



Curriculum Vitae



Name: Shishir Kumar Sahu

Born: June 15, 1961, Orissa, India

Present Post : Professor (Higher Administrative Grade), Civil Engineering
NIT, Rourkela-769008

Contact Address:

Office: Professor in Civil Engineering
National Institute of Technology, Rourkela
Rourkela-769008, Orissa

Residence: Qrs No C/06, NIT Campus
National Institute of Technology, Rourkela
Rourkela-769008, Orissa

Phone: 91-661-2462322 (Office)
91-661-2463322(Residence)
91-9437145236, 91-7978705849

E-mail: sksahu@nitrkl.ac.in
sksahu.nitrkl@gmail.com

Education:

Post Doc. Res.	Vibration of Composite plates, ISVR, University of Southampton, UK, 2007
Ph. D.	Structural Engineering, Indian Institute of Technology, Kharagpur, 2002
M. Sc.(Engg)	Structural Engineering, National Institute of Technology, Rourkela, 1989
B. Sc.(Engg)	Civil Engineering, Sambalpur University, Orissa, India, 1984

Area of Interest: Structural Dynamics, Composite Structures, Finite Element Method, Vibration and Stability of Plates and Shells, Modal analysis of structures, Fracture Mechanics, Nanocomposites.

No of Ph.D. Supervised: 12

Sl. No.	Name of the Student	Year of Award	Title of the Thesis	University Under which Awarded
1	Pritam Kr Pati	2025	Fly ash innovations in structural concrete for tiles, paver blocks with development of angular aggregates and ANFIS modelling of RC wall panels	NIT Rourkela
2	Priyadarshi Das	2022	Parametric resonance characteristics of laminated composite beam with cracks	NIT Rourkela
3	Leena Das	2022	Experimental and numerical vibration analysis of laminated composite stiffened plates with/without cutouts	VSSUT Burla
4	Elluri Venkat Prasad	2019	Vibration, buckling and dynamic instability of metal fiber composite panels	NIT Rourkela
5	Prasant Kr. Tripathy	2018	Vibration of stiffened laminated Composite plates	Sambalpur University
6	Madhusmita Biswal	2016	Vibration, buckling and Parametric resonance of laminated composite shells in hygrothermal environment	NIT Rourkela
7	H S Panda	2015	Vibration, buckling and dynamic instability of delaminated composite curved panels in hygrothermal environment	NIT Rourkela
8	Uttam Kr Mishra	2014	Vibration, buckling and dynamic stability of beam with multiple transverse cracks	NIT Rourkela
9	Manoj Kr. Rath	2013	Dynamic instability of laminated composite curved panels in hygrothermal environment	NIT Rourkela
10	Jayram Mohanty	2013	Vibration, buckling and parametric resonance characteristics of delaminated composite plates subjected to in plane periodic loading	NIT Rourkela
11	A V Asha	2008	Parametric resonance characteristics of laminated composite twisted cantilever panels	NIT Rourkela
12	Rabindra. Kr. Behera	2006	Vibration analysis of multi crack structures	NIT Rourkela

Current research Activities

No of Ph. D students under supervision ongoing: 2

Sl. No.	Name of the Student	Year to be submitted	Title of the Thesis	University Under which Awarded
1	Asha Patel	2026	Vibration, buckling and parametric resonance characteristics of multiwalled Carbon nanotube Composite plates	NIT Rourkela

No. of M. Tech Research Guided (awarded till date): 02

Sl. No.	Name of the Student	Year of Award	Title of the Thesis	University Under which Awarded
1	Itishree Mishra	2012	Experimental and numerical study on vibration and buckling characteristics of laminated composite panels	NIT Rourkela
2	Sarat Ch. Choudhury	2013	Flexural and shear Strengthening of RC beams with FRP-An experimental study	NIT Rourkela

No of M. Tech (Regular) thesis guided: 35

Details of Publications (List attached)

i	Journals	85 including 70 SCI/SCOPUS indexed journals (details attached)
ii	Conferences	35
iii	Any Other, book Chapters: 5	Written book chapter on “Stability of Composite Plates” for title ‘ Natural Composites ’, Stadium Press, USA
		Written book chapter on. Vibration analysis of laminated composite beam with transverse cracks (2015) Advances in Structural Engineering: Mechanics , V 1, pp. 67-75. Springer
		Written book chapter on ‘Hygrothermal Aging Behavior of Fiber-Reinforced Composites’ for the book of Green composites , Springer Nature Singapore Pte Ltd. 2019, https://doi.org/10.1007/978-981-13-6019-0 .
		Written book chapter by Sahu S.K., Kamalakannan S and Pati P K. (2020) Fly ash utilization in concrete tiles and paver blocks, <i>New materials in Civil Engineering</i> . Elsevier, ISBN: 978-0-12-818961-0
		Written book chapter by Sahu S.K., Gupta A and Prasad E V. (2020) Dynamic response of laminated composite plates with piezoelectric actuators, <i>New materials in Civil Engineering</i> . Elsevier, ISBN: 978-0-12-818961—0.

