

# Lab Internship for Overseas Students in Shenzhen Technology University

**Internship in Laboratory of Solar Energy System** (Reference Number: Intern/c/201809/01)

## Lab Introduction

Laboratory of solar energy system in College of New Materials and New Energies dedicates in developing high efficiency solar PV and solar thermal systems, technology in renewable energy application in buildings, high efficiency solar cells/panels and advanced thin film solar cells.

## Your Tasks

1. You have to get to know the basic knowledge about solar photovoltaic (PV) and solar thermal. For example, the fundamental physical theory (semi-conductor physics) of solar cells and solar collectors, familiar with each component and its function in the solar PV system and solar thermal systems. A series of courses (about 14 class hours) will be given on these subjects.
2. Work with the professional software program-Polysun. You need to master this program to be able to simulate the selected solar thermal/solar photovoltaic systems or design one new profitable solar system. A well-designed training course (about 8 class hours) will be arranged for the intern to be able to operate the program in a short time.
3. You will collect the data from one or two projects that solar energy systems are applied, either solar PV system or solar thermal or even both, to compare the simulation results with that of the real cases. You need to consider the applicability for different type of data, the accuracy and reliability of data that we may get from the different real cases, and make your final reporting on the findings.
4. Based on your results of Task 3, analyze the causes for the differences between the results of simulation and that of the real cases. Try to optimize the existing solar systems and to evaluate the economic profit.

## Requirements

1. Fluent in both oral and written English.
2. You are familiar with Microsoft Office and willing to learn new software program.
3. Technology background, good knowledge in physics is preferred
4. The intern will be required to work 5 days a week, 8 hours a day. We offer the accommodation in the campus of SZTU with canteen and football field close by. Western-style meals offered in the canteen all 7 days a week. The intern duration is about 2-3 months.

## Supervisor

Dr.HU Yunfei

Associate Professor, College of New Materials and New Energies, SZTU

Dr.Hu received her Ph.D from South China University of Technology (SCUT) in 2005. In the Ph.D project she has developed the earliest batch of polycrystalline silicon thin film solar cells on SSP substrate in China. After post doctor position in Sun Yat-Sen University in 2006, she joined the world class solar energy manufacture-REC Group in Norway and was in charge of the electric performance of silicon solar cells out of a fully automation production line. She worked as a senior research scientist in Northern Research Institute (Norway) since 2011, where she has led or participated in projects funded by Norwegian Research Council and North European Research Program, including solar cell/module technology, solar PV system, etc., for example, the design and data analysis of the first two-axis solar tracking system installed in Lulea, Sweden and grid-connected PV systems in Norway. When joined Norsun in 2015, she has been involved heavily in the technology improvement of silicon ingot casting and wafering. By use of Norsun's high quality Si wafer, Sunpower(world-famous solar cell manufacture) achieved a new world record of 24.1% for the c-Si solar module efficiency in 2016. Dr. Yunfei Hu has been worked in SZTU since the end of 2017.



Please send a full curriculum vitae and passport copy together with copies of qualification documents by email

to [international\\_internship@sztu.edu.cn](mailto:international_internship@sztu.edu.cn) with the email subject as "Reference Number – Job title – Full name of applicant".

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