

SAMPATH KUMAR GUNDU

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CARRER GOAL: Seeking a challenging career in the field of Mechanical Engineering to continuously enhance my skill sets and effectively utilize my experience to make a positive difference to the organization.

SUMMARY: B.E. (Hons.) (**Mech. Engg.**) from **BITS-Pilani** with more than **6 years** of experience in Solar thermal and PV ,mechanical design and R & D domain in solar thermal applications, refrigeration, with Flareum Technologies (Pioneer in the Scheffler technology) ,Sardar Patel Renewable Energy Research Institute(R & D Institute), M/s Comfonomics Design Ventures(HVAC and solar PV).

ACADEMIC QUALIFICATIONS

Year	Degree	Specialization	Institution	Board/University	CGPA/%
2011	M.Sc.	Mathematics	BITS-Pilani, Goa	BITS-Pilani	6.66
2011	B.E. (Hons.)	Mechanical	BITS-Pilani, Goa	BITS-Pilani	6.66
2005	BIE (Intermediate)	Sciences	Vivekananda college	State board (A.P)	91.2
2003	SSC	General	Kids Convent	State Board (A.P)	88

ACADEMIC ACHIEVEMENTS

- State level 2100th rank in EAMCET-2006
- Among top 2% in AIEEE - 2006
- State level 275th rank in CEEP-2003
- State level 410th rank in APRJC-2003
- Certification in PRO-Engineer,Quality management systems, solar PV power plant organized by MSME.
- Certification in Java, Oracle, C- language.
- Attended online training on solar cells by Stanford University.

KEY SKILLS

- Solar thermal and PV, Renewable energy technologies, Mechanical design, HVAC, CAD/CAE, FEA, PPC, Scheffler technology.
- **Software Packages:** Pvsyst,Pvsol, PRO Engineer Wildfire 5.0, CREO-2.0, CATIA V5, AutoCAD-2010, Ansys workbench 14.0, MATLAB, CNC Simulate, Fluid sim pro.

WORK EXPERIENCE (6 years)

M/s Comfonomics Design ventures.

Designation: Senior manager

May 2017-Present

Key Responsibilities	<ul style="list-style-type: none">• Associated with this company for more than 1 year as a consultant for solar PV power plant.• Conceptual and detailed design of solar PV plant.• Simulation of PV plant for optimized generation rate by using PVSYST.• Design and structural analysis of PV mounting systems for designed wind load in STAAD PRO.• Working from initial prefeasibility study to installation and commissioning of solar PV plant.• Working on technical and economic evaluation of solar PV plant.• Executed more than 4 MW solar PV plant in one year.• Worked on mechanical and electrical drawings of solar PV plant.• Worked on Remote monitoring for inverters and string level monitoring of SCBS .
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Sardar Patel Renewable Energy Research Institute

Designation: Senior Scientist

March 2017- May 2017

Designation: Associate Scientist

April 2015- February 2017

Key Responsibilities	<ul style="list-style-type: none">• Worked on the research project named "Development of solar-hybrid refrigeration technology for on-farm (or in production catchment) safe transient storage of horticultural produce" funded by ICAR• Design & Development of Solar –Drying facility of 2.5 tonne per day of stevia leaves.• Working on the research project "Efficiency Enhancement of the Scheffler Dish" funded by DST-MNRE.• Working in Regional test center cum technical back up unit for solar thermal devices testing approved by BIS and accredited by NABL• Working in Data acquisition systems , Data monitoring and logging at plant level.
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Designation: Research Associate		June 2013- March 2015
Key Responsibilities	<ul style="list-style-type: none"> Worked on the research project named “Development of solar-hybrid refrigeration technology for on-farm (or in production catchment) safe transient storage of horticultural produce” funded by ICAR Design & Development of Solar –hybrid refrigeration facility Using Vapor absorption machine of 5 TR - (lowest capacity R & D project) to attain the temperatures of 12-14° C chamber temperature. Calculating the Coefficient of performance of VAM at different loads, refrigeration loads for different horticulture products, project sizing etc. Finalizing the technical parameters of HVAC components, (E.g. Fan coil unit, cooling tower, hot and cold water tanks, instrumentation) Worked on the layout, process flow diagram and process and instrumentation diagrams. Prepared the tender document of complete HVAC system. Analyzing the data of installed R &D projects solar tunnel dryer, Thermal battery based solar refrigerator. Installation, commissioning and operation of the project “Development of solar-hybrid refrigeration technology for on-farm (or in production catchment) safe transient storage of horticultural produce” at Anand Agricultural University. 	
Achievements	<ul style="list-style-type: none"> Technical parameters and evaluation has been finalized. 3D model of the cold chamber and bin arrangement to get max surface area of the product is in contact with the cold air. Successfully completed the installation and trial runs of HVAC system. Promoted to Associate Scientist. 	
Flareum Technologies Pvt. Ltd (Formerly known as Gadhia Solar Energy Systems)		
Designation: Assistant Manager, R&D (Mechanical)		July, 2012 – May 2013
Key Responsibilities	<ul style="list-style-type: none"> Modeling of structural components of the Scheffler reflector using software Creo 2.0. Analysis of system components based on static & dynamic loads using Ansys workbench 13.0. Lead and train a team of 5 Research executives by setting and monitoring goals on quarterly basis. Validate structural design of system components based on functionality and load bearing capacity. To design, make prototype, test & develop new designs of support system for Scheffler reflector. Test technical feasibility of integration of Scheffler concentrator system with various thermal applications viz. VAM, Dryer, Power, Process heat & MED. Structural design & Prepare layout for installation of parabolic dishes at client site Set & inspect quality for tracking system & dish components To provide product training & technical support to sales & projects team. 	
Achievements	<ul style="list-style-type: none"> Prepared 3D models of the existing as well as proposed structure. Reduced weight of the system by over 10% Applied for patent on North -South marker that makes process of getting geometric N-S easier and faster. Designed high temperature concentrators for power & hydrogen generation – ISRO Project. 	
Designation: Research Executive, R&D (Mechanical)		July 2011 – June 2012
Key Responsibilities	<ul style="list-style-type: none"> Redesigning of jigs and fixtures to increase the accuracy which facilitates in faster production rate. FE analysis of crossbar by Ansys 13.0 using roller contact. Design manufacturing assembly of the frame structure & rotating support for high packing density. Develop automatic daily as well as seasonal tracking mechanism. Redesigning of portable solar cooker models SK-10 & SK 14. Design of experiment for getting the system efficiency. To submit manufacturing drawings of header pipe & dish assembly to the production team 	
Achievements	<ul style="list-style-type: none"> Designed modular dish structure which reduced logistics cost by over 30% 100% automation of daily and seasonal tracking mechanism. 	
PROJECTS – Flareum Technologies Pvt. Ltd, Gundlav, Gujarat		

