Atourki, El hassane Ihalane, Hassan Kirou, El houcine El hamri, Ahmed Ihlal, Laarbi Laanab, Khalid Bouabid*

S-I (PV-2) (Room 1)	Solar Energy – Photovoltaic
	Chairs *: - **Iver Lauermann**, Helmholtz-Zentrum Berlin für Materialien und Energie - Germany* *- **Philip Matthew**, Ngee Ann Polytechnic - Singapore*
Saturday 14 :45 - 15:45 16 :45 - 18 :15 4+6	**Transient thermal analyze of mini heat sink PV cells cooling for hot climate (ID: 250)** *Lahoucine Ouhsaine, Abdelaziz Mimet, Mohammed El Ganaoui , Angel Scipioni, Yassine Kharbouch* **Contribution to solar concentrators design for photovoltaic application (ID: 294)** *A. AHAITOUF, A. OUGAZZADEN, C. CHEVALLIER, J. P SALVESTRINI* **Structural and optical properties of ZnO thin films prepared by spin coating method (ID: 308)** *Ghizlan El Hallani, Nejma Fazouan, Ahmed Liba, Larbi Laanab* **In_2S_3 BUFFER LAYER PREPARED BY CHEMICAL BATH DEPOSITION (ID: 326)** *L. Atourki, K. Bouabid, A. Ihlal, E. Ihalane, Y. Amira, A. Elfanaoui, H. Kirou,A. Outzourhit, X. Portier* **One step electrodeposited CZTS thin films: Preparation and characterization (ID: 330)** *Taoufik Slimani Tlemçani, Fouzia Cherkaoui El Moursli, Mhamed Taibi, Faiza Hajji, ElBachir Benamar, Guy Schmerber, Dominique Muller, Abdelilah Slaoui, Aziz Dinia, Mohammed Abd-Lefdil* **Nano-Silver and Rose Bengal, Dual Sensitization of Zinc OxideDye Sensitized Solar Photoelectrode for Cell Application (ID: 345)** *Sola Shubhangi S. Khadtare, Abu Saad A. Ansari, Shrikrishna D. Sartale, Sandesh R. Jadkar, Habib M. Pathan* **ZnO Nanocactus Loaded with Gold Nanoparticles for Dye Sensitized Solar Cells (ID: 346)** *Shubhangi S. Khadtare, Abu Saad A.Ansari, Sandesh R. Jadkar, Shrikrishna D. Sartale, Habib M. Pathan* **Eosin-Y (EY), Rose Bengal (RB) and EY-RB Sensitized ZnO Solar Cells (ID: 347)** *Shubhangi S. Khadtare, Sandesh R. Jadkar, K.N. Hui, Rajaram S. Mane, Habib M. Pathan*

S-I (Thermal) (Room 4)	**Solar Energy - Thermal**
	Chairs : - Thomas Hannappel, Institute of Physics, Ilmenau University of Technology - Germany **- Zanganeh Giw**, Airlight Energy - Switzerland
Friday 15 :15 - 15:45 16 :45 - 18 :30 2+7	**Shading Efficiency Calculation For Linear Fresnel Reflector (ID: 22)** *Youssef Elmaanaoui, Dennoun Saifaoui* **Parametric analysis of end loss efficiency in linear Fresnel reflector (ID: 23)** *Youssef Elmaanaoui, Dennoun Saifaoui* **A 3 MWth parabolic trough CSP plant operating with air at up to 650 °C (ID: 38)** *Giw Zanganeh, Gianluca Ambrosetti, Andrea Pedretti, Simone Zavattoni, Maurizio Barbato, Philipp Good, Andreas Haselbacher, Aldo Steinfeld* **Deposition of Transparent Aluminum Oxide (Al_2O_3) Films on Silvered CSP Mirrors (ID: 96)** *Houda Ennaceri, Dounya Barrit, Asmae Khaldoun, Abdelilah benyoussef, Ahmed Ennaoui* **Ageing study of thermal heat transfer fluids used in solar thermal power plants based on Fresnel Collector technology (ID: 188)** *Hind Grirate, Nadia Zari, Abdellah Elmchaouri, Mohamed Maaroufi,Sophie Molina, Raphael Couturier* **Research on component materials used for Moroccan CSP power plants** **Mirrors ageing and thermal storage (ID: 192)** *Zineb EDFOUF, Sanae NAAMANE, Nadia ZARI, Olivier RACCURT, Christine DELORD, Raphael COUTURIER* **Composites of Zinc Phosphate Glass/Metal: New Materials for Thermoelectricity and Solar Cell Devices (ID: 273)** *O. OABI, A. MAAROUFI, B. LUCAS, S. DEGOT, A. EL AMRANI* **Fuzzy Logic of Speed Control for Photovoltaic Pumping System (ID: 277)** *Hamza Bouzeria, Cherif Fetha, Tahar Bahi, Salima Lekhchine, Zakaria Layate* **Heat transfer from multiple cylinders during melting process: Solar applications (ID: 288)** *Kousksou Tarik, Mahdaoui Mustapha, Hlimi Mohamed, Jamil Abdelmajid, El Rhafiki Tarik* **Optimization of Solar Updraft Tower by Using Heliostat Designed According to the Physiography of Sabha City (ID: 354)** *Ahmed Alamin, Danardono Prija and Suyitno Techn*

