

## Prof P K Parhi- Brief C V

**Name: Pravat Kumar Parhi**

**Designation: Professor, Civil Engg Department, Odisha University of Technology & Research, Bhubaneswar (Formerly CET Bhubaneswar) ; continuing since 2009**

**Date of Birth: 02.04.1964**

**Engineering Discipline: Civil Engineering**

**Ph.D: From IIT Kharagpur in 2001**

Field of Specialization :       **Structural Engineering** , i.e. Composite Structures,  
Structural Dynamics, FEM Analysis of Structures, Steel & RCC  
Structures

iii.   Length of Academic Experience : more than 32 years of teaching experience

**Date of Joining in the Department: 20.12.1989**

**Professional Training Programmes organized as Coordinator :**

Organisation	Period		Training Area
	From	To	
Civil Engg Deptt, CET and INSDAG, Kolkata	8 <sup>th</sup> June, 2006	13 <sup>th</sup> June , 2006	Structural Steel Design for Faculty Members sponsored by <b>INSDAG</b>
CET Bhubaneswar	1 <sup>st</sup> February, 2007	2 <sup>nd</sup> February, 2007	9 <sup>th</sup> Annual Convention of ISTE Orissa Section and <b>National Seminar</b> on ' Towards Excellence in Technical Education'
Civil Engg Deptt, CET ,BBSR	1 <sup>st</sup> March, 2007	2 <sup>nd</sup> March, 2007	<b>National Seminar</b> on 'Recent Advances in Civil Engineering' <b>sponsored by AICTE</b>
Civil Engg Deptt, CET ,BBSR	2 <sup>nd</sup> May, 2007	12 <sup>th</sup> May, 2007	Training Programme for Field Engineers on <b>Earthquake Resistant Construction Practices</b> sponsored by <b>Ministry of Home Affairs, Govt. of India</b>
Civil Engg Deptt, CET, BBSR	5 <sup>th</sup> May, 2008	9 <sup>th</sup> May, 2008	<b>ISTE sponsored</b> Short Term Training Programme on ' <b>Seismic Resistant Design of Structures</b> '
Civil Engg Deptt, CET, BBSR	14 <sup>th</sup> February, 2009	15 <sup>th</sup> February, 2009	<b>International Conference on Pavement Engineering (ICPE-2009)</b>
Civil Engg Deptt, CET, BBSR	February, 2013	9 <sup>th</sup> May, 2008	<b>TEQIP II sponsored one week course on Finite Element Analysis and Applications</b>

## in Civil Engineering

### Research Guidance (M Tech)

SI No	Name of the Student	Topic	Year
1	Mr Sanket Nayak	Free Vibration Analysis of Delaminated Composite Plates by FEM	2007
2	Mr Bhabatosh Behera	Study of Shear Behaviour of Reinforced Steel Fibrous Blast Furnace Slag Concrete Beams	2007
3	Miss Sumedha Maharana	Free Vibration Analysis of Delaminated Composite Shell Structures	2008
4	Mr Madan Mohan Mohapatra	Parametric Studies of Continuous Pre stressed Concrete Beams	2009
5	Mr Nurul Haque	Comparative Study on Transverse Analysis of Single and Double Cell Box Girder Bridges	2009
6	Mr Debadatta Jena	Rehabilitation of structures subjected to dynamic loading	2010
7	Mr Tapas Ranjan Rath	Strength Characteristics Analysis of Steel Slag Hydrated Matrix	2012
8	Ms monalisa das	Study on High Performance Concrete using Bottom Ash as Fine Aggregate	2012
9	Ms Sagarika Panda	Comparison of Properties of Concrete Using Fly Ash and Mineral Admixtures	2012
10	Mr Rabindra Ku Malla	Recycling of Industrial Wastes in Self Compacting Concrete	2012
11	Ms Sarmilee Patnaik	Experimental Investigation on Strength of Concrete by partial replacement of Cement with Industrial Wastes	2013
12	Ms Subhasri Panda	Effects of GGBS Content on Compressive Strength of Mortar	2013
13	Ms Manasmita Paikaray	Study on Structural Concrete Using Oilpalm Shell as Light Weight Aggregate	2013
14	Mr Pankaj Ku Dash	Some Studies on strength Characteristics of Reactive	2014

