

# Conference Program



## Conference Date

24 - 25 Rabi' al-Thani 1442 H  
9 - 10 December 2020 G

Organized by



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مدينة الملك عبد الله للطاقة  
الذرية والمتجددة K.A.CARE



## First Day

Wednesday - December 9, 2020

# Session 1

## Electric Power Generation using Solar Energy



**Presenter**



**Presentation Title**



**Time**

<b>Dr. Meshal Almoshaogeh</b>	Welcoming Word by Dean of the College of Engineering	9:00 - 9:05
<b>Dr. Immad Shams</b>	Problem Identification Using Swarm Based Bio - Inspired Algorithms for Solar Maximum Power Point Tracking	9:05 - 9:18
<b>Dr. Ahmad Eid</b>	Impact of Solar Distributed Generation on Power Loss and Voltage Stability of Distribution Networks	9:18 - 9:31
<b>Dr. Humaid Mohammed</b>	Assessment of Crystalline Silicon Photovoltaic Module Operating Conditions Frequency Distribution for Riyadh	9:31 - 9:44
<b>Dr. Roopmati Meena</b>	Degradation in crystalline silicon photovoltaic modules under hot climate conditions	9:44 - 9:57
<b>Dr. Manahil Mohammed</b>	Solar Energy as an alternative of electric power in Saudi Arabia's houses vision 2030	9:57 - 10:10
<b>Dr. Hesham Othman</b>	THERMAL CHARACTERISICS OF A PARABOLIC TROUGH COLLECTOR (A COMPARISON STUDY)	10:10 - 10:23

## First Day

Wednesday - December 9, 2020

### Session 2

Opening Ceremony



Opening Ceremony



11:00 - 12:05

## First Day

Wednesday - December 9, 2020

### Session 3

#### Invited Speakers



**Presenter**



**Presentation Title**



**Time**

<b>Dr. Nazeeruddin Mohammed</b>	Perovskites Solar Cells: A New Paradigm in Energy Sector	12:35 - 1:05
<b>Dr. Fahad Alsulaiman</b>	Impact of 4th Industrial Revolution in Solar Energy Market	1:05 - 1:35
<b>Dr. Hussain Bassi</b>	Solar Energy Challenges and Inventions	1:35 - 2:05

## First Day

Wednesday - December 9, 2020

### Session 4

#### Water Desalination using Solar Energy



**Presenter**



**Presentation Title**



**Time**

**Dr. Quazi Bari**

Porous Block Column Type Solar Desalination Unit

2:15 - 2:28

**Dr. Lotfy Kamal Azaz**

Using GIS and Multi - criteria Analysis (MCA) techniques to Locate Suitable Sites for Desalination Solar Stations, A Case Study from Egypt

2:28 - 2:41

**Dr. Zakariya Omara**

Rotating wheel solar stills for water desalination: Comparative study

2:41 - 2:54

**Dr. Abdelkader Abdullah**

Influence of adding trays on the performance of solar still, an experimental approach

2:54 - 3:07

**Dr. Abdullah Najib**

Solar Desalination using Multiple Effect Membrane Distillation: Experimental results

3:07 - 3:20

## First Day

Wednesday - December 9, 2020

### Session 5

#### Materials for Solar Energy Applications



**Presenter**



**Presentation Title**



**Time**

**Dr. Nazek El - Atab**

Ultra - flexible, Ultra - stretchable, Lightweight and High efficiency Silicon Solar Cells for Unmanned Aerial Vehicles Application

3:40 - 3:53

**Dr. Roopmati Meena**

Investigation of different types of defects in newly manufactured crystalline silicon PV modules

3:53 - 4:06

**Dr. H. Sadig**

Design, Fabrication and Testing of Low - Cost Flat Plate Collector Under Central Qassim Climate

4:06 - 4:19

**Dr. Mohamed Musa**

Inorganic metal halide perovskites AMX<sub>3</sub> as promising candidate materials for future photovoltaic solar cell technologies

4:19 - 4:32

**Dr. Mohamed Ben Rabha**

Silicon nanowires for photovoltaic applications

4:32 - 4:45

**Dr. Mohamed Ben Rabha**

High Quality Aluminum/Porous silicon Passivation of multicrystalline Silicon nanostructure for solar cells applications

4:45 - 4:58

End of Day 1 (Wednesday - December 9, 2020)

## Second Day

Thursday - December 10, 2020

### Session 1

#### Applications of Solar Energy



**Presenter**



**Presentation Title**



**Time**

**Dr. Fawaz Alharbi**

Applications of Solar Energy based Technologies in Transportation Engineering: Opportunities and Challenges

9:00 - 9:13

**Dr. Siham Mohamed**

The Photovoltaic Characteristic of Silicon Solar cell using Solar Tester through Different Temperature

9:13 - 9:26

**Dr. Abdulkarim AlUlayet**

PV Penetration Sizing Limitation and Challenges to the Saudi Grid: Achieving the Lowest Energy Cost; Considering Static Constrains with No Battery Storage

9:26 - 9:39

**Dr. Radwan Almasri**

Research and Applications of Solar energy in Kingdom of Saudi Arabia (KSA)

9:39 - 9:52

**Dr. Abdulaziz Alshurbaji**

Solar Energy based Hybrid Power System for a Small Community near Yanbu, Saudi Arabia

9:52 - 10:05

## Second Day

Thursday - December 10, 2020

### Session 2

#### Applications of Solar Energy



**Presenter**



**Presentation Title**



**Time**

**Dr. Mohammad Alnassar**

PC1D as a computer - assisted learning tool in graduate - level solar PV courses

10:45 - 10:58

**Dr. Nagwa Ibrahim**

Solar Energy Regulations System in the Kingdom of Saudi Arabia

10:58 - 11:11

**Dr. Mohammad Rizwan**

Adaptive Neuro Fuzzy Inference System (ANFIS) Based Model for Short - Term PV Power Forecasting

11:11 - 11:24

**Dr. Mohamed Fterich**

Numerical and experimental investigation of heat transfer in mixed solar

11:24 - 11:37



## Second Day

Thursday - December 10, 2020

### Session 3

#### Invited Speakers



**Presenter**



**Presentation Title**



**Time**

<b>Dr. Tariq Muneer</b>	The coming age of solar and wind energy	12:30 - 1:00
<b>Dr. Hany A. Al - Ansary</b>	Design Features of the World's First Commercial Concentrating Solar Power Plant Using the Particle Heating Receiver Concept	1:00 - 1:30
<b>Dr. Abdulrahman Alamoud</b>	Solar Photovoltaic Potential: a Future Dominant Energy Source	1:30 - 2:00

## Second Day

Thursday - December 10, 2020

### Session 4

Technical and Economical Studies of Solar Energy



**Presenter**



**Presentation Title**



**Time**

**Dr. Majdi Amin**

A Feasibility Study of an Autonomous Integrated System for a Conventional Household Power Supply in Saudi Arabia: The Vision of 2030

2:20 - 2:33

**Dr. Ahmad Tazay**

A comparison of techno - economic analysis and optimization of a solar system for energy reduction dependency at Al Baha and Al Qassim.

2:33 - 2:46

**Dr. Raed Alahmdi**

Feasibility Study of Dual - Axis Tracking Systems for PV Panels in Saudi Arabia

2:46 - 2:59

**Dr. Adham El - Malky**

Performance and economic analysis of a solar - assisted heating and cooling network in Cairo, Egypt

2:59 - 3:12

End of Day 2 (Thursday - December 10, 2020)