S-I (Tracking) (Room 4)	**Solar Energy - Tracking**
	Chairs* : - *Fahhad Alharabi, *Qatar Environment & Energy Research Institute, Qatar* ***- Abdelhafid Taleb***, *Chimie ParisTech, Pierre & Marie Curie University, Paris – France*
Friday 11 :15 - 12:15 14:45 - 15 :15 4+2	**Design and Simulation of Characteristics and Maximum Power Point Tracking for Photovoltaic Systems (ID: 78)** *BOUALI Hamid, SALHI Badr, QJIDAA Hassan* **Maximum Power Point Tracking using Dual PI Fuzzy Controller for Photovoltaic System (ID: 84)** *DERRI Mounir, BOUZI Mostafa, LAGRAT Ismail, BABA Youssef* **Evaluation of Potential Solar Irradiance on Fixed and Two-Axes Solar Panel in Morocco (ID: 140)** *Radouan Ajdid, Mohammed Ouassaid, Mohamed Maaroufi,* **Performance analysis of different extraction strategies of the maximum power in PV systems (ID: 178)** *Touria HASSBOUN, Youness AITE DRISS, Lhoussain EL BAHIR, Mustapha EL ADNANI* **OPTIMIZATION OF A SOLAR TRACKER FOR CPV SYSTEM PRINCIPLES AND PRATICAL APPROACH (ID: 226)** *Merouan Belkasmi, Khalid Bouziane, Mohammed Akherraz, Tayeb Sadiki* **Solar tracking systems for solar concentrator field of heliostats – Innovation, performance and adaptation to small-scale applications (ID: 312)** *LOUDADI Mounir, EL OMARI Hamid*

S-I (Modelling) (Room 1)	**Solar Energy - Modelling**
	Chairs *: - **Said Ahzi**, Qatar Environment and Energy Research Institute - Qatar* *- **Sergey Rashkeev**, Qatar Environment and Energy Research Institute - Qatar*
Saturday 08 :30 - 10:00 12:15 - 13 :15 6+4	**Optimizing the Performance of a Solar Cell Based on New Materials (ID: 12)** *Abdelkader Aissat, Jean Pieerre Vilcot* **Study and realization of a single-phase inverter based micro controller for photovoltaic system (ID: 126)** *Larbi Nehari, I. S. Bousmaha, M. Brahami* **Integration of Supercapacitor in Photovoltaic Energy Storage: Modelling and Control (ID: 167)** *Zineb Cabrane, Mohammed Ouassaid, Mohamed Maaroufi* **Synchronization Techniques benchmarking of grid fault modes in single-phase Systems (ID: 170)** *Hicham FADIL, Driss YOUSFI, Youness AITE DRISS, Abd Rahim NASRUDIN* **A new MPPT using Gradient Method for Grid-Connected PV Inverter (ID: 181)** *Faicel EL AAMRI, Hattab MAKER, Azeddine MOUHSEN, Mohamed HARMOUCHI* **Design and implementation of MPPT solar system based on enhanced P&O algorithm using Labview (ID: 183)** *GAGA Ahmed, ERRAHIMI Fatima, ES-SBAI Najia* **DC / DC converters for Photovoltaic Applications-Modeling and Simulations (ID: 228)** *Zakaria SABIRI, Nadia MACHKOUR, Elm'kaddem KHEDDIOUI, Mamadou Bailo CAMARA, Brayima DAKYO* **Verification & Validation of Simulation Code for Linear Fresnel Systems (ID: 311)** *Sara Benyakhlef, Ahmed Al Mers, Abdelfattah Bouatem,Noureddine Boutammachte, Ossama Merroun* **Heat transfer model of a trough compound parabolic reflector used in a linear Fresnel solar field (ID: 313)** *Hamid Ajdad, Noureddine Boutammachte, Ahmed Al Mers, Abdelfattah Bouatem, Ossama Merroun* **Modeling and Design of PV Grid Connected System Using a Modified Fractional Short-Circuit Current MPPT (ID: 314)** *Abdelhalim Sandali, Tarik Oukhoya, Ahmed Cheriti*

S-I (case st.) (Room 2)	**Solar Energy - Case Study**
	Chairs *: - **Abdelkader Kara**, University of Central Florida – USA* *- **William Hayes**, First Solar, San Francisco – USA*
Saturday 12 :15 - 13:15 14:45 - 15 :45 8	**Environmental Variables Affecting Solar Photovoltaic Energy Generation in Morocco (ID: 64)** *Parikhit Sinha, William Hayes, Bodo Littmann, Lauren Ngan, Reda Znaidi* **A comparative study between two structures of hybrid photovoltaic/thermal (PV/T) collectors for water pumping systems (ID: 110)** *M. HAJJI, S. E. NAIMI, B. HAJJI, M. L. EL HAFYANI* **Optimal tilt angle and size of solar systems matching investor's strategy with seasonal needs (ID: 122)** *Amin Bennouna* **Surface wear damage of glass solar mirrors in Moroccan desert environment (ID: 155)** *Mounia Karim, Sanae Naamane, Christine Delord, Amine Bennouna* **Long-Term PV System Performances Evaluation by Only the Main Weather Parameters Data uses. Case of Study: Desert and arid climate (ID: 264)** *Mustapha Koussa, Seddik Hadji, Saheb Djohra* **A New Expert System For the selection of The best Renewable Energy Project Plant in Morocco (ID: 331)** *Afaf Dadda, Brahim Ouhbi, Bouchra Frikh* **Outdoor testing effect of sand on photovoltaic module in the Saharan region (ID: 337)** *F. BANDOU, A. HADJ ARAB, M.S. BELKAID*

S-II (Wind-1) (Room 3)	**Wind Energy**
	Chairs **: - *Nedim Tutkun***, *Faculty of Engineering, Duzce University – Turkey* - ***Brahim Benhamou***, *FS Semlalia Marrakech - Morocco*
Friday 11 :15 - 12:15 12 :45 - 15 :45 4+4	**Impact of STATCOM on a wind farm into the Western of Algerian network (ID: 18)** *Guentri Hocine, Lakdja Fatiha, Y.A. Gherbi, Djaffar Ould Adbsallem* **Variable Speed Control of DFIG-Wind Turbine with Wind Estimation (ID: 36)** *Youssef MAJDOUB, Ahmed ABBOU, Mohamed AKHERRAZ* **Robust and Simple Yaw Controller Design for a Low Power Wind Turbine through the Shuffled Frog Leaping Algorithm (ID: 50)** *Nedim Tutkun, Dinçer Maden, Erdem Elibol* **On the use of small wind turbine in design and innovation education (ID: 86)** *Khadija Hmina, Abdelaziz Arbaoui, Mohammed Sallaou, Larbi Lasri* **Utilising Renewable Energy Subsides in the Integration of Energy Sectors (ID: 90)** *Victor Maxwell, Madalina Marilena Jogararu* **Optimal Sizing and placement of Renewable energy Source in large scale Power System using ABC technique in presence of UPFC (ID: 92)** *Sebaa Haddi, Khaled R.Guerriche, Bouktir Tarek* **Variable Structure Control Approach for Grid Connected PMSG Wind Farm (ID: 117)** *Youssef Errami, Mohamed Maaroufi, Mohammed Ouassaid* **Trends in grid integration of renewables. Case of Doubly Fed induction wind generator (ID: 121)** *Salma EL AIMANI*

