

Sustainable Development Report 2020

# Affordable and Clean Energy







## Achievements ■

### MoU with Koncar

The Prince Sultan University is involved in several industrial collaborations that are leading the way in the search for alternative energy sources. One such example comes from our Renewable Energy Lab, who are in cooperation with Koncar Power Plant Electric Traction, Croatia for a collaborative consultancy project on microgrids test bench for EV charging and renewable energy.

The focus areas of the sponsors chosen business themes towards Saudi Vision 2030 and United Nations Sustainable Development Goals (SDG 7, 9, & 11). The chosen themes help students, researchers, and faculty to gain the knowledge and experience on new technologies in the clean energy domain.



### MoU with Power and Telecom Technologies Co., KFB Holding Group, Riyadh

Prince Sultan University is involved in several industrial collaborations that are leading the way in the search for alternative energy sources. One such example comes from our Renewable Energy Lab, who are in cooperation with Power and Telecom Technologies Co., KFB Holding Group, Riyadh for a collaborative consultancy project on investigations on minimizing electricity cost and feasibility study of self-sustainable campus.

The main objective of the project is to study PSU Lighting electricity network to provide Strategic solutions as per the sustainable development goals (SDG 7, 9, & 11).

- Benchmarking the energy usage with Solar based LED Lighting
- Implementing stepping stones for the Localization Target within renewable energy based lighting sector in context of the Vision 2030





## Renewable Energy Lab and Altair Inc Organised two days webinar on Simulation driven Innovation on Emobility and Renewable Energy

Renewable Energy Lab and Altair Inc Organised two days webinar on Simulation driven Innovation on Emobility and Renewable Energy

The global demand for energy continues to increase and the diversity of sources is growing. We are helping customers explore sustainable generation, achieve efficient, distribution, maintain reliable power grids, and transform the market with the *Internet of Things(IoT)*.

Whether in oil and gas, coal, renewable energy, nuclear power, or distribution, our customers use Altair to simulate everything from geomechanics to composite wind turbine blades and analyze structural safety to network loads.

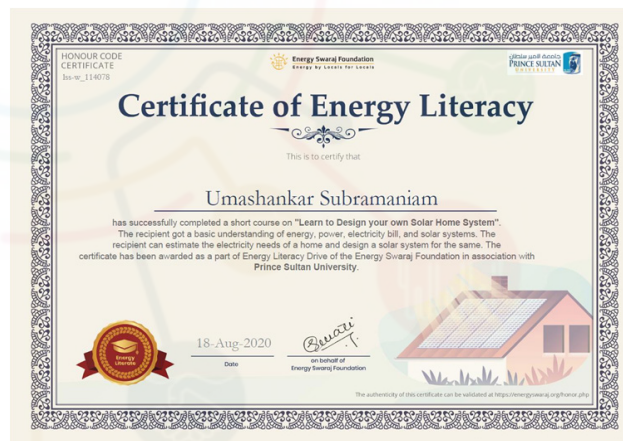
### Agenda:

- Ensure Reliability and Robustness with Multiphysics
- Streamline Aerodynamics and Thermal
- Increase Network Efficiency
- Smart Digital Transformation
- Optimize Energy Production and Distribution



## Promote pledge on 100 per cent renewable energy (4.6%)

Climate change is a major concern, which needs a collective response to mitigate its catastrophic effects. Energy Swaraj Foundation (ESF) is igniting the Energy Swaraj Movement to bring awareness to people on energy and climate change to make this planet liveable for the sake of our future generations. Renewable Energy Lab, PSU is partnered with ESF for achieving the following sustainable development goals (SDG 7,11,13 & 17), to promote 100% renewables and to train the students, researchers, faculty, and technical staff in PSU on Solar PV System Design with digital certification.



Energy Swaraj Foundation & Renewable Energy Lab jointly organised the "Learn to Design your Solar System." This course gives a unique opportunity to become Energy Literate irrespective of their educational background and experience.



## Conference on 2020 ■

### International Conference on Power Electronics and Renewable Energy Applications



This conference is a step to encourage various professionals for colonizing the relevant topics in Power Electronics and Renewable Energy Applications. The participants from academia, industry and research organisations come closer through presentation sessions, keynote lectures and exhibitions. The conference will be an opportunity to discuss the developments in the signal processing, electronic systems and soft computing which enhances the ability of Power electronics system for various applications. The applications include FACTS, HVDC, Custom power devices, electric vehicle, Industrial drives, Welding system and Renewable energy developments.

