

# Programme

**2<sup>nd</sup> International Conference on  
Energy Systems and Technologies**

**ICEST 2013**

**18-21 February 2013  
Cairo, Egypt**

**Programme of the**

**2<sup>nd</sup> International Conference on  
Energy Systems and Technologies**

**ICEST 2013**

**18-21 Feb. 2013  
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

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**Executive Committee**

T.M. Nassef                      G.S. Moaawad    M. Tohamy

**ICEST 2013**  
**Conference Timetable**

Time	Mon., 18 Feb.	Tue., 19 Feb.	Wed., 20 Feb.	Thu., 21 Feb.
9:00-10:30	<b>Reg./ OS</b>	<b>CET</b>	Full	<b>IET</b>
10:30-11:00	Tea/Coffee	Tea/Coffee	Day	Tea/Coffee
11:00-13:00	<b>KNR1</b>	<b>NET2/ ESD</b>	Giza/Cairo	<b>KNR2</b>
13:00-14:00	Break	Break	(Pyramids/	Conf. Lunch
14:00-15:30	<b>NET1</b>	<b>SMC/ EME</b>	Egypt.	<b>CS</b>
15:30-17:00	<b>GBE</b>	<b>Poster Session</b>	Museum)	
19:00-22:00	Fatimide Cairo	Cruise on the Nile	Free Evening	

**Programme abbreviations:**

<b>OS</b>	Opening Session	<b>GBE</b>	Green Buildings & Environment
<b>KNR</b>	Keynote & Review Talk	<b>IET</b>	Innovations in Energy Technology
<b>CET</b>	Clean Energy Technologies	<b>NET</b>	New & Emerging Technologies
<b>EME</b>	Energy Management & Economics	<b>SMC</b>	System Modeling & Computation
<b>ESD</b>	Energy Storage & Distribution	<b>CS</b>	Closing Session

# ICEST 2013

## Conference Programme

### Monday, 18 Feb. 2013

9:00 -10:30  
10:30 - 11:00

OS  
Tea/Coffee

11:00 - 13:00

**Session KNR1** [77/111/25]

**Chairperson: Prof. Dr. M.R. El-Tahlawy**

- 1 An international outlook of innovative energy efficient designs of low carbon buildings: **Essam E. Khalil** [77]
- 2 The technology and economics of a Combined Cycle WTE Facility at an existing Egyptian Landfill site: **Robert H. Aldrich**, Mahmoud Elshazly and Walter Schroeder
- 3 Nuclear energy perspectives in MENA countries: **M.N.H. Comsan** [25]

13:00 – 14:00

**Break**

14:00 - 15:30

**Session NET1** [116/83/36/37/53/22]

**Chairperson: Prof. Dr. T. El-Tablawy**

- 1 Algae energy system potential for oil production and CO<sub>2</sub> capture in the Middle East: **Ihab H. Farag** [116]
- 2 Risk management and pricing insurance on renewable energy projects: **Keun Ock Lew** [83]

- 3 Solar parabolic collector assisted evaporative cooling system: **V. Arora and T. Sheorey** [36]
- 4 Electrochemical deposition and pseudocapacitive behavior in urea-based quasi-ionic liquid electrolytes studied with X-ray absorption spectroscopy: **M-Jay Deng, K-Tzu Lu, Ch-Ch Wang, J-F Lee, J-K Chang and J-M Chen** [37]
- 5 Challenges facing the fuel cell technology to replace combustion engines: **M.Y. Mustafa** and **R.K. Calay** [53]
- 6 Development of a gas-hydrate power generation system: **R. Shimizu**, Sh., Obara, M. Okuda and M. Kawai [22]

15:30 - 17:00

**Session GBE** [32/99/59/88/69]

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

- 1 Welcoming the wind: The potential for urban wind turbines to reshape the built environment: **Naglaa A. Megahed** [32]
- 2 Effects of fossil fuel extraction on Gokana environment, Ogoniland, Nigeria: **Victoria C. Ibezue** [99]
- 3 Green building and energy saving: **Mahmoud A. Hassan** and **Nabil M. Guirguis** [59]
- 4 Passive design features for low energy office building: **F. Ismail**, **N. A. Azizan** and **N. M. Zainudin** [88]
- 5 Modern roads with green energy: **Sanwal Muneer** [69]