		Powder Concrete	
15	Ms Subhalaxmi Sahoo	Studies on Properties of Concrete Using Fly Ash as Cement Replacement	2014
16	Ms Dipti Kiran Padhy	Study on Properties of Concrete using GBFS as Fine Aggregate	2014

### Ph D Guidance

1	<b>Dr Jayaram Mohanty</b>	<b>Dynamic Stability of Delaminated Composite Structures</b>	<b>2013 Ph.D</b>
2	<b>Mrs Smita Sahoo</b>	<b>Strength and Durability Characteristics of Pozzolana Cement and Concrete</b>	<b>Ph D Thesis Submitted to BPUT in Dec-2021.</b>

### Awards / Honors received

	Awards/Honours	Year	Detail
Professional bodies	<b>Gold Medal &amp; Er S.M.Ali Memorial Award by the Institution of Engineers (I), Orissa State Centre</b>	2002	Best research paper titled 'Hygrothermal Analysis of Multiple Delaminated Composite Structures'
Professional bodies	<b>Gold Medal &amp; Er S.M.Ali Memorial Award by the Institution of Engineers (I), Orissa State Centre</b>	2005	Best research paper titled 'Free Vibration Analysis of Delaminated Composite Twisted Plates by FEM'
Professional bodies	<b>Felicitation by Indian Society for Technical Education, Orissa Section</b>	2004	Recognition for significant contribution towards conducting ISTE Programmes
Professional bodies	<b>Felicitation by Indian Society for Technical Education, Orissa Section</b>	2007	For successfully organizing the 9 <sup>th</sup> Annual Convention of ISTE Orissa Section and National Seminar as Organising Secretary
Professional bodies	<b>Felicitation by Institution of Engineers(I), Odisha State Centre , Bhubaneswar</b>	2009	<b>Govinda Gupta Award</b> on 15.9.2009 for dedicated contribution to the field of R & D works
Professional bodies	<b>National Award presented by Indian</b>	December 2009	Calcutta Convention National Award for Best Technical Paper

	<b>Society for Technical Education, New Delhi</b>		Presentation during 38 <sup>th</sup> Annual ISTE National Convention on the topic <i>Role of System Components for Excellence in Technical Education</i>
Professional bodies	<b>ISTE Rajalaxmi Memorial Best Engineering College Teacher Award for Orissa State presented by Indian Society for Technical Education, New Delhi</b>	December 2008	Rajalaxmi Memorial Best Engineering College Teacher Award for Orissa State
Professional bodies	<b>S V SRINIVASAN MEMORIAL AWARD By Institution of Engineers, Odisha State Centre in 2010</b>	February 2010	Best Research Paper Award
Professional bodies	<b>INSTITUTION AWARD By Institution of Engineers, Odisha State Centre in 2012</b>	February 2012	Best Research Paper Award

**Affiliation to Professional Society :**

- Academic Fellowship (i) Fellow, Institution of Engineers (India)
- (ii) Chartered Engineer (India)
- Professional Body (i) Life Member, Indian Society for Technical Education
- Membership (ii) Life Member, Indian Institute of Industrial Engineering
- (iii) Life Member, Indian Concrete Institute
- (iv) Life Member, Orissa Engineering Congress
- (v) Life Member, Operation Research Society of India
- (vi) Life Member, Odisha Env'n Society

9 Vice Chairman, Indian Institute of Industrial Engineering, Odisha Chapter since 2014

**Involvement in Other Activities**

- (i) In 2005 coordinated to start a New PG Course (M.Tech.) in the specialization of Structural Engineering with AICTE approval and syllabus design.
- (ii) Continuing as Coordinator, State Technical Agency, CET for scrutiny of DPRs for rural roads under National Rural Road Development Agency, New Delhi
- (iii) Generated internal revenue of more than Rs 70 lakhs for CET through department consultancy in last 4 years .
- (iv) Continuing as National Executive Council Member, ISTE New Delhi since 2011.
- (v) Organizing Seminars in the Department level inviting eminent subject experts from IITs, NITs and industry professionals for the benefit of the students.

