

CAREER OBJECTIVE

To prove myself dedicated and energetic as an effective Structural engineering researcher in a progressive organization that gives me scope to apply my knowledge and skills.

EDUCATIONAL QUALIFICATION

Degree & Branch	Institute /University	Year of passing	Class	%
M.E. (Structural engineering)	Birla Institute of Technology and Science, Pilani (BITS ,Pilani)	2011	First	92.00
B.E (Civil engineering)	Mepco Schlenk Engineering College/Anna University	2009	First with distinction	86.10
H.Sc	O.C.P.M.Hr .Sec .School	2005	First with distinction	95.40
S.S.L.C	O.C.P.M.Hr .Sec .School	2003	First with distinction	95.20

Test scores: GRE test score : 151(verbal), 159(Quans), 3(AWA)

IETLS test score: Overall band score -7, CEFR Level –C1

7.5-Listening, 7- Reading-, Writing-5.5, and Speaking-7.5

Courses : Offshore Structures under special loading including Fire resistance from **IIT Madras**

Membership: Associate member, Structural Engineering Association of Illinois

SOFTWARE SKILLS

Packages : SACS 5.5 V8i,MAXSURF, PIAXIS 3D, MS Office, STAAD Pro.V8i, ANSYS, AutoCAD

Programming language: Matlab, C Programming

EMPLOYMENT RECORD

Period	Name of Employer	Position held	Location
May-2013-Present	National Institute of Ocean Technology,Chennai	Project Scientist-I	Chennai
July 2011-May 2013	L&T RAMBØLL Consulting Engineers Limited , Chennai,India	Engineering consultant	Chennai
Jan2011-July2011	Structural Engineering research center , CSIR-SERC	Research intern	Chennai
Jan2011-July2012	CADD Centre	Part-time Faculty	Chennai

June-July2010	IIT Madras	Summer Intern	Chennai
Jan-April2010	BITS,Pilani	Professional Fellowship	Chennai

EXPERIENCE RECORD

(Starting with recent experience)

Research Experience:

Research topic	Analysis and design of Floating Platform for Solar Energy In the Remote Islands of Lakshadweep
Year	2017-Ongoing
Position held	Project Scientist-I
Project features	As population growth is increasing in the Remote Islands, the demand for Electricity has also increased considerably. Solar and wind power has been proven success in power generation in the recent years. The scope of the work includes feasibility study of Floating Solar Panels in shallow waters in Lakshadweep Islands.
Responsibilities	<ul style="list-style-type: none"> • Finite Element Modelling and design of solar panels. • Response Analysis of the Floating Panels using MAXUSRF Software. • Determination of RAOs.

Research topic	Conceptual Study of LiDAR based offshore data collection platform
Year	2014-Ongoing
Position held	Project Scientist-I
Project features	As India has announced offshore wind policy which allows interested parties to carry out offshore data collection at potential locations. The scope of the work includes arriving suitable substructure concept for offshore wind data collection platform at potential zones such as Gujarat and Tamilnadu for period of 2 years.
Responsibilities	<ul style="list-style-type: none"> • Structural analysis and arriving design methodology for LiDAR based data collection platform at water depth ranging 10-20m using suitable structural analysis software (SACS) considering extreme environmental conditions (wind, wave, and earthquake). • Setting up design methodology for Jacket based 120m met mast for more accurate offshore wind data collection. • Performing various construction sequence analysis such as towing, upending frequency domain transportation analysis, seakeeping analysis and boat impact. • Codes referred : API RP 2A,ASCE ,NORSOK G-001, DNV standards

Project Name	Feasibility study on Fixed Platform for Offshore Wind Turbine
Year	2013-Ongoing
Position held	Project Scientist-I
Project features	As India has shown proven success in establishing onshore wind farms, focus has been shifted towards offshore wind as there are enormous potential zones available in Gujarat and Tamilnadu Coast. National Institute of ocean technology is involved in feasibility studies for suitable substructures concepts for offshore wind turbine at environmental conditions.
Responsibilities	<ul style="list-style-type: none"> • Identifying suitable substructure concept for offshore wind turbine at various water depths such as <10m Gravity based , 10-30m Monopile ,>30m Floating concept by considering various environmental and geotechnical aspects.