S-II (Wind-2) (Room 3)	**Wind Energy**
	Chairs **: - *Mohammed El-ganaoui***, *lorraine University – France* **- *Salma El Aimani***, *FPO Ouarzazate - Morocco*
Saturday 14 :15 - 16:15 8	**Evaluation of three methods for estimating annual and seasonal wind speed distributions (ID: 143)** *Razika Ihaddadene, Nabila Ihaddadene, Marouane Mostefaoui* **Non-Linear Control and Transient Stability of SCAG Connected to Unbalanced AC Network (ID: 166)** *Kamal Elyaalaoui, Mohammed Ouassaid, Mohammed Cherkaoui* **Analysis of wake impact on wind farm performance using two analytical models (ID: 175)** *Naima Charhouni, Abdelaziz Arbaoui, Mohammed Sallaou* **A new sensorless Maximum Power Point Tracking technologies of wind conversion chain based on a PMSG (ID: 190)** *Amina ECHCHAACHOUAI, Soumia EL HANI, Ahmed HAMMOUCH, Said GUEDIRA* **Direct Torque Control of a Doubly Fed Induction Generator of Wind Turbine for Maximum Power Extraction (ID: 208)** *Anass Bakouri, Ahmed Abbou, Hassan Mahmoudi, Kamal Elyaalaoui* **Modeling and controlling of a wind turbine generator based on the Permanent Magnet Synchronous Machine (ID: 222)** *Walid SOULOUH, Hicham HIHI, Khalid FAITAH* **Extended Kalman Filter for characterizing a Wind Energy Conversion System based onVariable Speed Permanent Magnet Synchronous Generator (ID: 224)** *Abdelouahed Mesbahi, Abdelhadi Raihani, Omar Bouattane, Abdellah Saad, Mohamed Khafallah* **Analysis of Different Converters Used in Wind Energy Conversion System (ID: 232)** *Abdeldjalil DAHBI, Nasreddine NAIT-SAID, Messaoud Hamouda, Arama Fatima Zohra* **HOMER analysis for integrating wind energy into the grid in southern of ALGERIA (ID: 258)** *Djohra SAHEB KOUSSA, Mustapha KOUSSA*

-III (Room 4)	**- Eco-Design** **- Energy Efficiency**
	Chairs **: - *Abdelhafid Taleb***, *Chimie ParisTech, Pierre & Marie Curie University, Paris – France* - ***Al-Shaalan Abdullah***, *Faculty of Engineering - Saudi Arabia*
Saturday 08 :30 - 10:00 12:15 - 13 :15 17 :15 - 18 :15 6+4+4	**Sensorless Direct Torque Control of Induction Motor Using Fuzzy Logic Controller Applied to Electric Vehicle (ID: 125)** *Abderrahmane Ouchatti, Ahmed Abbou, Mohammed Akherraz, Abderrahim Taouni* **Comparative Study of Thermal Behaviour of Two Types of Apartments Located in Casablanca (ID: 40)** *K. JRAIDA, A. FARCHI, B. MOUNIR, I. MOUNIR* **Comparison of two compensation control strategies for shunt Active Power Filter (ID: 80)** *Faiza KADDARI, Benyounes MAZARI, Youcef MIHOUB, Ahmed SAFA*

Saturday 08 :30 - 10:00 12:15 - 13 :15 17 :15 - 18 :15 6+4+4	**Experimental study of heat storage in a PCM incorporated into a residentiel premises walls (ID: 81)** *Yassine BOUZLOU, Amina MOURID, Mustapha EL ALAMI, Mostafa NAJAM, Mustapha FARAJI* **Resolution of Economic Dispatch Problem considering Wind Power Penetration Planning (ID: 91)** *Ahmed Salhi, Djemai Naimi, Tarek Bouktir* **Numerical evaluation of heat transfer in corrugated heat exchangers (ID: 93)** *Aicha Chorak, Ernest Ihringer, Abdellatif Ben abdellah, El Hachmi Essadiqi, Mohsine Bouya, Mustapha Faqir, Said Dhimdi* **Fractal Multiband Planar Antenna for Wireless Power Transmission (ID: 116)** *BENYETHO Taoufik, ZBITOU Jamal, EL ABDELLAOUI Larbi, BENNIS Hamid, TAJMOUATI Abdelali LITEN, TRIBAK Abdelwahed, LATRACH Mohamed* **An Advanced PID-PSS Based Genetic Algorithms Implemented using GUI - MATLAB (ID: 142)** *GHOURAF Djamel Eddine, NACERI Abdellatif* **Effects of Three Passive Techniques on Thermal Performance of a Building in Marrakech Region (ID: 201)** *Hicham MASTOURI, Brahim BENHAMOU, Hassan HAMDI, Karim LIMAM* **Effect of thermal insulation and ground coupling on thermal load of a modern house in Marrakech (ID: 204)** *Issam SOBHY, Abderahim BRAKEZ, Brahim BENHAMOU* **On Numerical Modeling in OWC Systems for Wave Energy Conversion (ID: 213)** *H. BOUHRIM, A. EL MARJANI* **Reducing Electric Energy Interruptions to Residential Sector By Means of Proper Practical Measures (ID: 242)** *Abdullah M. Shaalan* **Heat transfer from horizontal cylinder with fins embedded in PCM (ID: 254)** *Kousksou Tarik, Mahdaoui Mustapha, Hlimi Mohamed, Jamil Abdelmajid, El Rhafiki Tarik* **A new hybrid control method for multi-cell choppers. Application to power renewable energy systems (ID: 274)** *Bilal Amghar, Ikram El Abbassi, M. A. M. Mladjao, Abdelmoumen Darcherif* **A three-dimernsional numerical simulation of heat exchanges between the ground and shallow basements in Marackech (ID: 316)** *Naima Sakami, Lahcen Boukhattem, Hassan Hamdi* **Rare earths and metal nanoparticles in silicate glass-ceramics to improve the efficiency of photovoltaic solar cells (ID: 339)** *A. Bouajaj, S. Belmokhtar, M. Britel,S. Normani, C. Armellini, F. Enrichi, M. Ferrari, B. Boulard, F. Enrichi, F. Belluomo, A. Di Stefano* **Annular condensation flow in horizontal rectangular microchannels: impact of the variable heat flux imposed on the outer wall on energy efficiency (ID: 182)** *Hicham EL MGHARI, Hasna LOUHLIA*

