Programme

International Conference on Energy Systems and Technologies

ICEST 2011

Programme of

International Conference on Energy Systems and Technologies

14-17 March 2011
Cairo, Egypt

Science Partners

Egyptian Nuclear Physics Association (ENPA)
Science and Technology Forum (STF)
Conference Chairman
Prof. Dr. M.N.H. Comsan

Conference Coordinator
Dr. S.R. Atalla

Organizing Committee
S.R. Atalla
M.N.H. Comsan
T. El-Tablawy
A. Khozam

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H. Motaafy, HTI

Executive Committee
T.M. Nassef
M. Tohamy

<table>
<thead>
<tr>
<th>AEA</th>
<th>Atomic Energy Authority</th>
<th>HTI</th>
<th>Higher Technological Institute, 10th of Ramadan City</th>
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<tr>
<td>NCNSRC</td>
<td>National Centre for Nuclear Safety and Radiation Control</td>
<td>QIT</td>
<td>Qalyoubeya Institute of Technology, Qalyoubeya</td>
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ICEST 2011 Conference Timetable

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<th>Time</th>
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<tr>
<td>9:00-10:30</td>
<td>Reg./OS</td>
<td>Full</td>
<td>GBE1/NET2</td>
<td>Full</td>
<td>GBE2</td>
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<tr>
<td>10:30-11:00</td>
<td>Tea/Coffee</td>
<td>Day</td>
<td>Tea/Coffee</td>
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<td>Tea/Coffee</td>
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<tr>
<td>11:00-13:00</td>
<td>KN1</td>
<td>KN2/Peak Oil</td>
<td>Giza/Cairo</td>
<td>CET2/GBE2</td>
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<tr>
<td>13:00-14:00</td>
<td>Break</td>
<td>Break</td>
<td>(Pyramids/Conf. Lunch)</td>
<td>Egyptian</td>
<td>CS</td>
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<td>14:00-15:30</td>
<td>NET1/ESD</td>
<td>IET1/EME2</td>
<td>Egyptian</td>
<td>CET1/EME1</td>
<td>Poster Session</td>
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<td>15:30-17:00</td>
<td>CET1/EME1</td>
<td>Poster Session</td>
<td>Museum</td>
<td>Free Evening</td>
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<tr>
<td>19:00-22:00</td>
<td>Fatimide Cairo</td>
<td>Cruise on the Nile</td>
<td>Free Evening</td>
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Programme abbreviations:

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<tr>
<th>OS</th>
<th>Opening Session</th>
<th>GBE</th>
<th>Green Buildings &amp; Environment</th>
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<tr>
<td>KN</td>
<td>Keynote Talk</td>
<td>IET</td>
<td>Innovations in Energy Technology</td>
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<td>CET</td>
<td>Clean Energy Technologies</td>
<td>NET</td>
<td>New &amp; Emerging Technologies</td>
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<tr>
<td>EME</td>
<td>Energy Management &amp; Economics</td>
<td>SMC</td>
<td>System Modeling &amp; Computation</td>
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<td>ESD</td>
<td>Energy Storage &amp; Distribution</td>
<td>CS</td>
<td>Closing Session</td>
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Executive Committee:

T.M. Nassef
M. Tohamy
ICEST 2011
Conference Programme

Monday, 14 March 2011

9:00 - 10:30  Registration/Opening Session
10:30 - 11:00  Tea/Coffee
11:00 - 13:00  Session KN1 [38/39/128]
   Chairperson: M.R. El-Tahlawy
   1 Preliminary investigation of high temperature partial oxidation reaction of primary alcohols on platinum surface as an efficient renewable energy source: S.R. Atalla, M.F. Elshahed and S.E. Shalaby [38]
   2 Potential utilization of agricultural wastes for CHP production in Egypt: Ahmed Khozam [39]
   3 The importance of nuclear power in Egypt: Ali Abd El Nabi [128]

13:00 – 14:00  Break
14:00 - 15:30  Session NET1 [7/61/76/94]
   Chairperson: M.N.H. Comsan
   1 Wind farm micro siting using finite difference method
      S. Rajper, I. Amin and F. Junejo [7]

14:00 - 15:30  Session ESD [6/18/43/75]
   Chairperson: T. El-Tablawy
   1 Smart grid and the role of distributed generation technologies in sustainable electric power system: A. Zahedi [6]
   2 Investigating the impact of HTS on electrical distribution networks: Mustafa Ali Elsherif and Philip Taylor [18]
   3 Power loss evaluation of HVDC and DC HTS transmission solutions for round 3 offshore wind farms in the United Kingdom: Mustafa Ali Elsherif [43]
   4 Design of pneumatic flow control for wind energy penetration and storage: E.M. El-Beheiry [75]

2 Computational fluid dynamics–based analysis and optimization of Stirling engines: An insightful survey: Hossam Abdelsattar, Waleed Talaat, Mahmoud Abdennasser and Mohamed Leheta [61]
4 Glycerol and methylesters decomposition in the supercritical production of biodiesel: potential alternative to improve fuel characteristics and yield: Victor F. Marulanda [94]
15:30 - 17:00  
**Session CET1** [21/33/123]  
**Chairperson: I. Shanshoury**  
1 Performance investigation of solid oxide fuel cell system: **A. Musa, A. Agina and M. Talbi** [21]  
2 An insightful survey into green energy based power plants: the concept, challenges and research-worthy solutions: **Samar Raafat Amer** [33]  
3 Clean gasoline fuels: **Hamdy Abou El Naga** [123]