### **LIST OF PUBLICATIONS**

#### ***Publication of Research Papers in Journals***

1. P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha- Finite Element Dynamic Analysis of Laminated Composite Plates with Multiple Delaminations- ***Journal of Reinforced Plastics and Composites*** (2000) , vol. 19, no. 11, p 863-882.
2. P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha- Dynamic Analysis of Multiple Delaminated Composite Twisted Plates- ***Aircraft Engineering & Aerospace Technology, An International Journal***, (1999), vol. 71, no. 5, p451-461.
3. P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha- Failure Analysis of Multiple Delaminated Composite Plates due to Low Velocity Impact-***International Journal of Crashworthiness*** , (2000), Vol. 5, no. 1, p 63-77.
4. P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha- P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha- Dynamic Behaviour and Impact Induced First Ply Failure of Multiple Delaminated Composite Shells- ***Journal of Reinforced Plastics and Composites*** (2001) , vol. 20, p 1276-1300.
5. P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha- Hygrothermal Effects on the Dynamic Behaviour of Multiple Delaminated Composite Plates and Shells- ***Journal of Sound & Vibration***, (2000), 248(2) p 195-214.
6. **Mohanty, J.**, Sahu, S. K. and Parhi, P.K. (2012): “Numerical and experimental study on free vibration of delaminated woven fiber glass/epoxy composite plates”, ***International Journal of Structural Stability and Dynamics***, Vol.12(2), pp.377-394.
7. **Mohanty, J.**, Sahu, S. K. and Parhi, P.K. (2012): “Parametric instability of delaminated composite plates subjected to periodic in-plane loading”, ***International Journal of vibration and control***. - Vol 21-issue 3-P419-434 .

8. **Mohanty, J., Sahu, S. K. and Parhi, P.K.** (2013): “Numerical and experimental study on buckling behaviour of multiple delaminated composite plates”, **International Journal of Structural Integrity**, Vol. 4 Iss: 2, page 240-257.
9. **H. S. Panda, S. K. Sahu and P.K. Parhi**(2013):Hygrothermal effects on free vibration of delaminated woven fiber composite plates – Numerical and experimental results, *Composite Structures (Elsevier)*, Vol.96, pp.502-513.
10. **H. S. Panda, S. K. Sahu, P.K. Parhi and A.V. Asha** (2014): Vibration of woven fiber composite doubly curved panels with strip delamination in thermal field, *Journal of Vibration and Control (SAGE, SCI)*, DOI: **10.1177/1077546313520024**.
11. **H. S. Panda, S. K. Sahu and P.K. Parhi**(2014):Effects of moisture on the frequencies of vibration of woven fiber composite doubly curved panels with strip delaminations, *Thin Walled Structures (Elsevier)*Vol.78, pp.79-86.
12. **H. S. Panda, S. K. Sahu and P.K. Parhi** (2014): Buckling behavior of bidirectional composite flat panels with delaminations in hygrothermal field, *Acta Mechanica (Springer, SCI)*, DOI: **10.1007/s00707-014-1280-4**.
13. **H. S. Panda, S. K. Sahu and P.K. Parhi** (2015): Hygrothermal response on parametric instability of delaminated bidirectional composite flat panels, *European Journal of Mechanics A/Solids (Elsevier, SCI)*,
14. **H. S. Panda, S. K. Sahu and P.K. Parhi** (2015): Thermal effects on parametric instability of delaminated woven fabric composite cylindrical panels, Composite Part B: (*Elsevier, SCI*),
15. “Analysis on Mix Design of High Strength Concrete (HSC) using IS: 10262-1982 and partial replacement of waste marble aggregates as coarse aggregate” - **Debasmita Panda, Dr. (Prof.) P.K. Parhi** -June 2017, Volume 7, Issue 6 publication under ISSN 2250-3153-International Journal of Scientific and Research Publications.
16. EXPERIMENTAL STUDY ON M50 GRADE OF HPC MIX USING HIGHLY REACTIVE METAKAOLIN AND RICE HUSK ASH WITH RECRON 3S FIBRE -Volume-06 Issue-10, 2017 of IJRET-**Namrata Ray & P K Parhi**
17. “Experimental Investigation on the Properties of Recycled Concrete and Coconut Shell Aggregate Concrete” **Swagatika Mohapatra, Prof. P K Parhi** -June 2017, Volume 7, Issue 6-ISSN 2250-3153- International Journal of Scientific and Research Publications.
18. Impact of ferrochrome ash and gypsum powder on properties of concrete- **Shrinu Mohanty & P K Parhi**- **IJSER Volume 8, Issue 6, June 2017**