S-IV (Room 2)	- Distribution Power System - Transportation Generation
	***Chairs*: - *Bilal Amghar*, EPMI, Cergy – France** - ***Aziza Benaboud*, Royal Navy School, Casablanca - Morocco**
Friday 18:00 - 18:30 Saturday 08:30 - 10:00 2+6	**A Robust Phase-Locked-Loop Approach for the Generation System with Power Flow Control (ID: 49)** *Aziza Benaboud* **Genetic Algorithm for Solving Large Practical Fuzzy Economic Load Dispatch with Prohibited Operating Zones (ID: 66)** *Abdellah DERGHAL, Noureddine GOLEA* **A New Technique of Backstepping Control Parameters Determination Using Genetic Algorithm (ID: 108)** *Mohamed MOUTCHOU, Hassan MAHMOUDI, Ahmed ABBOU* **Maximum Loading Point in Distribution System with Renewable Resources Penetration (ID: 149)** *Khaled Ras Guerriche, Tarek Bouktir* **Improvement performance of sensorless direct field oriented control induction motor drive with fuzzy logic controllers (ID: 211)** *Abderrahim Bennassar, Ahmed Abbou, Mohamed Akherraz, Mohamed Barara, Adil Essalmi, Yassine Zahraoui* **Dynamic Simulation of Single Phase Transverse Flux Linear Motor (ID: 249)** *Rashed Meer, Hany Mohamed Hasanien, Abdulrahman Ibrahim Alolah* **Blade Exit Angle Impact on Turbulent Fluid Flow and Performance of Centrifugal Pump Using CFD (ID: 263)** *Abdelmadjid CHEHHAT, Mohamed SI-AMEUR* **Passive Filter for Harmonics Mitigation In Standalone PV System for non Linear Load (ID: 269)** *Mouna TALI, Abdellatif OBBADI, Abdelkrim ELFAJRI, Youssef ERRAMI*

S-V (Room 3)	- Thermal and Recycling - Green Technology - Biomass
	Chairs : **- *Hadi Nur***, *Ibnu Sina Institute for Fundamental Science Studies, UTM Skudai, Johor – Malaysia* **- *Abu Zahra Mohammad***, *Masdar Institute of Science and Technology - United Arab Emirates*
Saturday 14:15 - 14:45 16:45 - 18:15 2+6	**Thermal behavior of PCM building material under periodic convection boundary conditions (ID: 199)** *Arid Ahmed, Kousksou Tarik, Zeraouli Youssef, Allouhi Amine, El Rhafiki Tarik* **Thermal model of IGBT Modules in the arm converter (ID: 202)** *Ahmed HADDOU, Fadwa HARAKA, Hafsa EL OMARI, Hamid EL OMARI* **A new kinetic approach to analyze the thermally stimulated photodegradation of solar devices (ID: 272)** *Muhammad Azeem Arshad, Abdelkarim MAAROUFI* **Energy Saving in Tunnels Lighting using Shading Structures (ID: 28)** *Ahmed O. Abdul Salam, Kahtan A. Mezher* **An Advanced Novel Solvent for CO_2 Post-Combustion Capture Application (ID: 120)** *Ahmed Sodiq, Abdurahim Abdulkadir, Adewale Adeosun, Mohammad R. M. Abu-Zahra* **Synthesis of titania with different shapes (ID: 275)** *Hadi Nur, Sheela Chandren, Lai Sin Yuan* **Study on Co-Gasification of Oil Palm Fronds and Wood (ID: 259)** *Shaharin Anwar Sulaiman, Samson Mekbib Atnaw, Abdul Rahman Japar*

S-VI (Room 2)	- Renewable Energy for IT Equipments - Smart Grid
	Chairs : **- *Jovanovic Raka,*** *Qatar Environment and Energy Research Institute - Qatar* **- *Yaser Jararweh***, *Jordan University of Science and Technology - Jordan*
Saturday 15:15 -16:15 16 :45 - 18 :15 4+6	**Compilation of Factors Affecting Durability of Proton Exchange Membrane Fuel Cell (PEMFC) (ID: 85)** *Mohammed JOURDANI, Hamid MOUNIR, Abdellatif EL MARJANI* **A Global Maximum Power Point Tracking Algorithm for Photo-Voltaic Array with Non-uniform Insolation (ID: 169)** *Abdelkader Bousselham, Zhaohui Cen, Ali Y. Elrayyah* **Basic Parameter Extraction From An Organic Solar Cell Through The Single Diode Model And A Metaheuristic Technique With The Lambert W Function (ID: 172)** *Nedim Tutkun, Erdem Elibol, Dinçer Maden* **Optimal Power Flow for a Hybrid AC/DC Microgrid (ID: 218)** *Nabil QACHCHACHI, Hassane MAHMOUDI, Abdennebi EL HASNAOUI* **A Greedy Method for Optimizing the Self-Adequacy of Microgrids Presented as Partitioning of Graphs with Supply and Demand (ID: 270)** *Raka Jovanovic, Abdelkader Bousselham* **Integration of Renewable Energy in Demand-Side Management for Home Appliances (ID: 281)** *Manar Jaradat, Moath Jarrah, Yaser Jararweh, Mahmoud Al-Ayyoub, Abdelkader Bousselham* **Efficient Rectenna Design Incorporating New Circularly Polarized Antenna Array for Wireless Power Transmission at 2.45GHz (ID: 341)** *Mohamed Adel SENNOUNI, Jamal ZBITOU, Benaissa ABBOUD, Abdelwahed TRIBAK, Mohamed LATRACH* **Improved Circularly Polarized Rectenna Design for Microwave Power Transmission at 2.45GHz (ID: 348)** *Mohamed Adel SENNOUNI, Jamal ZBITOU, Benaissa ABBOUD, Abdelwahed TRIBAK, Mohamed LATRACH* **Wireless Sensor Network Applications in Smart Grid (ID: 370)** *Mohamed El Brak, Said El Brak, Mohamed Essaaidi, Driss Benhaddou*