Sponsored Research

- Parametric instability of woven fiber composite panels, DST, New Delhi, 25.41 lakhs, 2009-2012
- Nonlinear dynamics of smart composite structures with discrete delamination, 7.0 lakhs, CSIR, 2010
- Fly ash utilization in structural applications for sustainable construction, 32.52 lakhs, Works Department, (R&D and Quality Promotion) Govt. of Odisha, Bhubaneswar.2015

Consultancy Projects and other forms of interaction with industry

- Vetting of design of Residential cum commercial building at Plot No 2254, Khata no 1708/1582, Brahmani Tarang, Rourkela, 3.15 lakhs, June 2022.
- Vetting of design of ORMAS Outlet building in Bhubaneswar, NN Engineers, 0.57 lakh, April 2022.
- Vetting of design of IT park and Convention center building in Bhubaneswar, NN Engineers, 2.36 lakhs, May 2022.
- Vetting of design of auditorium in Rajendra college, Bolangir , NN Engineers, 0.95lakh, June 2022.
- Vetting of structural design of G+5 New SLDC building, The Design Group, BBSR, 1.18 lakhs, March 2022.
- Vetting of structural design of G+5 library cum canteen block building, The Design Group, BBSR, 1.18 lakhs, March 2022.
- Vetting of structural design of MCH building in Jajpur, The Design Group, BBSR, 2.42 lakhs, June 2022.
- Vetting of design of structural design of Hospital extension in Bargarh, The Design Group, BBSR, 1.77 lakhs, Feb 2022.
- Vetting of design of structural design of multistoried hotel Sea Roses building in Puri, EVOS Buildcon PVT Ltd, 2.36 lakhs, January, 2022.
- Vetting of design of structural design of Farmers Technology center, OUAT building, Bhubaneswar, The Design Group, BBSR,1.18 lakhs, March 2021.
- Investigation of the collapse of PSC Girders at the Flyover at Km 479+897 in Deogarh, NHA through TPF GETINSA EUROESTUDIOS and Segmental Consulting & Infrastructure Advisory, 2.37 lakhs, Jan-March, 2020
- Vetting of design of B+G+6 building in Brahmani Tarang, Rourkela, Carnex Sales Agencies, Rourkela, 2.25 lakhs, April-June 2019.
- Vetting of design of structural design of multistoried SLDC Office building, Mancheswar, Bhubaneswar, The Design Group, BBSR, 0.54 lakhs, Oct 2018- Dec 2018

- Vetting of design of structural design of multistoried BCCD Office building, Nayapalli, Bhubaneswar, The Design Group, BBSR, 0.52 lakhs, July 2019- Sept 2019.
- Ultrasonic pulse velocity test for Darlipali super thermal power project, NTPC Sundergarh, 9.0 lakhs, April 2016-March 2017.
- Evaluation of Structural stability of crusher plant at Gomar, Tata Steel Ltd, Jamshedpur, 2015, 6.88 lakhs
- Stability test of fire damaged Building, Ordinance factory, Badmal, Odisha, 5.24 lakhs, 2015.
- Checking design of various components such as spur, mid-stream tank, balancing tanks, ungated weir and training wall of NALCO project, WAPCOS, Bhubaneswar, 2.85 lakhs, 2015
- Checking of stability of frame, conveyor gallery, Vedanta, Jharsuguda, 3.0 lakhs, 2013
- Design of Chimney in Indian Rare Earth, Tamilnadu, 7.0 lakhs, 2011
- Design of Chimney, Indian Rare Earth, Chhatrapur, 5.0 lakh, 2010
- Measurement of Vibration, OMC, Bhubaneswar, 2.78 lakhs, 2007

Contribution to Institute Management:

- Dean, Planning and Development (2011-2014)
- Head, Civil Engineering (2014-2017), Planning & Architecture (2013-2015)
- Chairman, Board of Trustee, NIT Rourkela (2018-2020)
- Institute coordinator, GIAN(2018-continuing)
- PIC Library(2020-continuing)
- PIC Convocation(2018-2020)
- Professor-in Charge (Institute Seminar), (2003-2008)
- Vice President, Film and Music Society (Students Activity Center) (2004-2006)

Conference Organised:

- Organised the All India Seminar on ‘**Emerging Trends in Structural Mechanics and Composites**’(ETSMC-2003) during 1-2, November, 2003 at NIT, Rourkela as **Convenor**.
- Organised the All India Seminar on **Sustainable Materials and Technology for Better Future**, 11-12, Nov 2017 at NIT Rourkela as Convenor
- Organised the All India Seminar on **Hi-Tech and Value Addition to Crop Production** in Rourkela on 29 April 2018 as Secretary, IE
- Organised the All India Seminar on **Earthquake resistant analysis and design of structures** in Bhubaneswar during 26-27 May 2018 as Secretary, IE
- **Program Chair** for conference on Civil and Architecture, Hong Kong, 2011,

International Conference on Mechanics Engg, (ICME) , Jakarta, Indonesia, 2013

- **Countries Visited: UK, Germany, Singapore, Hong Kong, Indonesia**

Continuing education Program/Short Term course conducted:

- GIAN course on Structural Dynamics: Analysis and Control, October 1-5, 2018
- GIAN course on Coupled Unsaturated and THM Behaviour of Soils and Rocks: Applications to Geo-Energy and Geo-environmental Problems, December 17-21, 2018
- Analysis , design and Health monitoring of Structures, 30 September to 2nd October, 2016. (Industry institute interaction course)
- Finite element applications to Engineering, Bhubaneswar, 2010, 64
- Disaster Management, preparedness and mitigation: Staff Development Programme, Dec.2008, 50
Software applications to Civil Engineering, NIT Rourkela., 2009, 40