	<ul style="list-style-type: none"> • Coupling non-linear loads such as wave, wind and performing analysis in Time domain as well as Frequency domain. • Soil structure interaction studies as non-linear springs for monopile which is the most suitable substructure concept. • Optimization studies for conceptual design methodology for offshore wind turbine substructure using non-linear regression analysis. <p>Codes referred : API RP 2A,ASCE ,NORSOK G-001, DNV standards</p>
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Research topic	Pile Soil Interaction studies
Year	2014-Ongoing
Position held	Project Scientist-I
Project features	As Large diameter Monopiles are found most suitable substructure concept for Indian coast, present conventional design methodology based on API RP 2A holds good for smaller diameter monopiles. The scope of the work includes extraction of p-y curves for large diameter monopiles. Developing monogram for the existing conventional design methodology which are suitable for smaller diameter monopiles.
Responsibilities	<ul style="list-style-type: none"> • Conventional pile soil interaction study using API RP 2A. • Generation of Finite Element Model using Plaxis 3D for various configurations of monopile with diameters ranging from 1m to 7m. • Extraction of p-y curves from FEM using Matlab. • Comparison of p-y curves from FEM with conventional API p-y curves. • Study on pile tip deflection for various configurations of monopile. • Study on applicability of FEM generated p-y curves in the design of monopile using SACS5.6. • Non-linear regression analysis in setting up a monogram for large diameter monopiles.

Project Name	Island Desalination
Year	2013-Ongoing
Position held	Project Scientist-I
Project features	The scope of the work includes design of various structural components for island desalination using LTTD process in order to develop technology for providing portable water in UT Lakshadweep islands.
Responsibilities	<ul style="list-style-type: none"> • Design of Various structural components of the bridge connecting Plant building in the shore to sump used to collect cold water pipelines. • Optimization studies for Design technology for the bridge structures for Island desalination for environmental conditions. • Study on various innovative construction methodologies for complex environmental condition based constructions. • Fuzzy Analytic Hierarchy Process for optimizing the cost-benefit design methodology for Island Desalination Plant.

Industrial Experience:

Project Name	Detailed design and Execution of offshore observation platform at Gulf of Khambhat, Gujarat, India
Year	2015-2017

Client	National Institute of Wind Energy under Ministry of New and Renewable Energy
Position held	Structural Engineer
Project Features	The scope of the work includes preparation of Design Basis, Detailed design of various structural components and Good for construction drawings for Offshore Data Collection Platform at 15m water depth off Jakhau Coast, Gulf of Khambhat, India.
Responsibilities	The role was as the Senior Structural Engineer preparing Front End Engineering, Finite element modelling considering environmental conditions, Detailed design using API and suitable Indian standards including in-place analysis, towing analysis and free vibration analysis etc.

Project Name	Detailed design consultancy services for elevated corridor from Mukarba chowk to Wazirabad- Package –I
Year	2012-2013
Client	PWD- Delhi
Position held	Project Engineer
Project features	The scope of the work includes preparation of General arrangement drawing for the elevated corridor. Detailed design of various components of bridge structures.. Providing detailed design in the latest codes. Issuing Good for construction drawings. Coordination with PWD in site.
Responsibilities	The role was that of Project engineer preparing GAD for BURARI CHOWK –Steel composite ROB. Design of Steel composite bridge superstructure based on IRC24-2010, IRC 22-2008 & BS 5400. Preparation of drawings.

Project Name	Detailed design consultancy services for viaduct –Chennai Metro Rail Limited Contract ECV02-ECV03
Year	2010-2013
Client	Larsen & Toubro Limited
Position held	Project Engineer
Project features	The scope of the work involves preparation of General arrangement drawings for the whole corridor .Preparation of design report. Detailed design of various component of the bridge structure. Recommendation of suitable foundations, issuing Good for construction drawings, Design support during construction, coordination with clients.
Responsibilities	The role was that of Project engineer preparing GAD for Guindy ROB, Detailed design of substructure, Bearings and Design of deck slab for open web through type truss. Preparation of Drawings, interacting with clients and getting approval from Southern Railway and CRS.

Project Name	Chennai Port to Madhuravoyal Elevated corridor
Year	2009-2012
Client	Soma Enterprises
Position held	Project Engineer

Project features	The scope of the work involves preparation of General arrangement drawings for the elevated corridor .Preparation of design report. Detailed design of various component of the bridge structure. Recommendation of suitable foundations, issuing Good for construction drawings, Design support during construction, coordination with clients.
Responsibilities	The role was that of Project engineer providing detailed design of Pile foundation .Design of Steel composite bridge Superstructure for obligatory spans (46m span). Preparation of Quality drawings and co-ordination with clients.

Project Name	Detailed design of Kishangarh Udhaipur Ahmedabad Expressway-Package5
Year	2011-2013
Client	L&T ECC Division
Position held	Project Engineer
Project features	The scope of the work involves preparation of General arrangement drawings for the elevated exressway .Preparation of design report. Detailed design of various component of the bridge structure. Recommendation of suitable foundations, issuing Good for construction drawings, Design support during construction, coordination with clients.
Responsibilities	The role was that of a project engineer preparation of GAD for minor bridges. Providing detailed design of minor bridge Superstructure with RCC I girder .Preparation of drawings and coordination with clients.