19. Structural Behaviour of Concrete Block with Flyash Content and Waste Rubber as its Loading Surface for Industrial Purpose- **Lalit Krishna Nayak , Prof. P K Parhi-** International Journal of Scientific and Research Publications, Volume 7, Issue 6, June 2017- ISSN 2250-3153-P 542-545
20. STUDIES ON LOCATION OF SHEAR WALL IN BUILDINGS FOR STRUCTURAL STABILITY- **Sanjeebanee Behera & P K Parhi-** IJRET- Volume 6, Issue 6; June 2017.
21. Influence of Partial Replacement of Fine Aggregates by Stone Crusher Sand with Cement by Fly Ash and Lime Powder on Concrete—**Satyabrata Naik & P K Parhi-** IJERT, Volume. 6, Issue. 06 , June – 2017
22. COMPARATIVE EVALUATION OF EPOXY TREATED REINFORCEMENT AND ENAMEL TREATED REINFORCEMENT- **Saumyanjan Mohanty & P K Parhi-**IJRET Volume-06 Issue-06-June 2017
23. STUDY OF COST INVOLVED IN DESIGN OF BUILDING STRUCTURES WITH DIFFERENT **GRADES OF CONCRETE AND STEEL-** **Soumyajit Pradhan & P K Parhi-** Vol -6, Issue 07, July -2017, P 36-39-International Journal of Engineering Research & Technology-ISSN:2278-0181 ([www.ijert.org](http://www.ijert.org))
24. Usefulness of P-Δ Analysis of High Rise Buildings in Seismic Zones With Shear Walls at Different Locations-**H S Panda, A Khatua & P K Parhi-**IJSART-Vol 4, issue-4, April-2018-ISSN (online): 2395-1052 –P2381-P 2389
25. Effects of Arbitrarily Located Circular Cutouts on Vibration of Laminated Composite Plates-**H S Panda, Phatechand Naik & P K Parhi-** IJSART-Vol 4, issue-4, April-2018-ISSN (online): 2395-1052 –P2367- P2373
26. EFFECT OF VARIATION ON NUMBER OF COUNTERFORTS ON THE STATIC AND DYNAMIC PERFORMANCE OF A RAILWAY BRIDGE WITH TALL ABUTMENTS- **H S Panda, S S Mohanty & P K Parhi,** International Journal of Advanced and Innovative research (IJAIR), Vol 7, issue 5, 2018, P1 –P12, (ISSN Online): 2278-7844, <http://ijairjournal.com>
27. Thermal Effects on Fatigue Life of RC T - Beam Including Other Aspects - A Critical Study-**H S Panda, Upasana Mishra & P K Parhi** -International Journal of Research in Applied Science & Engineering Tecgnology-IJRASET-Vol 6, issue IV, April 2018, P 4707-4714
28. EFFECT OF TIME DEPENDENT FACTORS ON CONTINUOUS PSC BOX GIRDER BRIDGE-Swasti Prangyan Samantaray , Dr.Pravat Kumar Parhi & Dr. H.S Panda-IJCRT-Vol 6, issue 2, April 2018 -ISSN-2320-2882. P349-359
29. Comparative Study on Analysis & Design of Box Culvert-**SHAIENDRA GUPTA & Pravat K Parhi-**IJSART-Vol 4, issue 4, 2018, ISSN(online):2395-1052-P 2819-2832.