List of research publications in referred journals

2024

1. Fuzzy logic for crack detection in cantilever-laminated composite beam using frequency response
Das, P., Muni, M.K., Pradhan, N., Basa, B., Sahu, S.K. . *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 2024, 46(4), 250
2. Effects of thermal conditions on fatigue behaviour of laminated glass/epoxy plates under tension-tension cycle, Biswal, M., Das, P., Sahu, S.K. *Engineering Solid Mechanics*, 2024, 12(4), pp. 459–470
3. Frequency-Based Crack Effect Study on Beams Under Free Vibration Using Finite Element Analysis, Sahu, O., Das, P., Muni, M.K., ...Basa, B., Sahu, S.K. *Engineering Transactions*, 2024, 72(1), pp. 95–114.
4. A concerted experimental and numerical approach for frequency based non-destructive analysis of Bi-directional cracked laminated composite beams Das, P., Muni, M.K., Choudhury, S., ...Basa, B., Sahu, S.K. *Non-destructive Testing and Evaluation*, 2024
5. Experimental and Numerical Analysis of Free–Free Woven Fiber Laminated Shallow Shell Panels, Biswal, M., Sahu, S.K. *Journal of Vibration Engineering and Technologies*, 2024, 12(1), pp. 619–632

6. Experimental and numerical buckling analysis of CNT reinforced polymer composite plates, Patel, Asha; Das, Priyadarshi Das P.; Biswal, Madhusmita; Sahu, Shishir Kumar, *Materials Science and Technology*, 2024, DOI: 10.1177/02670836241278898
7. Buckling data trained fuzzy logic for crack detection in composite glass/epoxy laminated beam. Prakash S.S.; Prusty J.K.; Das P., Das P.; Choudhury S^c; Muni M.K., M Biswal and Sahu S K, *Mechanics of Advanced Materials and Structures*, 2024, DOI: 10.1080/15376494.2024.2427392

2023

8. Mohanty, N., Sasmal, S.K., Mishra, U.K., Sahu, S.K., Experimental and Computational Analysis of Free In-Plane Vibration of Curved Beams , *Journal of Vibration Engineering and Technologies*, 2023, 11(4), pp. 1777–1796
9. Mohanty, N., Mishra, U.K., Sahu, S.K., An adaptive neuro fuzzy inference system model for studying free in plane and out of plane vibration behavior of curved beams *Structures*, 2023, 47, pp. 1836–1845

2022

10. Pati P. K and Sahu S K, Structural Performance of concrete containing fly ash based light weight angular aggregates, *Advances in Concrete Constructions*, 2022, 13(4), 291-305.
11. Das P and Sahu S K, Experimental and numerical free vibration analysis of industry-driven woven fibre laminated glass/epoxy composite beams, *Current Science*, 122, 2022.
12. Patel A., Sahu S.K. (2022) Experimental Modal Analysis of Carbon Nanotubes-Reinforced Composite Plates. Recent Advances in Computational and Experimental Mechanics, Vol II. Lecture Notes in Mechanical Engineering. Springer, https://doi.org/10.1007/978-981-16-6490-8_49.

2021

13. Das P and Sahu S K, Free vibration analysis of industry-driven woven fiber laminated carbon/epoxy composite beams by experimental and numerical approach, *Polymers and Polymer Composites*, 2021, <https://doi.org/10.1177/09673911211052825>.
14. Sinha L, Tripathy A, Nayak A N and Sahu S K, Free vibration behaviour of angle-ply laminated composite stiffened plates, *International Journal of Structural Stability and Dynamics*, 2021, doi.org/10.1142/S021945542150187X.
15. Das P, Muni M K and Sahu S K, On crack detection in a laminated glass/epoxy composite beam

under free vibration with fuzzy logic aid, *International Journal of Structural Stability and Dynamics*, 20 (12), 2020, 2050129. <https://doi.org/10.1142/S0219455421501765>.

16. Sinha L, Das D, Nayak A N and **Sahu S K** , Experimental and numerical study on free vibration characteristics of laminated composite plate with/without cut-out, *Composite Structures*, 256 (15), 2021, 113051.
17. Das P., Chakurkar V.D. and ,Sahu S.K, Finite Element Modeling of Composite Beam with Transverse Cracks Under Free Vibration with Experimental Validation, ***Lecture Notes in Mechanical Engineering***Volume 52, Pages 481 - 4922021 International Conference on Recent Advances in Mechanical Engineering Research and Development, ICRAMERD 2020, 24 July 2020 - 25 July 2020