19:00 - 22:00 Fatimide Cairo\*

**Tuesday, 19 Feb. 2013**

- 9:00 - 10:30**      **Session CET** [87/50/109/117/123]  
**Chairperson: Prof. Dr. Tanuja Sheorey**
- 1 Measuring of reduction of CO<sub>2</sub> emissions transport fuels on the example of ethanol in Poland: **Piotr F. Borowski**, Malgorzata Powalka, Adam Kupczyk and Michal Sikora [87]
  - 2 Analysis of the energy output of a solid waste treatment plant in Norway with the objective of optimization: E. Román, **M.Y. Mustafa** and W. Sargalski [50]
  - 3 Fabrication and testing of compressed air car: Anirudh Addala and **Abhuri Supriya** [109]
  - 4 Machine-to-machine smart grid for sustainable energy: **Rashid A. Saeed**, Rania A. Mokhtar and AwadAllah A. Tayfour [117]
  - 5 Potential of solar thermal energy utilization in electricity generation: **A.M. Abdel Dayem**, M. Nabil Metwally, A.S. Alghamdi and E.M. Marzouk [123]

**10:30 - 11:00**      **Tea/Coffee**

- 11:00 - 13:00**      **Session NET2** [78/94/68/46/98]  
**Chairperson: Prof. Dr. Elham Elhakim**
- 1 An evaluation of solid oxide fuel cell for residential applications: **Omar A. Shaneb** and Ahmed I. Alguwiri [78]

- 2 Development of eco-friendly photovoltaic energy systems through “energy efficiency” technology - A roadmap and an application in Egypt and Japan: **Gamal M. Dousoky** and Masahito Shoyama [94]
- 3 Meeting future demand in the UK residential areas using superconductor technologies: **Mustafa A Elsherif** [68]
- 4 Assessing behavior of outer crowbar protection with the DFIG during the grid fault: **Mohamed Ebeed**, Omar Nour-eldeen and Abdulla A.E [46]
- 5 Assessment of evolution in LEDs lighting as energy-saving technology: **Salah Alabani** [98]

- 11:00 - 13:00**      **Session ESD** [93/76/17/115/122]  
**Chairperson: Dr. Piotr F. Borowski**
- 1 A sankey framework for tracing energy and exergy: **Kamalakaran Soundararajan**, Su Bin and Ho Hiang Kwee [93]
  - 2 Electrical distribution power systems of modern civil aircrafts: Reyad Mohamed, **Ahmad Eid** and Mazen Abdel-Salam [76]
  - 3 Geographical information system based energy transmission pipeline (ETP) routing for minimizing environmental risk: A case

study of Turkey: **V. Yildirim**, T. Yomralioglu and R. Nisanci [17]

4 The structural, electronic and thermal properties of Perovskite-type: Novel hydrogen storage materials: **Brahim Bahloul**, Abdelouahab Bentabet and Lynda Amirouche [115]

5 Wireless sensor network for smart grid communication: **Rania A Mokhtar**, Rashid A. Saeed and Hikma Shabana [122]

**13:00 - 14:00**

**Break**

**14:00 - 15:30**

**Session SMC** [65/114/118/2/91/24]

**Chairperson: Prof. Dr. Essam Khalil**

1 Evaluation of self-learning methods for predicting energy consumption: **S. Vadera**, J. Wu, U. Donath, A. Gomez, F. Meziane and N. Redondo [65]

2 The performance of 0.6m impulse turbine operating under bi-directional airflow: **Rehil O. Abdulhadi** [114]

3 Chaotic behavior of coupled pendula: **Sobhy R. Atalla** [118]

4 Electronic transport studies of bulk semimetal - semiconductor ternary alloy based on an ensemble Monte Carlo calculation including three-valley band structure model: **H.M. Tahir**, B. Bouazza, N. Maassoume and L. Kotbi [2]