30. **PARAMETRIC STUDY FOR OPTIMUM POSITION OF SHEAR WALLS IN A RC FRAMED BUILDING WITH RHOMBIC FLOOR CONFIGURATION UNDER LATERAL LOADINGS-** Jyotirmaya Dalai & P.K.Parhi, INTERNATIONAL JOURNAL OF CIVIL & STRUCTURAL ENGINEERING- 2018-
31. Base Isolation of Residential Building using Lead Rubber Bearing Technique-Dhiraj Narayan Sahoo & P K Parhi-IJERT-Vol 7, issue 5, May 2018
32. Effect Of Floating Column On Dynamic Response Of Multi-storeyed RC Framed Buildings- DHANURJAYA BEHERA, HIMANSHU SEKHAR PANDA & PRAVAT KR. PARHI –Vol 4, issue 4, April 2018, ISSN online- 2395:1052
33. Optimum Static Analysis of U Type Retaining Wall With & Without Shelf At Different Level Using Staad Pro- Mr. Santosh Kumar Sahoo, Pravat Kumar Parhi, -IJSART - Volume 4 Issue 4 – APRIL 2018- ISSN [ONLINE]: 2395-1052
34. Experimental Investigation of Natural Fiber Reinforced Concrete--- Biswabhusan Parida, Sirajudheen Ch, Pravat Kumar Parhi: International Research Journal of Engineering and Technology (IRJET)-- Volume: 06 Issue: 05 | **May 2019**--e- ISSN: 2395-0056-Page 7047-7054
35. Enhancing flexural strength of reinforced concrete beams using carbon fiber reinforced polymers (CFRP)-- HS Panda, K Swain, P K Parhi -Journal of Engineering Research and Application-ISSN : 2248-9622, Vol. 8, Issue5 (Part -IV) May 2018, pp 35-44.
36. Strength and Durability Characteristics of Cement Mortar-Smita Sahoo, B C Panda and P K Parhi- The Indian Concrete Journal-- Vol. 91, No. 7-- July 2017
37. Durability properties of concrete with silica fume and rice husk ash- Smita Sahoo, Pravat Kumar Parhi and Bikasha Chandra Panda- Cleaner Engineering & Technology- Vol 2-June 2021 –

.....

***Publication of Research Papers in International National Conferences***

1. **P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha** - International Conference on Fatigue and Fracture of Glass, Ceramics and Composites, Material Research Society of India, Calcutta: *Failure Analysis of Multiple Delaminated Composite Plates due to Bending and Impact, 1999*
2. **P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha** International Conference on Structural Engineering Convention-2000, IIT Bombay Topic: Finite Element Impact Analysis of Multiple Delaminated Composite Plates