2020

18. **Patel A**, Das R and **Sahu S K**, Experimental and Numerical Study on Free Vibration of Multiwall Carbon Nanotube Reinforced Composite Plates, *International Journal of Structural Stability and Dynamics*, 20 (12), 2020, 2050129. <https://doi.org/10.1142/S0219455420501291>
19. Prasad, E.V., C Shivteja and **Sahu, S.K**, Effect of nanoalumina on fatigue characteristics of fiber metal laminates, *Polymer testing*, 85, 2020, doi.org/10.1016/j.polymertesting.2020.106441.
20. Sahu, S.K., Das, P., (2020) Experimental and numerical studies on vibration of laminated composite beam with transverse multiple cracks, *Mechanical Systems and Signal Processing*, 135, DOI: 10.1016/j.ymsp.2019.106398.
21. Sinha, L., Mishra, S.S., Nayak, A.N., Sahu, S.K., (2020) Free vibration characteristics of laminated composite stiffened plates: Experimental and Numerical investigation, *Composite Structures* , 233, 111557, <https://doi.org/10.1016/j.compstruct.2019>.
22. Prasad, E.V., **Sahu, S.K.**(2020), “Buckling of fiber metal laminated plates-numerical and experimental studies”, *Aircraft Engineering and Aerospace Technology*.92(3), pp. 472-481. <https://doi.org/10.1108/AEAT-01-2019-0005>.
23. Panda, H.S., **Sahu, S.K.**, Parhi, P.K., (2020) Parametric instability of delaminated composite curved panels subjected to moist environment, *Materials Today Proceedings*, 21, Part-2, 1213-1217.

24. Das P and **Sahu S. K.**, (2020) Experimental and numerical study on free vibration of cracked woven fiber glass/epoxy composite beam, *Materials Today Proceedings*, <https://doi.org/10.1016/j.matpr.2020.03.320>.
25. Pati P K and Sahu S K, (2020) Innovative utilisation of flyash in concrete tiles for sustainable constructions, *Materials Today Proceedings*, <https://doi.org/10.1016/j.matpr.2020.02.971>.

2019

26. Prasad, E.V., Sahu, S.K. (2019), Parametric Resonance Characteristics of Woven Fiber Metal Laminated Plates, *International Journal of Applied Mechanics*, 11 (4), DOI: 10.1142/S1758825119500340

2018

27. Prasad, E.V., Sahu, S.K. (2018), Vibration Analysis of Woven Fiber Metal Laminated Plates - Experimental and Numerical Studies, *International Journal of Structural Stability and Dynamics*, 18 (11), DOI: 10.1142/S0219455418501444
28. Dey, S., Mukhopadhyay, T., Sahu, S.K., Adhikari, S. (2018) Stochastic dynamic stability analysis of composite curved panels subjected to non-uniform partial edge loading, *European Journal of Mechanics, A/Solids*, 67, pp. 108-122., .DOI: 10.1016/j.euromechsol.2017.09.005.
29. Manan, N.F.A., Jam, M.F.M., Sahu, S.K., Mahmud, J. Failure analysis of graphite epoxy composite plate under transverse sinusoidal load, (2018) *International Journal of Engineering and Technology(UAE)*, 7 (3), pp. 62-66. DOI: 10.14419/ijet.v7i3.11.15931

2017

30. Biswal, M., Sahu, S.K., Asha, A.V. (2017), Dynamic Stability of Woven Fiber Laminated Composite Shallow Shells in Hygrothermal Environment, *International Journal of Structural Stability and Dynamics*, 17 (8), DOI: 10.1142/ S0219455417500845
31. Panda, H.S., Sahu, S.K., Parhi, P.K. (2017), Thermal Effects on Parametric Instability of Delaminated Woven Fabric Composite Curved Panels, *International Journal of Structural Stability and Dynamics*, 17 (1),DOI: 10.1142/ S0219455417500080.

2016

32. Biswal, M., Sahu, S.K., Asha, A.V., Nanda, N. (2016) Hygrothermal effects on buckling of composite shell-experimental and FEM results, *Steel and Composite Structures*, 22 (6), pp. 1445-1463. DOI: 10.12989/scs.2016.22.6.1445

33. Dey, S., Mukhopadhyay, T., Sahu, S.K., Adhikari, S. (2016) Effect of cutout on stochastic natural frequency of composite curved panels, *Composites Part B: Engineering*, 105, pp. 188-202. DOI: 10.1016/j.compositesb. 2016.08.028
34. Biswal, M., Sahu, S.K., Asha, A.V. (2016) Vibration of composite cylindrical shallow shells subjected to hygrothermal loading-experimental and numerical results, *Composites Part B: Engineering*, 98, pp. 108-119. DOI: 0.1016/j.compositesb. 2016.05. 037.

2015

35. Biswal, M., Sahu, S.K., Asha, A.V. (2015) Experimental and numerical studies on free vibration of laminated composite shallow shells in hygrothermal environment *Composite Structures*, 127, pp. 165-174. DOI: 10.1016/j.compstruct.2015.03. 007
36. Dey, S., Mukhopadhyay, T., Sahu, S.K., Li, G., Rabitz, H., Adhikari, S. (2015) Thermal uncertainty quantification in frequency responses of laminated composite plates, *Composites Part B: Engineering*, 80, art. no. 3641, pp. 186-197. DOI: 10.1016/j.compositesb.2015.06.006.
37. Panda, H.S., Sahu, S.K., Parhi, P.K. (2015) Buckling behavior of bidirectional composite flat panels with delaminations in hygrothermal field , *Acta Mechanica*, 226 (6), pp. 1971-1992. DOI: 10.1007/s00707-014-1280-4.
38. Panda, H.S., Sahu, S.K., Parhi, P.K. (2015), Hygrothermal response on parametric instability of delaminated bidirectional composite flat panels, *European Journal of Mechanics, A/Solids*, 53, art. no. 3185, pp. 268-281. DOI: 10.1016/j.euromechsol.2015.05.004.
39. Mishra, U.K., Sahu, S.K. (2015), Parametric instability of beams with transverse cracks subjected to harmonic in-plane loading, *International Journal of Structural Stability and Dynamics*, 15 (1), DOI: 10.1142/S0219455415400064
40. Mishra, I., Sahu, S.K. (2015), Modal analysis of woven fiber composite plates with different boundary conditions, *International Journal of Structural Stability and Dynamics*, 15 (1),. DOI: 10.1142/S0219455415400015.
41. Mohanty, J., Sahu, S.K., Parhi, P.K. (2015), Parametric instability of delaminated composite plates subjected to periodic in-plane loading, *JVC/Journal of Vibration and Control*, 21 (3), pp. 419-434. DOI: 10.1177/1077546313485613