Project Name	Numerical Simulation of beam column joint wrapped with Chopped Strand Mat
Year	2011
Client	CSIR-SERC
Position held	Research intern
Project features	The scope of the work involves analytical modeling and research in Composites which can be used for seismic strengthening for earthen structures.
Responsibilities	The role was that of research intern developing analytical models of beam column joints wrapped with chopped strand mat in ABAQUS and comparing the analytical results with experimental data.

Project Name	Characterisation of GFRP composites and resins
Year	2010
Client	IIT MADRAS
Position held	Summer Intern
Project features	The scope of the work involves casting of various concrete specimens and characterization of epoxy resins and determination of physical properties of resin.
Responsibilities	The role was that of summer intern designing trial mix of concrete specimens to achieve the targeted strength. Characterization of resin and casting of GFRP composites which is used for wrapping the concrete specimens.

ACADEMIC PROJECTS UNDERTAKEN

- **M.E.**
- **Numerical Simulation of Confinement effect on Gravity designed Beam –Column Joint.**
(Guided by Mrs.Smitha Gopinath, Scientist, SERC)

The study investigates the behavior of beam column joint confined with Chopped Strand Mat under Seismic load. Beam column joint is a structural member that is subjected to axial compression and transverse bending at the same time. These connections are a common structural weakness in dealing with seismic retrofitting. Prior to the introduction of modern seismic codes in early 1970s, beam-column joints were typically non-engineered or designed or either designed only for gravity loads. It is subjected to large forces during severe ground shaking and its behavior has a significant influence on the response of the structure. Hence seismic strengthening of beam column joint is an important research area. Non linear Finite Element Analysis has been carried out on the beam column joint using ABAQUS software. The results have been validated with Experimental and Numerical models available in Literature .The confinement effect of CSM on cylindrical concrete specimen have been carried out. Also, studies have been done on Beam-column joint using CSM confinement effect. It has been observed that CSM confined specimen is capable of enhancing the load carrying capacity of Beam-column joint.

- **B.E**
- Design and analysis of folded plate structure and development of software for the design .
- Design and analysis of multistoried building for lateral loads.

PUBLICATIONS

Journals:

- **B.Krishnaveni**, Satya Kiran Raju Alluri, M.V.Ramana Murthy, “ Generation of p-y curves for larger diameter monopiles using Numerical modelling”, International Journal for Research and Engineering and Technology, Volume 5,Issue 7,July 2016.
- Iswarya srikanth, Satya krian raju alluri, **B.Krishnaveni**, M.V.Ramana Murthy, and Arockiasamy Madasamy “Simplified design procedure of monopile foundation for offshore wind turbine in Gujarat,India”, **Journal of Shipping and Ocean Engineering**, Volume 7,Issue 4,July-August 2017.

Conferences:

- **B.Krishnaveni**, SmithaGopinath and A.Ramachandramurthy , “Experimental investigation on concrete specimens strengthened with copped strand mat ”, Proceedings of National Conference on Latest Advancements in Civil Engineering ,June 2011, R.M.K.Engineering college, Kavaraipaettai.

- R.Suresh, **B.Krishnaveni**, M.V.Ramana Murthy, “Mapping of Constraints in execution of Marine structures in Remote Islands”, National Conference on Hydraulics, water resources ,coastal and environmental engineering”, Pondicherry Engineering college,October,2016.

EXTRA-CURRICULAR ACTIVITES

- Got 1st prize for paper presentation in MOMENTS’09 held in NIT, trichy.
- Got 1st and 3rd prizes in TECHUTHSAV’08 and TECHUTHSAV’09 for paper presentation on the design and development software for folded plate structures held in Thiagarajar college of Engineering.
- Presented paper and won 1st prize in paper presentation organized by IE(I) STUDENTS CHAPTER.
- Participated in paper presentation in national level technical symposium LANDMARK 07conducted V.L.B.Janakiammal Engineering College and won second prize.
- Participated and secured 1st place in national level technical symposium conducted by department of civil engineering Kalasalingam university.
- Won 2nd prize in Mehandhi competition in-Art fiesta organized by Literary Association.
- Secured 3rd prize for “creative writing” organized by club innovative.
- Won II nd prize in English Elocution competition.

AWARDS AND ACTIVITIES

- Veltech Merit Scholarship for Post graduate students, for the academic year 2009-2010.
- Won **silver medal** for having secured 23rd position Tamilnadu in the **Anna University** examinations.
- Secured medal for scoring **Centum** in Engineering Mathematics in 1st and 2nd year of B.E civil.
- Won prize for “**First rank**” and “**second rank**” in “1st and 2nd B.E civil in the college in the university examination held during the academic year 2005-2006 and 2006-2007.
- Secured first rank in district level for getting **Centum** in biology in the common government examination for standard 12th.
- Won Samuel muthiah Isaac memorial prize for **centum** in biology for the academic year2004-2005.