WA-1 (ab-initio) (Room 3)	Workshop A : AB initio for Solar Energy
Friday 12:15 - 12:45 15:45 - 16:15 2+2	***Chairs*: - *Abdelilah Benyoussef,* *Faculty of Sciences, Mohammed V Univ., Rabat - Morocco*** ***- Abdelkader Kara**, University of Central Florida – USA* **Spectroscopic Analysis of Polyfuran and Theoretical Investigation of Electronic Properties of Oligofurans Destined for the solar cell applications (ID: 144)** *Ouafae Ninis, Mustapha Abarkan, Mohammed Bouachrine* **Optical Properties of Ni doped 3C-SiC with ab initio calculations (ID: 148)** *M. Houmad, A. Abbassi, A. El Kenz, H. Ez-Zahraouy, A. Benyoussef* **Band Gap Engineering of (InGaN) for Photovoltaic Application (ID: 157)** *E. Salmani, A. Marjaoui , O. Mounkachi, M. Ben Ali , H. El Moussaoui, H. Ez-Zahraouy, M. Hamedoun, M. Benaissa, A. Benyoussef*

WA-2 (ab-initio) (Room 4)	Workshop A : AB initio for Solar Energy
Saturday 11:15 - 12:15 4	***Chairs*: - *Abdelilah Benyoussef,* *Faculty of Sciences, Mohammed V Univ., Rabat - Morocco*** ***- El-Kebir Hlil**, University of Joseph Fourier, Grenoble – France* **Accurate band gaps for earth-abundant photovoltaic absorber from density functional theory (ID: 174)** *O. Mounkachi, E. Salmani, K. El Maalama, H. Ez-Zahraouy, M. Hamedoun , M. Benaissa , A. Benyoussef* **Electronic structure of intrinsic defect in bulk pyrite (FeS_2) (ID: 177)** *M. Lakhal, O. Mounkachi, E. Salmani, M. Ait Tamerd, B. Abraime, H. Ez-Zahraouy, M. Hamedoun, A. Benyoussef* **The 3D-Computational Study of the Heat Transfer Enhancement by Using of the Longitudinal and Transversal Internal Fins in a Heated Horizontal Pipe (ID: 234)** *Sofiane Touahri, Toufik Boufendi* **Electronic structure, optical and magnetic properties of $Zn_{1-x}M_xTe$ (M = Ti, Cr and Mn) using the GGA+mBJ approximation (ID: 334)** *H. Zaari, A. G. El hachimi, M. Boujnah, A. Benyoussef, A. El Kenz*

WB-1 (Li ion bat.) (Room 2)	Workshop B : Next-generation Li-ion batteries
Friday 12:15 - 12:45 15:45 - 16 :15 2+2+1+1	***Chairs*: - *Ismael Saadoune**, FST Marrakech - Morocco*** ***- Khalil Amine**, Argonne National Laboratory, IL – USA* **Fuzzy Multi-agent Approach for Diagnosis - Application to electrical energy storage systems (ID: 25)** *Rachid El Amrani, Hamid Tairi, Ali Yahyaouy* **Li_2FeSiO_4: upscaleable Li-ion battery cathode materials (ID: 150)** *Mohammed Dahbi, Torbjörn Gustafsson, Kristina Edström* **Effect of synthesis conditions and composition modification on the structural and electrochemical properties of layered transition metal oxide cathode materials (ID: 207)** *Wassima El Mofid, Svetlozar Ivanov, Andreas Bund* **Electrochemical Lithium and sodium insertion from aqueous solutions into TiO_2 films deposited on stainless steel (ID: 290)** *Fouzia Cherkaoui El Moursli, Zineb Edfouf, Faiza Hajji, Khadija Nabih, Khalid Nouneh, Mohammed Abdlefdil* **SOC estimation of Lithium-ion battery using Kalman filter and Luenberger observer: A comparative study (ID: 297)** *Mouhssine Lagraoui, Said Doubabi, Ahmed Rachid* **Improving silicate cathode materials - insights from DFT calculations (ID: 301) *(Invited Paper)*** *Anti Liivat* **Study of electrochemical alkali insertion into carbonaceous materials (ID: 305)** *Tatsuya Hasegawa, Mouad Dahbi, Kei Kubota, Koji Miyamoto, Takeshi Nakano, Kiyofumi Yamagiwa, Tarik Chafik, Shinichi Komaba*

WB-2 (Li ion bat.) (Room 3)	Workshop B : Next-generation Li-ion batteries
Saturday 11:15 - 12:15 4	***Chairs*: - *Ilias Belharouak,* *Qatar Environment and Energy Research Inst. - Qatar & Argonne National Laboratory, IL -USA*** ***- Raphael Hermann**, JCNS, Forschungszentrum Jülich GmbH - Germany* **P2-type $Na_x[Fe,Ni,Mn]O_2$ for high capacity Na-ion batteries (ID: 306)** *Kazuki Hashimoto, Kei Kubota, Issei Ikeuchi, Ismael Saadoune, Shinichi Komaba* **^{121}Sb Mössbauer spectroscopy for battery materials studies (ID: 349)** *Abdelfattah Mahmoud, Ali Darwiche, Moulay Tahar Sougrati, Lorenzo Stievano, Raphael Hermann, Laure Monconduit* **A new layered cathode material for sodium ion batteries (ID: 350)** *Siham BOUBAJI, Ismael SAADOUNE, Mario VALVO, Bertrand PHILIPPE, Magnus WIKBERG, Mohammed DAHBI, Kristina EDSTRÖM* **$Ni_{0.5}TiOPO_4$ advanced Material for Li-ion Batteries (ID: 353)** *K. Lasri, I. Saadoune, M. Hahlin, R. Ericsson, M. Dahbi, A. Liivat, D. Brandell, T. Gustafsson, K. Edström*