5 Distributed generation placement and sizing using a modified PSO for power loss reduction in radial distribution systems: **H.**

**Musa** and S.S. Adamu [91]

6 Study on operation analysis of a compound energy system using orthogonal table-GA hybrid method: **S. Watanabe** and Sh. Obara [24]

**14:00 - 15:30**

**Session EME** [35/81/20/86/119]

**Chairperson: Prof. Dr. Hameed Nezhad**

1 Applying the contingent approach to public participation in nuclear policy: **Yueh-Hua Lee**, Chu-Ching Wang, Hsiu-chen Chuang and Chien-Chi Lin [35]

2 Strategy of adaptation as a mode of development in the contemporary companies on energy sector examples: **Piotr F. Borowski** [81]

3 Prospect of Iran natural gas export projects: **H. Omidvar** [20]

4 Technical and economic assessment of solar PV/Diesel hybrid power system for rural school electrification in Ethiopia: **Zelalem Girma** [86]

5 Energy: The crisis and the way-out: **Heikal Bedair** [119]

**15:30 - 17:00**

**Poster Session**

**Chairperson: Dr. S.R. Atalla**

[1/13/19/21/23/26/27/49/52/61/63/64/70/72/89/95/101/102/105/107/108/110/112/121/125/126]

**19:00 - 22:00**

**Cruise on the Nile\***

**Wednesday, 20 Feb. 2013**

**9:30 - 22:00**    **Social and Culture Events - Full Day**  
**Giza/Cairo\***

**Thursday, 21 Feb. 2013**

**9:00 - 10:30**

**Session IET [18/79/106/113/71/51]**

**Chairperson: Prof. Dr. H. Motaafy**

- 1 Study on the performance of solar still used for desalination: **Ehssan Nassef** [18]
- 2 All graphene-nanoparticle composite based electrodes for dye-sensitized solar cells: **Sung-Ryong Kim**, Young-Hui Koh, In-Sik In and Ju-Won Lee [79]
- 3 Ba<sub>6-x</sub>BP<sub>5</sub>O<sub>20</sub>:xEu<sup>3+</sup> phosphor systems for highly energy-efficient white LEDs: **K. Park**, H. Kim, K.N. Shinde and S. J. Yoon [106]
- 4 Nanofluids as a cooling agent for Rankine power cycle: **Eman Abdel-Hakim Tora** [113]
- 5 Biodiesel production as clean energy source from waste cooking oils: Characterization using TGA, FTIR and fuel properties: **Nahla A. Taha**, Azza El-Maghraby and H.A.Farag [71]
- 6 Innovative integrated marine biomass utilization: **M. Aziz**, T. Oda and T. Kashiwagi [51]

**10:30 - 11:00**

**Tea/Coffee**

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(\*) At extra charge. For more information contact Conference Treasurer

- 11:00 - 13:00**      **Session KNR2** [85/73/75/29]  
**Chairperson: Prof. Dr. M.N.H. Comsan**
- 1 Future of the power sector: Uncertainties and opportunities: **Hameed G. Nezhad** [85]
  - 2 Water energy nexus: A strategy and roadmap: **Essam E. Khalil** [73]
  - 3 Air flow in places of worship: **Essam E. Khalil** [75]
  - 4 Energy-environment interaction: Case study of Northern Nigeria: **S.I. Ladan** [29]

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

**14:00 - 15:30**      **Closing Session**

Conference Conclusions and  
Recommendations Conference Closing

برنامج

المؤتمر الدولي الثاني لنظم وتكنولوجيا الطاقة

ICEST 2013

الشراكة العلمية

الجمعية المصرية للفيزياء النووية  
جمعية منتدى العلم والتكنولوجيا

١٨ - ٢١ فبراير ٢٠١٣  
القاهرة - جمهورية مصر العربية

برنامج

المؤتمر الدولي الثاني  
لنظم وتكنولوجيا الطاقة

ICEST 2013

٢١-١٨ فبراير ٢٠١٣  
القاهرة - جمهورية مصر العربية