42. Panda, H.S., Sahu, S.K., Parhi, P.K., Asha, A.V. (2015), Vibration of woven fiber composite doubly curved panels with strip delamination in thermal field, *JVC/Journal of Vibration and Control*, 21 (15), pp. 3072-3089.. DOI: 10.1177/1077546313520024.
43. Behera S., Sahu S.K., Asha A.V. (2015) Vibration Analysis of Laminated Composite Beam with Transverse Cracks. In: Matsagar V. (eds) *Advances in Structural Engineering*. Springer, New Delhi. https://doi.org/10.1007/978-81-322-2190-6_7

2014

44. Panda, H.S., Sahu, S.K., Parhi, P.K. (2014), Effects of moisture on the frequencies of vibration of woven fibre composite doubly curved panels with strip delaminations *Thin-Walled Structures*, 78, pp. 79-86.

2013

45. Mishra, U.K., Sahu, S.K., (2013), On parametric response characteristics of beams with multiple transverse cracks, *International Journal of Acoustics and Vibrations*, 18 (4), pp. 155-162.
46. Mohanty, J., Sahu, S.Kr., Parhi, P.Kr. (2013), Numerical and experimental study on buckling behaviour of multiple delaminated composite plates, *International Journal of Structural Integrity*, 4 (2), pp. 240-257. DOI: 10.1108/17579861311321717.
47. Nanda, N., Sahu, S.K. (2013), Nonlinear free and forced vibrations of delaminated composite plates in Hygrothermal environments, *Advances in Vibration Engineering*, 12 (4), pp. 349-355.
48. Nanda, N., Sahu, S.K., Bandyopadhyay, J.N. (2013), Effect of delamination on nonlinear transient response of composite shells in hygrothermal environments *International Journal of Structural Integrity*, 4 (3), pp. 349-367., DOI: 10.1108/IJSI-05-2010-0007
49. Panda, H.S., Sahu, S.K., Parhi, P.K. (2013), Hygrothermal effects on free vibration of delaminated woven fiber composite plates - Numerical and experimental results, *Composite Structures*, 96, pp. 502-513. DOI: 10.1016/j.compstruct. 2012. 08. 057.
50. M. K. Rath and S. K. Sahu, 2013, Parametric instability of square laminated plates in hygrothermal environment, *Journal of Structures*, ID 492839, doi.org/10.1155/2013/492839.
51. M. K. Rath and S. K. Sahu, 2013, Experimental investigations for free vibration of woven fiber composite plates subjected to hygrothermal loading, *Journal of Thermal energy and power Engineering*, 2, 94.103.

2012

52. Rath, M.K., Sahu, S.K. (2012), Vibration of woven fiber laminated composite plates in hygrothermal environment, *JVC/Journal of Vibration and Control*, 18 (13), pp. 1957-1970. DOI: 10.1177/1077546311428638.
53. Sahu, S.K., Rath, M.K., Datta, P.K., Sahoo, R. (2012), Parametric resonance characteristics of laminated composite curved shell panels in a hygrothermal environment, *International Journal of Aeronautical and Space Sciences*, 13 (3), pp. 330-347. DOI: 10.5139/ IJASS.2012.13.3.347
54. Mohanty, J., Sahu, S.K., 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*, 12 (2), pp. 377-394.. DOI: 10.1142/ S0219455412500083
55. Nanda, N., Sahu, S.K. (2012), Free vibration analysis of delaminated composite shells using different shell theories, *International Journal of Pressure Vessels and Piping*, 98, pp. 111-118.. DOI: 10.1016/j.ijpvp.2012.07.008.
56. M. K. Rath and S. K. Sahu, 2012, Dynamic response of Composite plates in hygrothermal environment, *Journal of Multiscale modeling*, 4,(3), 1250009,1-14. <https://doi.org/10.1142/S1756973712500096>.
57. M K Rath and S. K. Sahu, 2012, Parametric resonance of woven fiber composite plates in adverse hygrothermal environment, *Journal of Multiscale modeling* 4(4), 1250016 , doi.10.114/S1756973712500163.