Posters Session I

Chairs : - ***Barhdadi Abdelfettah,*** *ENS Rabat - Morocco*
- Krim Fateh*, University of Staif - Algeria*

Friday
16:15 - 16:45

Intelligent Control MPPT Technique for PV Module at Varying Atmospheric Conditions Using MATLAB/SIMULINK (ID: 20)
Zaghba layachi, A.Bouchakour, N.Terki, A .Borni, N.Terki

Effect of the nature of the buffer layer on the organic photovoltaic cell (ID: 39)
A. ANSRI, M. HAMOUNI, S. KHALDI

β-In_2S_3 Thin Film Doped by Tin (Sn^{4+}) and Deposited by Chemical Spray Pyrolysis Technique for photovoltaic applications (ID: 47)
Thierno Sall, Bernabe Mari, Mollar Miguel, Bouchaib Hartiti, Mounir Fahoume

Potentialities of using Linear Fresnel technology for solar energy development in Djibouti (ID: 62)
A. Abdourazak, S. Abderafi, D. Zejli, I. Abdoulkader

Study of boron diffusion for industrial crystalline N-type silicon solar cells (ID: 88)
Hanane Lachachi, Abdellatif Zerga

Improving the functioning of a transformer less inverter equipping a photovoltaic generator (ID: 107)
M. Jbilou, IS. Bousmaha, Z. Dey, M. Brahami

Study of the properties of TiO_2 thin films for photovoltaic application (ID: 187)
Z.ESSALHI, B.HARTITI, A. LFAKIR, M. SIADAT, P. THEVENIN

A numerical simulation study of ZnTe-based solar cells (ID: 193)
Hanif Ullah, Bernabé Marí Soucase, O. Skhouni, A. El Manouni

Toward a new method to improving hydrogen production by an adaptive photovoltaic system (ID: 210)
S. DAHBI, A. AZIZ, N. BENAZZI, H. ZAHBOUNE, M. ELHAFYANI

Selective Emitter Structure for Multicrystalline Silicon Solar Cells (ID: 245)
A. Djelloul, A. Moussi, K. Bendimrad, S. Meziani, M. Mebarki, K. Bourai, A.Noukaz

Effect of substrate on ZnO thin films grown by SILAR method (ID: 261)
Abderrahim Raidou, Mohamed Lharch, Khalid Nouneh, Mohammed Aggour, Ahmed Qachaou, Larbi Laanab, Mounir Fahoume

Numerical simulation of the performance of dual junction a-Si:H/a-SiGe:H solar cell with AMPS-1D (ID: 266)
Youssef El Hassouani, Kaouthar Hafid Alaoui, Abdellah El Idrissi, Mohamed El Hahioui, Abdellah Benami

Determination of the optimal conditions for the deposition of Cu_2ZnSnS_4 (CZTS) thin films by Spray Pyrolysis using Taguchi method (ID: 271)
Youssef Arba, Joël Hervé Nkuissi Tchognia, Bouchaib Hartiti, Abderraouf Ridah, Philippe Thevenin

Simulation of hydrophobic surfaces: A case study of ZnO thin film (ID: 285)
Hajar Ghannam, Zakaria Oulad El hmaidi, Zineb Yamlahi Alami, Mohamed Addou, Adil Chahboun, Moez Salem, Mounir Gaidi

Study and optimization of Al doped ZnO thin films deposited on PEN substrate by rf magnetron sputtering from nanopowders targets (ID: 356)
S. Hamrit, K. Djessas, N. Brihid, K. Medjnouna, A. Solhyf

Elaboration and characterization of the nanostructured $Zn_{1-x}V_xO$ alloy thin films for Cu(In,Ga)Se_2 solar cells application (ID: 357)
K. Medjnoun, K. Djessas, A. Solhy, H. Chehouani, S. Reyjal

Simulation of power production with mini-PV plants using 3-types of Silicon Technologies in Fes-Morocco case (ID: 358)
S. M'zred, A. Ezzabti, I. Zorkani, A. Jorio, R. Saadani

"Propre.Ma" project: Design, Startup and Testing of a Photovoltaic Station and simulation of its productivity (ID: 360)
Hasnaa Moukhabir, Hamid Elomari

"Propre.Ma" project: Metrology Supervision and Data Transfer From a PV Station (ID: 361)
Mohammed Nfaoui, Youssef Boukdir, Hamid Elomari

Modeling and comparative study of different PV modules technologies in Agadir climate (ID: 362)
A. Tihane, M. Nya, R. Oaddi, M. Boulaid, I. Mouhti, K. Bouabid, A. Ihlal

Mapping of solar water heating systems technologies in Morocco (ID: 106)
Mohsine Bouya, Merieme Agdid, Abellatif Ben Abdellah

Optimization of thermal performance of building integrated solar collector with Phase Change Material (ID: 141)
Z. BOUHSSINE, M. FARAJI, M. NAJAM, M. EL ALAMI

Comparative Study of Fin Geometries for Heat Sinks in Natural Convection (ID: 200)
Abdelhadi Bouknadel, Imane Rah, Hafsa El Omari, Hamid El Omari

Comparative study based on thermal efficiency of solar air heaters (ID: 219)
Hicham El Ferouali, Said Doubabi, Naji Abdenouri

Numerical study of solar latent heat storage unit using Paraffin Wax P116 (ID: 243)
R. Elbahjaoui, H. El Qarnia

Effect thermo-physical properties of the main elements of solar collector on the performances of a solar water heater system (ID: 284)
Mustapha Koussa, Seddik Hadji, Djohra Saheb-Koussa