3. **P.K.Parhi, S.K.Bhattacharyya & P.K.Sinha** International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, 2-4 April 2001. Topic: Hygrothermal Effects on the Bending Behaviour of Multiple Delaminated Composite Plates
4. Mohanty, J., Sahu, S. K. and **Parhi, P.K.** (2011): Effect of delamination on interlaminar shear strength of laminated woven fiber glass/epoxy composite plates, **Proceedings of 5<sup>th</sup> International Conference on Advances in Mechanical Engineering (ICAME-2011)**, June 06-08 at Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat, India, pp:114-118.
5. Mohanty, J., Sahu, S. K. , **Parhi, P.K.** and Ray, B.C. (2010): Vibration analysis of delaminated woven fiber glass/epoxy composite plates, **Proceedings of International Conference on Challenges and Application of Mathematics in Science & Technology (CAMIST)** at NIT, Rourkela, India, pp: 168-176.
6. Mohanty, J., Sahu,S. K., Sinha, L and **Parhi, P.K.** (2010): Buckling behaviour of delaminated woven fiber glass/epoxy composite plates, **Proceedings of 5<sup>th</sup> International Conference on Theoretical, Applied, Computational & Experimental Mechanics**, Dec. 27-29 at IIT, Kharagpur, India, pp: 320-322.
7. S. K. Sahu,H. S. Panda and **P.K. Parhi(2013)**:Numerical and experimental studies on free vibration of delaminated woven fiber composite plates at elevated temperatures,*4<sup>th</sup>International Conference on Recent Advances in Composite Materials (ICRACM- 2013)*, February 18-21 at Goa, India.
8. S. K. Sahu,H. S. Panda and **P.K. Parhi(2013)**:Thermal effects on vibration of delaminated composite doubly curved panels, *7<sup>th</sup> International Conference on Materials for Advanced Technologies (ICMAT 2013)*, 30<sup>th</sup> June - 05 July at Singapore.
9. H. S. Panda, S. K. Sahu and **P.K. Parhi(2013)**:Modal analysis of delaminated woven fibre composite plates in moist environment,*International conference on Structural Engineering and Mechanics (ICSEM 2013)*, December 20-22, 2013 at Rourkela, India.
10. H. S. Panda, S. K. Sahu and **P.K. Parhi(2012)**:Hygrothermal effects on free vibration of delaminated woven fabric composite plates, *National conference on Recent Advances in Mechanics and Materials (RAAM-2012)*, February 25-26, 2012, Burla, Odisha, India.
11. Mohanty, J., Sahu, S.K., and **Parhi, P.K** (2012). “Dynamic stability of delaminated composite plates using finite element method”.**53<sup>rd</sup> Technical Annual, 5<sup>th</sup> Feb. 2012 , The Institution of Engineers (India)**, Orissa State Centre, Bhubaneswar, pp.203-208.
12. Mohanty, J., Sahu, S.K., **Parhi, P.K** and Ray, B.C (2011). “Effect of delamination on interlaminar shear strength of woven glass/epoxy composite laminates at different cross head velocities”.**52<sup>nd</sup> Technical Annual, 27<sup>th</sup> Feb. 2011 , The Institution of Engineers (India)**, Orissa State Centre, Bhubaneswar, pp.116-120.

13. Mohanty, J., Sahu, S.K. and **Parhi, P.K.** (2011). “Characterization of interlaminar shear strength of delaminated woven glass/polyster composite plates”. **National Conference on plastic and composites (PLASTICON-2011), 29<sup>th</sup> January 2011**, NM Institute of Engineering and Technology, Bhubaneswar, pp 72-76.
14. Mohanty, J., Sahu, S.K. and **Parhi, P.K.** (2010). “Modal analysis of delaminated woven fiber glass/epoxy composite plates”. **51<sup>st</sup> Technical Annual , The Institution of Engineers (India)**, Orissa State Centre, Bhubaneswar, pp.236-240.
15. *S. K. Sahu, H. S. Panda and P.K. Parhi (2013):* Numerical and experimental studies on free vibration of delaminated woven fiber composite plates at elevated temperatures, *4<sup>th</sup> International Conference on Recent Advances in Composite Materials (ICRACM- 2013)*, February 18-21 at Goa, India.
16. *S. K. Sahu, H. S. Panda and P.K. Parhi (2013):* Thermal effects on vibration of delaminated composite doubly curved panels, *7<sup>th</sup> International Conference on Materials for Advanced Technologies (ICMAT 2013)*, 30<sup>th</sup> June - 05 July, 2013 at Singapore.
17. Smita Sahoo, B C Panda and P K Parhi- Durability Study of Cement Mortar--  
The International Conference on **Advances in Mechanics and Materials**—  
**VSSUT Burla**
18. Smita Sahoo, B C Panda and P K Parhi- Experimental Investigation on Cement Mortar for Durability and Strength International Conference on **Recent Innovations in Engineering and Technology--**