❖ Solar Thermal Projects		
<ul style="list-style-type: none"> Assist in proposal making and perform techno-commercial feasibility study. On site visit to finalize installation layout. Prepare material checklist. Costing of process equipments & provide low cost solution. Prepared operation & maintenance manual with respect to different applications. Act as single point of contact for product management and customer service issues. 		
❖ Solar Flare:		
<ul style="list-style-type: none"> Design of high temperature solar concentrating system. Testing of the efficiency of system under controlled conditions. 		
❖ SHARP : Solar Harnessing Applications Research Park		
<ul style="list-style-type: none"> Successfully tested different structural designs, daily & seasonal tracking mechanisms. Developed and tested different applications - Hot water system, Process steam, MED & VAM. Tested systems with various working fluids – water & thermic oil. 		
INTERNSHIP PROGRAM - Flareum Technologies Pvt. Ltd, Gundlav, Gujarat (1 year)		
<p>➤ Project 1: Design and fabrication of Year tester for the Scheffler concentrator.</p> <ul style="list-style-type: none"> Description: Year tester is equipment upon which the Scheffler concentrator is mounted to track data encompassing an entire year. Designing had to start from the scratch taking numerous considerations into account and a detailed structural analysis has been carried upon after which construction and assembling is done. The system is presently running successfully at the test site. Technologies used: ANSYS, PRO-Engineer. Purpose: Any Solar system owes its success to effective tracking of the sun. The Year tester helps in developing an automated seasonal tracking system for the Scheffler reflectors which are used for medium temperature thermal applications. <p>➤ Project 2: Design and analysis of support structure for Scheffler concentrator</p> <ul style="list-style-type: none"> Software's used: Pro e, Ansys and AutoCAD. 		
ACADEMIC PROJECTS		
<ul style="list-style-type: none"> Computer Project on “Finite element analysis of cantilever beams” 		
ELECTIVES		
Production Planning and control	Fundamentals of Finance and Accounting	Creative Multimedia
Principles of Economics	Computer Oriented Project	Marketing Research
EXTRACURRICULAR ACTIVITIES		
<ul style="list-style-type: none"> Event manager for REDO event in Quark-08 (National technical festival of BITS-Pilani Goa campus). Finance Coordinator of Andhra-Samiti & Ganeshotsav committee. Actively participated in redraw event in Quark-2010 (technical fest). Ardent member in DOPY (department of photography), Andhra-Samiti. 		
PERSONAL DETAILS		
<ul style="list-style-type: none"> Date of Birth – 27th January, 1988 Permanent Address: House no. 12-240, Opp. Venkatarama towers, Jangareddigudem, West Godavari district, Andhra Pradesh – 534447 (India) Contact No. +91 9974041059,8128078974 Email ID – sampath.bitsgoa@gmail.com Languages known – English, Hindi & Telugu Hobbies – Playing football & volleyball, Photography 		
REFERENCES		
<ul style="list-style-type: none"> Available on request 		