19:00 - 22:00  
Fatimide Cairo*

Tuesday, 15 March 2011

9:00 - 10:30  
**Session GBE1** [28/32/124/130]  
**Chairperson: M. Samir Abdel-Azim**  
1 Green evaluation for an experiment of high-rise apartment building as mainstream building practices in Egypt: **Usama Elfiky** [28]  
2 A new intelligent reliable environmental friendly power unit for superyachts: **Ali Ibraheem, Ibraheem Hamid and Mohamed Adel** [32]  
3 Development of prototype structure for low cost and energy efficient house by utilising palm tree fronds: M. Samir Abdel-Azim and **H.R. Shalaby** [124]  
4 UV-VIS absorption and characterization of the synthesized TiO2 for uranium uptake and energy applications: **Abram F. Bishay** [130]
**Session NET2 [22/40/91/96/132]**

**Chairperson: A.B. Ustimenko**


2. Concentrating photovoltaic model for low latitude regions: Ahmad Zahedi [40]

3. Half cell and full cell nickel oxide based supercapacitor: Hao Gong, Guangxia Hu, Chunhua Tang and Zhe Tang [91]

4. Investigation of bahavior and application of fuel cells and making a laboratory specimen: Seyyedmehdi Sharifian, Rabeah Mehravar, Arezou Ghadi and Reza Miremadoddin [96]

5. A research to determine the effects cotton seed methyl esters diesel mixtures over the engine emissions performance: Cihan Bayindirli and Mustafa Acaroglu [132]

**Session KN2 / Peak Oil [12]**

**Chairperson: A.A. El-Kady**


**Session IET1 [81/90/121/133]**

**Chairperson: M.N.H. Comsan**

1. Generation of electrical energy using municipal water pipe line: Ali Riza Gün and Mehmet Kurban [81]

2. Methanation of CO and CO2 in a nonthermal plasma-catalytic reactor: Young Sun Mok and Eun-Jin Jwa [90]

3. Materials and methods for using the energy of atmosphere ionization on and around pyramid structures as a source of alternative energy: Ikhtiyar Abdullayev [121]


**Session EME2 [8/17/45/56]**

**Chairperson: A. Khozam**

1. Incorporating community governance in planning decentralised sustainable energy security: Diane Costello [8]


3. Exergy analysis for evaluation of energy consumptions in an olefin plant: A.A. Changalvaie and Sh. Feghhi [45]

4. Economic evaluation and electricity cost of grid-connected solar photovoltaic system in Egypt: A. Zahedi [56]
Thursday, 17 March 2010

9:00 - 10:30  Session SMC [24/72/74/82/116]
Chairperson: H. Motaafy
2 CPU thermal management of personal and notebook computer (transient study): T. Abbas, K. M. Abd_elsalam and Kh. Khodairy [72]

9:00 - 10:30  Session IET2 [42/68/77/97/118]
Chairperson: E. Khalil
1 Innovation of adding additive to bio-diesel produced from Jatropha curcas L. as a way to increase Cetane number in diesel engine: A review: A.S. Silitonga, A.E. Atabani, A. Ghofur, H.H. Masjuki, T.M.I. Mahlia, Irfan Anjum Badruddin and A.H. Sebayang [42]
2 Experimental study of RDF gasification for power generation : University’s RDF model: Somrat, Kerdsuwan, Krongkaew Laohalidanond, Somphot Cherdpong and Tada Uthaikiatittikul [68]
3 Solid fuel plasma gasification as a clean technology of synthesis gas production: V.E. Messerle, A.B. Ustimenko and E.F. Osadchaya [77]
4 Comparison of metallic bipolar plates for PEM fuel cells: Mansour Shirvani, Mohammadbagher Limue, Ayedmehdi Sharifian and Arezou Ghadi [97]
5 Performance analysis of 3.6 kW rooftop grid connected photovoltaic system in Egypt: **Ahmed Elhodeiby** [118]

10:30 - 11:00  **Tea/Coffee**

11:00 - 13:00  **Session CET2** [47/52/125]

**Chairperson: S.R. Atalla**

1 WI-TI: An optimized green energy farm capable of solving Egypt energy crisis based on wind and marine current energies: Ahmed El-bastawesy, **Islam Adel**, Omar Fathi, Mohamed Fouad, Bassam Salem, Ahmed El-sayed, Ehab Eldin Heeba and Mohamed Refaa [47]

2 The introduction and optimization of distributed energy recourse system in a low-carbon aimed sustainable “Compact Block”: **Liyang Fan**, Weijun Gao and Zhu Wang [52]

3 Technology of transferring natural gas to different petroleum products (GTL): **Hamdy Abou El Naga** [125]

**11:00 - 13:00 Session GBE2** [14/29/51/60/99/131]

**Chairperson: M. Samir Abdel-Azim**


3 CO2 emission from buildings and mitigation countermeasures in China: **Hexiang Xu** and WeiJun Gao [51]

4 Study on the database for energy consumption of commercial building (DECC) situation of energy consumption and CO2 discharge in Kitakyushu education facilities: **Yongzhi Gao**, Toshiyuki Watanabe, WeiJun Gao and Hirotoshi Yoda [60]

5 Study on low-carbon city construction of Kitakyushu City in Japan: **Liu Jianan** [99]

6 Effects of bioethanol-diesel fuel blends on emissions of a diesel engine: **Hasan Aydogan**, Mustafa Acaroglu and A. Engin Ozcelik [131]

13:00 - 14:00  **Conference Lunch**

14:00 - 15:00  **Closing Session**

Conference Conclusions and Recommendations

Conference Closing
برنامج

المؤتمر الدولي لنظم وتكنولوجيات الطاقة

CEST 2011

المشاركة الفنية

الجمعية المصرية للفيزياء النظرية
جمعية معهد العلم والتكنولوجيا

14-17 مارس 2011
القاهرة - جمهورية مصر العربية

المؤتمر الدولي لنظم وتكنولوجيات الطاقة

CEST 2011