2011

58. Asha, A.V., Sahu, S.K. (2011), Parametric instability of twisted cross-ply laminated panels, *Aerospace Science and Technology*, 15 (6), pp. 465-475. DOI: 10.1016/j.ast. 2010.09.010
59. Rath, M.K., Sahu, S.K. (2011), Static behavior of woven fiber-laminated composites in hygrothermal environment, *Journal of Reinforced Plastics and Composites*, 30 (21), pp. 1771-1781. DOI: 10.1177/0731684411426811.
60. Sahu, S. K., et al. "Parametric Instability of Laminated Composite Doubly Curved Shell Panels Subjected to Hygrothermal Environment." *Advanced Materials Research*, vol. 383–390, Trans Tech Publications, Ltd., Nov. 2011, pp. 3212–3216. Crossref, doi:10.4028/www.scientific.net/amr.383-390.3212.

2010

61. Nanda, N., Sahu, S.K., Bandyopadhyay, J.N. (2010), Effect of delamination on the nonlinear transient response of composite shells in hygrothermal environments, *International Journal of Structural Integrity*, 1 (3), pp. 259-279.. DOI: 10.1108/17579861011092382.

2008

62. Sahu, S.K., Asha, A.V. (2008), Parametric resonance characteristics of angle-ply twisted curved panels, *International Journal of Structural Stability and Dynamics*, 8 (1), pp. 61-76.. DOI: 10.1142/S0219455408002557.

2007

63. Sahu, S.K., Datta, P.K. (2007), Research advances in the dynamic stability behavior of plates and shells: 1987-2005 - Part I: Conservative systems, *Applied Mechanics Reviews*, 60 (1-6), pp. 65-75.. DOI: 10.1115/1.2515580
64. Das, B., Sahu, S.K., Ray, B.C. (2007), Effects of loading speed on the failure behaviour of FRP composites, *Aircraft Engineering and Aerospace Technology*, 79 (1), pp. 45-52.. DOI: 10.1108/00022660710720485.
65. Sahu S.K., Asha A.V., Nagaraju S. (2008) Vibration And Stability Of Cross-Ply Laminated Twisted Cantilever Plates. In: İnan E., Sengupta D., Banerjee M., Mukhopadhyay B., Demiray H. (eds) Vibration Problems ICOVP-2007. Springer *Proceedings in Physics*, vol 126. Springer, Dordrecht. https://doi.org/10.1007/978-1-4020-9100-1_36

2006

66. Behera, R.K., Parhi, D.R.K., Sahu, S.K. (2006), Vibration analysis of a cracked rotor surrounded by viscous liquid. *JVC/Journal of Vibration and Control*, 12 (5), pp. 465-494. DOI: 10.1177/1077546306064267
67. Behera, R.K., Parhi, D.R.K., Sahu, S.K. (2006), Dynamic characteristics of a cantilever beam with transverse cracks International, *Journal of Acoustics and Vibrations*, 11 (1), pp. 3-18.

2005

68. Behera, R.K., Parhi, D.R.K., Sahu, S.K. (2005), Vibration analysis of a cracked beam subjected to a moving mass, *International Journal of Acoustics and Vibrations*, 10 (4), pp. 197-201. Cited 1 time.

69. Sahu, S.K., Asha, A.V., Mishra, R.N. (2005), Stability of laminated composite pretwisted cantilever panels, *Journal of Reinforced Plastics and Composites*, 24 (12), pp. 1327-1334. Cited 8 times. DOI: 10.1177/0731684405049856.

2003

70. Sahu, S.K., Datta, P.K. (2003), Dynamic stability of laminated composite curved panels with cutouts, *Journal of Engineering Mechanics*, 129 (11), pp. 1245-1253. Cited 32 times. DOI: 10.1061/(ASCE)0733-9399(2003)129:11(1245)
71. . Sahu, S. K. and Datta, P.K, Parametric instability characteristics of laminated composite curved panel subjected to concentrated in-plane edge loading, *Journal of Advances in Vibration Engineering*, 2, 2003, 142-150.

2002

72. Sahu, S.K., Datta, P.K. (2002), Vibration of doubly curved panels with cutouts *Journal of the Institution of Engineers (India): Aerospace Engineering Journal*, 83, pp. 25-28.
73. Sahu, S.K., Datta, P.K. (2002), Dynamic stability of curved panels with cutouts, *Journal of Sound and Vibration*, 251 (4), pp. 683-696. DOI: 10.1006/jsvi.2001.3961.

2001

74. Sahu, S.K., Prabhakar, D.L., Datta, P.K. (2001), Vibration and buckling of laminated composite plates subjected to non-uniform in-plane edge loading, *Journal of Structural Engineering*, 28 (2), pp. 75-80.
75. Sahu, S.K., Datta, P.K. (2001), Parametric instability of doubly curved panels subjected to non-uniform harmonic loading, *Journal of Sound and Vibration*, 240 (1), pp. 117-129.. DOI: 10.1006/jsvi.2000.3187
76. Sahu, S.K., Datta, P.K. (2001), Parametric resonance characteristics of laminated composite doubly curved shells subjected to non-uniform loading, *Journal of Reinforced Plastics and Composites*, 20 (18), pp. 1556-1576.. DOI: 10.1106/U2VL-8673-4K1N-J1W7.