## Events ■

### IGEN GENDISTRANSCON 2021

Altair Engineering Inc. is an American multinational information technology company headquartered in Troy, Michigan, USA. For leveraging University programs, Altair offers online programs for students and researchers. As a part of Industry-Academia engagement, Altair in association with Renewable Energy Lab (REL) & the Department of Communications and Networks, Prince Sultan University Organising events/training/certification programs for students of PSU through Altair University. Altair is the collaborator and industry partner with Renewable Energy Lab (REL) & Students Activities Committee, Department of Communications and Networks and will offer more events in the near future.

#### Coordinators

- Dr. Umashankar Subramaniam
- Dr. Sagar Mahajan Baskar

Department of Communications and Networks Engineering



## 1. ALTAIR ACADEMIA

For leveraging University programs, Altair offers Student free license for students' computers ( Having functional limitations) and Research bundles (no limitations) of software seats for the course and Lab practices for the universities.

<https://altairuniversity.com/student-edition-products/>

## 2. Due to COVID-19 work from home Initiatives

It's a solicited mail for kind perusal. Under Covid19 situation, Altair wishes to open up Learning opportunities to all the students. As a courtesy, please share this info with your Friends/Students/Faculties. Note that these initiatives aid the Outcome-based Education principles of Washington Accord Learning outcomes. Scan QR code in my email signature to download the softcopy of the brochure for the notice board.

**IGEN GENDISTRANCON 2021**  
(INTERNATIONAL CONFERENCE ON ELECTRIC VEHICLE AND ENERGY STORAGE)  
EMINENT SPEAKERS

**Prof. Dr. Sanjeevikumar Padmanaban**  
Professor, CTF Global Capsule (CGC) Laboratory,  
Department of Business Development and Technology,  
Aarhus University, Herning, Denmark.

**Dr. Erik Scholtz**  
Associate Professor, Aalborg Energy  
Faculty of Engineering and Science, Denmark.

**Er. Bhadrash B. Metha**  
Director (SLDC) & Chief Load Despatcher  
Transmission Corps Ltd, Bhubaneswar, Odisha,  
Odisha, India.

**Prof. Dr. Umashankar Subramaniam**  
Professor and Distinguished Researcher,  
Renewable energy lab, college of engineering,  
Prince Sultan University,  
Riyadh, Saudi Arabia 11586.

**Er. Anil Thomas**  
Head, PSP DNV-GL

**Dr. Arunachalam Sundaram**  
Associate Professor, Jubail Industrial College,  
Kingdom of Saudi Arabia, Al Jubail

**Prof. Dr. Mayilvelnathan vivekanathan**  
Solar Expert, International Supervisor,  
InCoRE-ISES, Green Building Consultancy and Energy Audit specialist,  
Power Quality Audit, Water Audit, ADB Consultant

**November 27-28**

**An Invite From**  
**Mr. S. Senthil Kumar,**  
Organising Chairman,  
Director IGEN

**Dr. K. Geetha**  
Organising Secretary  
**Dr. S. Gomathi**  
Joint Organising Secretary

REGISTRATION @ [gendistrancon.theigen.org/](http://gendistrancon.theigen.org/) Email: [igen.gendistrancon@gmail.com](mailto:igen.gendistrancon@gmail.com), Website: [www.theigen.org](http://www.theigen.org)

## In Future ■

In EE Program, SDGs well incorporated in advance while preparing the program specifications esp. core and elective courses. The courses like power electronics, power systems and elective courses like renewable energy mapped with SDGs 7, 11,12,13, 17 on Clean Energy, Responsible consumption, Sustainable Cities and Climate Action. Also the courses like Engineering Design, Logic Design, Micro-processor Design and Signals and System mapped with SDGs 9, 17. Senior Design Project would contribute for the applications with mapping SDG 1-17. Overall the EE Program designed to map with SDGs 4, 10,16,17 towards Quality Education and Partnerships for the Goals to achieve Reduced Inequalities.



## PSU's commitment to SDG 2030

PSU is committed to United Nations Sustainable Development Goals (SDGs) through effective institutional resource management, innovative teaching and learning, research, national and international partnerships, continuous studies, and outreach. PSU shall undertake the following activities: form higher and steering committees, evaluate each SDG, formulate and develop related SDG policies, conduct awareness campaigns to the PSU community, establish a sustainability office, identify the SDGs related to each college, program, and course, and lab centers at PSU, and implement sustainability-related initiatives.

## Vision

Prince Sultan University strives to support Saudi Arabia's Vision 2030 and the United Nations Sustainable Development Goals (SDGs) by paving the way for higher education in KSA and Middle East.

## Mission

Supporting the Saudi Arabia's Vision 2030 and the PSU's strategic directions, PSU aligns its mission with SDGs by providing quality education, sustainability initiatives, lifelong learning, scientific research, and community service.



P.O. Box No. 66833, Rafha Street, Riyadh 11586,  
Saudi Arabia.