

CURRICULAM VITAE

1. NAME : **MARIYA DAYANA P J**

2. DESIGNATION : **SCIENTIST**

3. OFFICE ADDRESS : Geotechnical Engineering Division
CSIR-Central Road Research Institute
Delhi - Mathura Road
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4. AREAS OF INTEREST : Geotechnical engineering, Ground improvement techniques, Slope stabilisation, Reinforced slope, Geotechnical investigations, Foundation design

5. EDUCATIONAL QUALIFICATION

Degree	Year	University/ Institute	Subject	CGPA / %
M. Tech	2016	NIT Surat	Soil Mechanics and Foundation Engineering	9.90 / 10 (Gold Medal)
B. Tech	2014	College of Engineering Trivandrum	Civil Engineering	8.66 / 10
HSC	2010	Kendriya Vidyalaya	Science	93.60 (School Topper)
BSc	Ongoing	IIT Madras	Programming and Data Science	-

5. PROFESSIONAL EXPERIENCE

Start Date	End Date	Position Held	Organisation
Feb 2021	Present	Scientist	CSIR-Central Road Research Institute
Jan 2019	Feb 2021	Assistant Engineering Manager	Larsen & Toubro Transportation Infrastructure IC
July 2017	Dec 2018	Senior Design Engineer	
July 2016	July 2017	Post Graduate Engineer Trainee	

6. MEMBERSHIP IN PROFESSIONAL BODIES / TECHNICAL COMMITTEES

- Life Member of Indian Geotechnical Society
- Member of International Geosynthetics Society
- Member of Indian Road Congress
- Member of The Institution of Engineers (India)
- Member of IRC H4 sub-committee

7. HONOURS/ AWARDS/ SIGNIFICANT ACHIEVEMENTS

- Received 'Special Award' from L&T TI IC for contribution to the Construction of 70m high Reinforced Soil Slope in Kannur International Airport Ltd.
- Received Gold Medal for scoring the highest marks in all the semesters in Post-Graduation
- Awarded School Topper medal at HSC level
- Awarded 0.1 certificate for Mathematics from CBSE board in the year 2010

8. PROJECTS HANDLED IN CRRI

a) Research Projects

Sl. No.	Title of the Project	Role	Sponsoring Agency
1.	Sustainable Geocomposite Drainage-Root Barrier	Co-PI	CSIR
2.	Design, Construction, Supervision and Pavement performance evaluation of road constructed by using red mud	Member	M/s Hindalco Ltd.
3.	Behavior of Red Mud Waste Material Under Cyclic Loading	Member	CSIR-CRRI
4.	Hill Road Widening using Light Weight Geofoam Blocks-An alternative to earth cutting and filling	Member	NHIDCL
5.	Delhi Cluster- "Delhi Research Implementation and Innovation" (DRIIV), Theme Solid Waste Management, WP-6 Use of construction & demolition wastes, incinerated residues in road construction	Member	IIT Delhi
6.	Recycling of Ghazipur Municipal Solid Waste for Road Embankment & Subgrade	Member	EDMC
7.	Utilization of Red Mud for Road and Structural fill applications	Member	M/s Hindalco Ltd.
8.	Extension of Geological and Geotechnical Specimen Gallery and databank (Phase –II)	Co-PI	CSIR-CRRI

b) Consultancy Projects

Sl. No.	Title of the Project	Role	Sponsoring Agency
1.	Investigation of Causes of Settlement and Remedial Rehabilitation Measures for the Foundation Settlement at Pier P3 and Visual Inspection of Structural components of Major Bridge at km 24+461 of Galgalia-Bahadurganj of NH-327E (Package-I), Bihar	PI	GRIL
2.	Failure Analysis and Design of Remediation Works for Silewani Ghat Hill Road	Co-PI	NHAI