2000

77. Sahu, S.K., Datta, P.K. (2000), Dynamic instability of laminated composite rectangular plates subjected to non-uniform harmonic in-plane edge loading, *Proceedings of the Institution of*

Mechanical Engineers, Part G: Journal of Aerospace Engineering, 214 (5), pp. 295-312. Cited 20 times., DOI: 10.1243/ 0954410001532079

78. Sahu, S.K., Datta, P.K. (2000), Parametric instability characteristics of laminated composite curved panels, *Journal of the Institution of Engineers (India): Aerospace Engineering Journal*, 81 (1), pp. 20-24.

Publications in National Journals: (1996-1998)

1. **Sahu S. K.** and Jain K. K., Assessment of concrete quality from pulse velocity tests, *Civil Engineering and Construction Review*, 1998, 43-45.
2. **Sahu S. K.** Sahoo A. K. and Barik K.C. Shear failure of deep steel fibre reinforced concrete beams, *Civil Engineering and Construction Review*, 1998, 56-60.
3. **Sahu S. K.** and Samal A. K. New dimensions in cementitious studies through FAL-G, *Civil Engineering and Construction Review*, 1997, 39-43.
4. **Sahu S. K.** Padma Radhika P.V. and Jain, K. K. Shear strength of fibre reinforced concrete deep beam, *Civil Engineering and Construction Review*, 1996, 45-51.

List of full papers published in Seminar/Conferences and book chapters:

1. **Asha Patel** and **S K Sahu**, Experimental Modal Analysis of a Carbon Nano-tubes Reinforced Composite Plates, 1st Online *International Conference on Recent Advances in Computational and Experimental Mechanics* September 4-6, 2020, IIT Kharagpur.
2. P Das and **Sahu, S K**, Dynamic Analysis of Woven Roving Glass/Epoxy Composite Beam by Numerical and Experimental Analysis, Mar 02 – Mar 04, 2020, *ASCE India Conference 2020 “Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies” CRSIDE-2020*, March 2-4, 2020, Kolkata
3. Pati P.K., **Sahu S.K.**, 2020. “Innovative Use of Fly Ash in Wall Panels for Sustainable Construction”. *ASCE India Conference on “Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies” (CRSIDE-2020)*. March 2-4, 2020, Kolkata.
4. H S Panda, **S K Sahu** and P. K Parhi, Parametric instability of delaminated composite curved panels subjected to moist environment, Sixth International conference on *Recent Advances in Composite Materials (ICRACM-2019)*, Feb 25-28, 2019, IIT(BHU), Varanasi.
5. P Das and **Sahu S K**, Experimental and Numerical Study on Free Vibration of Cracked Woven Fiber Glass/Epoxy Composite Beams, *International Conference on Processing and Characterisation of Materials (ICPCM 2019)*, Dec 12 – Dec14, 2019, NIT Rourkela

6. Pati, P. K., **Sahu, S. K.** (2019). Innovative utilization of fly ash in concrete tiles for sustainable construction, *International Conference on Processing and Characterisation of Materials (ICPCM 2019)* Dec 12 – Dec 14, 2019, NIT Rourkela.
7. E V Prasad and **S K Sahu**; Free vibration analysis of Fiber metal laminated plates, *International Conference on Theoretical, Applied Computational and Experimental Mechanics ICTACEM*, IIT Kharagpur, Dec 28-30, 2017
8. **Sahu, S.K.**, Rath, M.K., Sahoo, R. (2012), Parametric instability of laminated composite doubly curved shell panels subjected to hygrothermal environment *Advanced Materials Research*, 383-390, pp. 3212-3216. Cited 1 time.
9. **Sahu, S.K.**, Asha, A.V., Nagaraju, S. (2008), Vibration and stability of cross-ply laminated twisted cantilever plates Springer Proceedings in Physics, 126, pp. 347-355. Cited 1 time. DOI: 10.1007/978-1-4020-9100-1_36.
10. **Sahu S. K.**, 2014, Stability of laminated composite plates, *International Conference on Advances in Mechanics engineering, (ICAME-2014)*, Hong Kong, July 28-29,.
11. **Sahu S. K.** 2013, Recent advances in solid mechanics, ICAME-2013 conference, Jakarta, Indonesia, July 13-14.
12. **Sahu S. K.**, H. S. Panda and P.K. Parhi, 2013, Thermal effects on vibrations of delaminated doubly curved panels, ICMAT, Singapore, June 30-July 5.
13. Nayak N, Meher S. and **Sahu S. K.**, 2013, Experimental and numerical study on dynamic characteristics of laminated composite plates, ICMAT, Singapore, June 30-July 5.
14. **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, IITBHU, 4th ICRAACM, Feb 18-21, Goa.
15. J Mohanty, **S. K Sahu**, P. K Parhi, 2010, Buckling behavior of delaminated woven fiber glass/epoxy composite plates, *International Conference on Theoretical, Applied Computational and Experimental Mechanics ICTACEM 2010*, IIT Kharagpur, Dec. 27-29.
16. M. K Rath and **S. K. Sahu**, 2010, Dynamic response of woven fiber composite plates in hygrothermal environment, *International Conference on Theoretical, Applied Computational and Experimental Mechanics ICTACEM 2010*, IIT Kharagpur, Dec. 27-29.
17. **Sahu, S. K.** and Asha A. V, **2007**, Vibration and stability of cross-ply laminated twisted cantilever plates, International Conference on Vibration Problems, BECS, Kolkata, Feb 01-Feb. 03.
18. **Sahu, S. K.** and Asha, A.V., 2007, Dynamic Stability of twisted laminated composite cross-ply panels, *International Conference on Theoretical, Applied Computational and Experimental Mechanics (ICTACEM 2007)* during December 27-29 at IIT, Kharagpur.
19. **Sahu, S. K.** and Asha, A.V., 2006, Dynamic Stability of laminated composite twisted curved panels, IXth International Conference on “Recent advances in Structural Dynamics”, July, Institute of Sound and Vibration Research, University of Southampton, U.K.
20. **Sahu, S. K.**, Das, S, and Asha A.V. 2004, Stability of laminated composite curved panels with cutout using finite element method, International Conference on Theoretical, Applied

