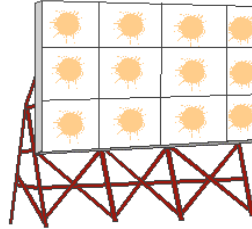


Solar Energy Applications Research Group (SEARG)



Research Group Leader



Dr. A. Zahedi holds a BSc degree in electrical engineering from Teheran Polytechnic (Iran), an MSc degree in nuclear engineering from Teheran University, and an MEng. degree in electrical engineering from Ruhr University, Germany. He wrote his PhD. Dissertation at Ruhr University on the safety analysis of nuclear power stations.

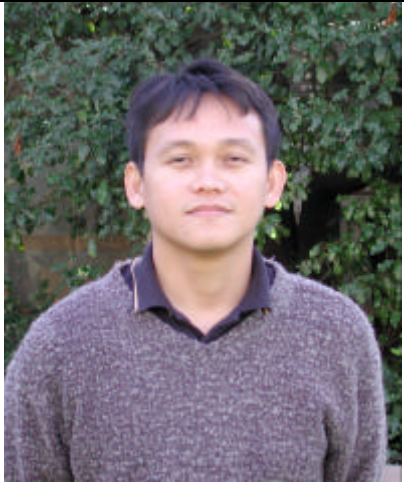
Dr. Zahedi has six years' industrial experience in various power plants and fifteen years experience in university teaching and research. He is a senior lecturer at Monash University and is currently lecturing in energy systems. He is the author of four books entitled:

- **ENERGY; Concerns and Possibilities;**
- **Solar Photovoltaic Energy Systems, Design and Use**
- **The Engineering and Economics of Solar Photovoltaic Energy Systems**
- **Fundamentals of Electrical and Electronic Design.**

He is also author and co-author of more than hundred technical papers and is a senior member of the Institute of Electrical and Electronic Engineers (IEEE). His main research interest is environmentally acceptable power generation. He is currently involved in research projects relating to the application of solar energy in isolated areas as well as the integration of renewable energy and energy storage systems. Dr. Zahedi is married with two children and his recreational interest is tennis.



Postgraduate Student Mr. Sivasubramanian
Research area: Numerical Approach in Size Optimization, Cost Calculation and Performance Prediction of Solar/Wind Hybrid Power Systems



Postgraduate Student Mr. Nolan Caliao
Research area:
Advanced Mathematical and Electrical model of PV/Wind Hybrid Power Systems



Postgraduate Student Mr. Francis Rault
Research area:
Investigation of the Efficiency of Solar Cell, Three Dimensional Quantum Well is introduced.

In 1994, Imperial College of Science and Technology introduced a quantum well into a standard solar cell. The quantum well assists the electrons to bridge the energy gap for the semiconductor material (p-n junction) This showed significant increase in the solar cell efficiency.

My research explores the effects on efficiency, when a three dimensional quantum well is introduced into the solar cell. Initial work is on developing a three dimensional model of the well. Once complete this well lead to implementing the quantum well solar cell. At this point modeling and experimentally verifying the results with hopfully an improvement in the cells efficiency.



Honorary Associate

Associate Professor H. Askarian Abyaneh

Department of Electrical Engineering, Amirkabir
University of Technology, Tehran, Iran