Sl. No.	Title of the Project	Role	Sponsoring Agency
3.	Feasibility Study of Red Mud waste material in the construction of Road and as a Structural fill	Member	M/s Vedanta Ltd.
4.	Feasibility Study for the Construction of Flyover/Underpass/Grade separator at three locations, Surat city, Gujarat	Member	Municipal Corporation of Surat
5.	Utilization of Municipal Solid Wastes for Road and Structural fill applications	Member	SDMC
6.	Quality audit of Six laning of Shamlaji to Motachiloda from km 401.200 to 494.410 (NH-8)	Member	NHAI
7.	Investigation on distressed Kolaghat Bridge in District Shahjahanpur, UP for its restoration	Member	UP State Bridge Corporation Ltd.
8.	Investigation and design of remedial measures for stabilization of soil to protect the Kali Sindh river upstream side slope of Abutment-1, Bridge No. 34 on Kota-Bina rail line	Member	Rail Vikas Nigam Limited (RVNL)
9.	Vetting of Rigid Design Report	Member	M.G. Contractors Pvt. Ltd.
10.	Review the design/drawings of slope stability of deep cut ground (with soil nails/normal slopes) from DFC Ch. 62+200 to DFC Ch. 65+750 (tunnel Portal Starting point P1) for Dedicated Freight Corridor (DFC) track from Rewari to Dadri	Member	DFCCIL
11.	Geotechnical investigations, analysis and design the suitable remedial measures for protection of landslides and sinking zones on road from Nyu Sobla to Sela-Tedang, Utrakhand	Member	CPWD
12.	Design and Technical guidance for RCC Box pushing at rail chainage Km 1377/4-6 near Farah Railway Station on Mathura-Dholpur Section	Member	RVNL

9. INDUSTRIAL EXPERIENCE

Mariya Dayana was formerly a Geotechnical Design Engineer in L&T TI IC. She has multi-dimensional experience of 4.5 years in Airport, Railways, Road, and Elevated Corridor projects. She is experienced with knowledge of geotechnical investigation planning, interpretation of data, evaluation of pile capacity, shallow foundation design, slope stability analysis for embankments and deep cuts, reinforced earth wall design, reinforced soil slope design, soil nail wall design, shoring system for deep excavation and liquefaction assessment. She is also skilled in the preparation of BoQ related to various geotechnical works. Apart from that, she has supervised the construction of a 70m high reinforced soil slope system as design coordinator for 2 years at KIAL, which involved 12 lakh

cubic meters of earthwork. She has also monitored on-site engineering investigations for different projects. She is well versed with geotechnical engineering-related software's.

a) Major Projects Handled

- Kannur International Airport Ltd. (KIAL), Kerala
- Bangalore International Airport Ltd. (BIAL)
- Delhi International Airport Ltd. (DIAL)
- Vadodara Mumbai Expressway
- Dwarka Expressway
- Western Dedicated Freight Corridor (Railway Projects)

b) Projects handled during bid stage

- Mumbai-Ahmedabad High-Speed Rail Corridor
- Mauritius Metro Rail Project
- Eastern Dedicated Freight Corridor
- Kalyani-Belghoria Road Project
- Aurangabad Karodi Road Project
- Pragati-Maidan Road Project
- Mumbai Nagpur Road Project
- Trivandrum Vilikuri Road Project
- Mumbai-Vadodara Road Project
- Delhi-Vadodara Road Project
- Kerala Highway Road packages

10. PAPER PUBLICATIONS

a) JOURNAL PAPER

- i. **Dayana** M.P.J., Parvathi G.S., Sinha A.K. (2023) Investigation of Hillslope Failure and Mitigation- A Case Study of Sillewani Ghat, Chhindwara, India. Journal of the Geological Society of India, 99: 621-634. <https://doi.org/10.1007/s12594-023-2363-4>
- ii. Parvathi G.S., Sinha A.K., Havanagi V.G., **Dayana** M.P.J. (2022) Failure analysis and mitigation of Shankumugham beach road, Kerala, India—a case study. Arabian journal of Geosciences, 15:1263. <https://doi.org/10.1007/s12517-022-10536-1>.

- iii. Anbazhagan P., Sheikh M.N., Bajaj K., **Dayana** M.P.J., Madhura H., Reddy G. (2017) Empirical models for the prediction of ground motion duration for Intraplate Earthquakes. Journal of Seismology 21(4):1001-1021.

b) CONFERENCE PAPER

- i. **Dayana** M.P.J, Jain B., Sunkavalli S.K., Subramaniam R. (2021) Design and construction demeanor of very high embankment using geosynthetic reinforcement. Advances in Transportation Geotechnics 4:871-887.
- ii. Parvathi G.S., **Dayana** M.P.J., Sinha A.K., Havanagi V.G. (2022) 3-Dimensional finite element analysis of Shankumugham beach road due to rainfall-induced storm surge. Indian Geotechnical Conference. Kochi.
- iii. **Dayana** M.P.J., Jose P., Jose T., Jose N. (2014) Study on the Attenuation Capacity of Amended Clay Liner. In: IGS Conference, Kakinada.