Solar absorption air-conditioning systems: An energy and economy approach (ID: 300)
A. ALLOUHI, A. JAMIL, Y. MOURAD, T. KOUSKSOU

Natural thermal-insulation materials composed of renewable resources: characterization of local date palm fibers

	(LDPF) (ID: 363) *A. Oushabi, S. Sair, Y. Abboud, O. Tanane, L. Bih, M. Bouhamidi, Z. Theisen-Louah and A. El Bouari* **Performance study of a solar thermal station under transient conditions (ID: 364)** *Radia Ait El Cadi, N. Selhaoui, K. Bouabid* **Thermal Storage of Concentrated Solar Energy Using Rocks As Materials High Temperature Storage (ID: 365)** *R. Tiskatine, A. Eddemani, A. Aharoune and L. Bouirden* **Costs optimization of photovoltaic ground moundted installation through focused geotechnical investigation (ID: 372)** *Orsolya Becker-Fazekas, Martin Schaffer*

	Posters Session II
	***Chairs* : - Mohammed OUASSAID,** *ENSA Safi – Morocco* -
Friday 16:15 - 16:45	**Sliding Mode Control Optimization and Comparison between PI, Fuzzy and Fuzzy PI controllers Current injected to Grid (ID: 26)** *Abdelhalim Borni, Layachi Zaghba, Bezza Baddradine, Rachid Chenni* **Application of feedback-feedforward loop digital control to a PWM dc-dc boost converter used for solar photovoltaic systems (ID: 103)** *Jaouad Tanouti, Mohammed Setti (IEEE Member), Abdelhak Aziz and El Mamoun Aziz* **Advanced Control of Three-Phase Grid Connected PV Generator (ID: 145)** *A.Yahya, H. El Fadil, F. Giri, H. Erguig* **Optimizing of The Silicon Solar Cell's Performance Using The Simulator PC-1D (ID: 220)** *S. Assal, S. Yadir, H. Amiry, M. Sidki, M. Benhmida* **Fuzzy logic PI controller for PV water pumping system (ID: 303)** *Sabah MIQOI , Abdelghani El Ougli, Belkasem Tidhaf, Boutouba Mohamed* **Modeling and Simulation of a Linear Fresnel solar collector (ID: 309)** *Soukaina El Alj, Ahmed Al Mers, Noureddine Boutammachte, Abdelfattah Bouatem, Ossama Merroun* **Prediction of direct, diffuse and global solar flux in the city of Tetouan Northern Morocco (ID: 1)** *El Mghouchi Youness, Abdelmajid El Bouardi, Zakaria Choulli, Taïb Ajzoul* **Forecasting of Direct Normal Irradiation (DNI) using Time series for the region of Ouarzazate Morocco (ID: 69)** *Ismail Belhaj, Oumkaltoume El Fatni, Moulay Hafid Bouhamidi, Mustapha Mouadine* **"Propre.Ma" project: roadmap & preliminary results for grid-connected PV yields maps in Morocco (ID: 146)** *N. Aarich, N. Erraïssi, M. Akhsassi, A. Lhannaoui, M. Raoufi, A. Bennouna* **Study of the solar combisystems for different types of building construction in Algiers climate (ID: 321)** *S. Bahria, A. Hamidat, A. Khoudja, M. Amirat, M. El Ganaoui* **Development and Integration of Innovative Low-Cost PV Windows Based on Dye Sensitized Solar Cells Technology: Application in Morocco (ID: 328)** *Ayoub El Baraka, Houda Ennaceri, Meimouna Baitoul, Asmae Khaldoun* **Comparison of synthesis routes of inorganic fullerene-like nano-additives for wind turbine lubrication: Application of Life Cycle Assessment approach (ID: 227)** *Hanane Akram, Ouafae Achak, Soukaina Haffane, Chaouki Elmoujahid, Abdelilah Elmesbahi, Driss Elmessoudi, Tarik Chafik, SalahEddine Bensemlali, Abderrahim Elmouakibi* **Robust Adaptive Backstepping control approach of DFIG Generators for Wind Turbines Variable-Speed (ID: 4)** *Badre Bossoufi, Hala Alami Aroussi, El Mostapha Ziani, Mohammed Karim, Ahmed Lagrioui, Mohammed Taoussi* **Modeling and Simulation of Wind Energy Chain Conversion (ID: 9)** *Samir BELLARBI, N. KASBADJI MERZOUK, A. MALEK* **Experimantal modeling and control of a small wind PMSG turbine (ID: 37)** *Lahfaoui Badreddine, Smail Zouggar, Fatima Zahra Kadda, Mohammed Larbi Elhafyani* **Optimization and Comparison between, Fuzzy and Fuzzy PI Controllers Turbine Speed Connected to a Grid (ID: 43)** *Abdelhalim Borni, Abdelhak Bouchakour, Zaarour Laid, Rachid Chenni* **Wind Farm Reliability Optimization using Harmony Search under Performance and Budget Constraints (ID: 53)** *R. Meziane, E. Châtelet, Y. Bouzidi, S. Boufala, A. Hamzi, M. Amara* **The New Architecture of a BUCK-BOOST Shunt Converter Non-inverter Dedicated to the Wind Turbine System with A High efficiency (ID: 65)** *Mohammed Seddik, Smail Zouggar, Bader Lahfaoui, Fatima Kadda, Mohammed Ahafyani, Abdelhak Aziz* **Sliding Mode Control of wind turbine emulator (ID: 74)** *Souhila Zine, Benyounes Mazari, Mohamed Amine Bouzid, Youcef Mihoub* **Modeling of flow around a wind rotor HAWT** **Application to the dynamic stall (ID: 151)** *Ali NOUIOUA, Rabah DIZENE* **Sliding Fuzzy Control Of a Wind System Containing an Aerogenerator DFAG (ID: 223)** *khayra. Roummani, Benyounes Mazari, Messaoud Hamouda, Moulay driss Chergui* **Artificial Intelligence control applied in wind energy conversion system (ID: 230)** *F. Arama, B. Mazari, A.Dahbi, K. Roummani, M. Hamouda* **Modeling of hybrid system combining an offshore wind turbine and an Oscillating Water Column system (ID: 233)** *Mustapha MALHOUNI, El Mostapha BOUDI* **The Voltage Regulation of the Asynchronous Wind Turbine Using a SVC (ID: 291)**