Computational and Experimental Mechanics (ICTACEM 2004) during December 28-31 at IIT, Kharagpur.

21. **Sahu, S. K.**, Das, B., and Ray, B.C. 2004, Effects of matrix types and loading speed on the failure behaviour of FRP composites, Proceedings of International Conference, *ISTAM 2004* at NIT, Rourkela, India, during December 27-30, 25-32.
22. **Sahu, S. K.** and Datta, P.K. 2001, Free vibration of doubly curved panel with cutout, International Conference on *Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 2001)* during December at IIT, Kharagpur.
23. **Sahu, S. K.** and Datta, P.K. Parametric instability of composite curved panel subjected to concentrated edge loading, First International conference on *Vibration Engineering and Technology of Machinery, VETOMAC-I*, Oct 25-27, IISC, Bangalore.
24. **Sahu, S. K.** and Datta, P.K. 2000, Parametric instability of laminated composite rectangular plates subjected to concentrated in-plane edge loading, *International Structural Engineering Convention (SEC 2000)*, IIT, Mumbai.
25. **Sahu, S. K.** and Datta, P.K. 1998, Buckling and vibration of rectangular plates subjected to partial edge loading having mixed boundary condition, International Conference on *Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 1998)* during December, at IIT, Kharagpur.
26. **Sahu S. K.**, 2012, Buckling of woven fiber composite plates, Asian Conference on functional graded materials, IIT Delhi, Dec.
27. S. Mishra and **S. K. Sahu**, 2012, Vibration of twisted plates subjected to hygrothermal loading, VSSUT, Burla.
28. Namita Nanda and **S. K. Sahu**, 2010, Dynamic analysis of composite delaminated shell panels using finite element method, CHAMIST-2010, NIT Rourkela.
29. J Mohanty **S. K. Sahu**, P.K. Parhi and B. C. Ray, 2010, Vibration analysis of delaminated woven fiber glass/epoxy composite Plates, CHAMIST-2010, NIT Rourkela.
30. B. B. Mukharjee, U. K. Mishra and **S. K. Sahu**, 2010, Dynamic Stability of cracked beam using finite element method, CHAMIST-2010, NIT Rourkela.
31. Gupta, D Samal and **S. K. Sahu**, 2010, Transient Response of laminated composite Plates in thermal environments, CHAMIST-2010, NIT Rourkela.
32. Namita Nanda and **S. K. Sahu**, 2010, Bending and vibration analysis of delaminated composite shells, RAF&SM-2010, NIT Rourkela.
33. B. B. Mukharjee, U. K. Mishra and **S. K. Sahu**, 2010, Vibration and buckling analysis of a multiple cracked beam, RAF&SM-2010, NIT Rourkela
34. Rajesh Kumar **S. K. Sahu** and A. V. Asha, 2010, Experimental assessment of inter laminar shear strength (ILSS) of woven glass fiber composite beam by short beam strength test, RAF&SM-2010, NIT Rourkela
35. **Sahu, S. K.** and Patel G. 2006, Buckling of curved panels subjected to non-uniform loading using finite element method. National Conference on "Emerging Trends in Nano Technology and innovations in design and manufacturing, Feb 18-19, NIT, Rourkela.

36. **Sahu, S. K.**, Mohanty, S.C. and Kavi, N, 2003, Dynamic stability of a pretwisted cantilever beam with localised damage under periodic axial force, All India Seminar on *Emerging Trends in Structural Mechanics and Composites (ETSMC-2003)* during Nov.1-2, at NIT, Rourkela.
37. **Sahu, S.K.**, Behera, R.K. and Parhi, DRK, 2003, Vibration analysis of fixed-fixed beam with transverse cracks, All India Seminar on *Emerging Trends in Structural Mechanics and Composites(ETSMC-2003)* during Nov.1-2, at NIT, Rourkela
38. **Sahu S.K.** and **Sahoo A. K.** 1998, Shear Strength of Fibre Reinforced Concrete Deep Beam, National Seminar on *Advances in Special Concretes* at Bangalore.
39. **Sahu S. K.** and Jain K. K. 1992, On accelerated curing of structural concrete with flyash, National Conference on *Cement and Building materials from Industrial Waste*, Hyderabad.

S.K. Sahu

Prof. Shishir Kr. Sahu
Professor,(HAG) Civil Engineering
National Institute of Technology, Rourkela
Rourkela-769008, Odisha, India
Email; sksahu@nitrkl.ac.in,sksahu.nitrkl@gmail.com
Phone: 06612462322, Cell; 09437145236