	H. ZAHBOUNE, S. ZOUGGAR, M. ZIANI, S. DAHBI, M. ELHAFYANI **Generator side part of a wind energy conversion system based on direct drive PMSG (ID: 296)** *Amine El Fathi, Abdelkader Outzourhit* **Improvement of the availabiliy of the DFIG wind turbines during voltage DIP with crowbar circuit (ID: 340)** *DRHORHI Ismail, LAHDA Mohamed, MIMET Abdelaziz*

Posters Session III

Chairs *: -* ***Ahmed Ihlal****, FS Agadir – Morocco*
- ***Isam Janajreh****, Masdar Institute of Science and Technology - United Arab Emirates*

Saturday
16:15 - 16:45

New Design of a Greenhouse Solar Distiller Coupled With Parabolic Trough and the Energy Balance of This System (ID: 83)
Khalid Guissi, Abdelmoumen Tabyaoui, Mohamed Harmouchi, Azeddine Mouhsen, El Mostafa Oualim, Abdellah Boulal

Passive study of thermal inertia and thermal behavior of two locals 'test' with and without PCM located in Casablanca city (ID: 128)
Amina MOURID, Yassine BOUZLOU, Mustapha EL ALAMI, Mostafa NAJAM, Mustapha FARAJI

Modeling of the internal loads of a building and analyzing their impact on the thermal behavior and electricity consumption (ID: 267)
GUEDDOUCH Touria, SAAD Abdellah, HMIDAT Abdehamid

State feedback controller for current source inverter Based STATCOM used for unbalance compensation in high voltage power grid (ID: 14)
Anas Benslimane, Jamal Bouchnaif, Mohamed Azizi, Khalid Grari

Comparative Study between Several Strategies Speed Controllers in an Indirect Field-Oriented Control of an Induction Machine (ID: 17)
Chaymae LAOUFI, Ahmed ABBOU, Mohammed AKHERRAZ

Induction Machine Identification Based on a New Technique of Simulated Annealing Optimization (ID: 95)
Mohamed MOUTCHOU, Hassan MAHMOUDI, Ahmed ABBOU

DTC of PMSM based on artificial neural networks with regulation speed using the fuzzy logic controller (ID: 212)
Adil Essalmi, Hassan Mahmoudi, Ahmed Abbou, Abderrahim Bennassar, Yassine Zahraoui

POWER SYSTEM STABILIZER DISIGN USING H ∞ ROBUST TECHNIQUE TO ENHANCE ROBUSTNESS OF POWER SYSTEM (ID: 87)
HORCH Abdessamad , NACERI Abdellatif , AYAD AHMED

Optimization of 33/225 KV Power Evacuation Transformers in Onshore Wind Farms in Morocco (ID: 133)
Noreddine Citroen, Ouassaid Mohammed, Maaroufi Mohamed

Optimal conditions for the growth of $CuZnSnS_4$ thin films using close spaced vapor transport technique (ID: 366)
Mohamed Belaqziz, Sagna Alphousseyni, Kamal Djessas and Hassan Chehouani

Storage of Heat Energy in Packed- Bed of Rocks for Concentrated Solar Power Plants (ID: 367)
A. Eddemani, R. Tiskatine, A. Aharoune, L. Bouirden, M. Eljazouli

Sensorless Control of the Switched Reluctance Motor (ID: 138)
Khalid Grari, Jamal Bouchnaife, Mohammed Azizi, Anas Benslimane

Operation Optimization and Economic Assessment of Energy Storage (ID: 260)
Khalid Loudiyi, Asmae Berrada

Effect of internal currents, fuel crossover, and membrane thickness on a PEMFC performance (ID: 315)
Adil Atifi, Hamid Mounir, Abdellatif El marjani

Different Harvesting of Marine Microalgae (ID: 57)
Ángeles Cancela, Ángel Sánchez, Rocío Maceiras, Víctor Alfonsín

The influence of temperature on the production of biogas under mesophilic regime (ID: 71)
Amine HAJJI, Mohammed RHACHI

Lipids extraction from microalgae for biodiesel production (ID: 147)
Ángel Sánchez, Ángeles Cancela, Rocío Maceiras, Víctor Alfonsín

Mixed Convective Heat Transfer in an Inclined "T" form Double Cavity (ID: 112)
M'barka Mourabit, Hicham Rouijaa, El Alami Semma, Mustapha El Alami, Mostafa Najam

Proposed Vision of Algerian Smart Grid (ID: 265)
Benahmed Khelifa, Khannous Fatiha, Douli Amel

Performance monitoring of a grid-connected high concentration photovoltaic power plant (ID: 359)
A. Benazzouz, A. Barhdadi, B. Fabrizio, D. Verdilio

"Propre.Ma" project: Modeling and simulation of Grid connected photovoltaic system for Meknes Climate (ID: 368)
M. El-Yadri, R. Saadani, I. Zorkani, M. Rahmoune

Structural, electronic and optical properties of four phases of TeO_2: α, β, γ and δ from ab-initio calculations (ID: 332)
M. Boujnah, H. Zaari, A. Benyoussef, A. El Kenz, M. Y. Messous, H. Labrim

The investigations of Electronic Structure, Optical and Magnetic Properties of MgB_2 nanosheets (ID: 333)
H. Zaari, S.Naji, M. Boujnah, A.G. El hachimi, A. El Kenz, A. Benyoussef, S.Naji

Alternative treatment of petroleum waste via thermochemical conversion (ID: 327)
Isam Janajreh, Thomas Arink and Ahmed Al Shehhi

Numerical simulation of direct contact membrane desalination in conjugate heat transfer configuration: role of flow velocity (ID: 371)
Isam Janajreh, Dana Suwwan

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