# Dr. VINEET SAHOO


## Present Address

*Assistant Professor, Dept. of Mechanical Engineering, National Institute of Technology Jamshedpur, Jamshedpur, Jharkhand, India, PIN: 831014*

*Gender: Male*

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## Academic Profile

| Professional Degree | Institution/University | Passing Year | Subject | Division/Marks in Percentage/CGPA |
|---|---|---|---|---|
| Ph.D. | Indian Institute of Technology Kharagpur, India | 25th April 2017 | Mechanical Engineering | |
| | **Thesis Title / Supervisor** | Static Load Sharing by Tooth Pairs in Involute Internal-External Gear Set- with specific reference to Strain Wave Gearing. *(Supervisor : Prof. Rathindranath Maiti)* | | |
| M.Tech | Indian Institute of Technology Kharagpur, India | 2012 | Mechanical System Design | 1st. / 8.78 (out of 10) |
| | **Thesis Title / Supervisor** | Investigation On Load Sharing By Internal-External Involute Gear Pairs In Contact. *(Supervisor : Prof. Rathindranath Maiti)* | | |
| B.E. | Utkal University Bhubaneswar, Orissa | 2006 | Mechanical Engineering | 1st. / 66.66% |
| Higher Secondary (10+2) | Council of Higher Secondary Education(CHSE), Orissa | 2002 | Science | 1st. / 62.8% |
| Secondary (10th) | Board Secondary Education (BSE) Orissa | 2000 | | 1st. / 78.6% |

## Experiences

| Duration | Organization | Position Held/ Nature of Work |
|---|---|---|
| Oct 2006- Apr 2007 | Dept. of Mechanical Engineering, Trident Academy of Technology, Bhubaneswar | Lecturer / Teaching (Pre-PhD) |
| Apr 2007- July 2012 | Dept. of Mechanical Engineering, Institute of Technical Education and Research, Bhubaneswar | Lecturer / Teaching (Pre-PhD) |
| July 2017-May 2018 | Dept. of Mechanical Engg. National Institute of Technology (NIT) Tadepalligudem, Andhra Pradesh, India | Asst. Professor/Teaching (Post-PhD) |
| June 2018-Cont… | Dept. of Mechanical Engg. National Institute of Technology (NIT) Jamshedpur, Jharkhand, India | Asst. Professor/Teaching (Post-PhD) |

| | |
|---|---|
| **Broad Area** | Mechanical System and Component Design- Theory and Experiment and CAD |
| **Specific Area** | Design of mechanical **power transmitting devices**, Structural analysis of **superconducting tape and power cable** |
| **Expertise** | Finite Element Analysis, Solid Modeling, Strain Measurement in experiment |

## Publications

## Journal Publication

1. **Sahoo V** (2021): Load Sharing by Tooth Pairs and Stresses in Flex-Gear Cup on Assembling Conventional and Split-Cam SWG with Conventional Involute Toothed Gear Set In Harmonic Drive. ***Journal of Mechanical Engineering Sciences (JMES)*** **(In press)**
2. Sinha R, **Sahoo V,** Paswan M. (2021): Radial Load Distribution by Balls in a Ball Bearing with Variable Clearance. **Mechanics Based Design of Structures and Machines**, (**online**)
3. Routh B, **Sahoo V**, Sobczyk A.S. (2021): Performance Analysis of Asymmetric Toothed Strain Wave Gear. **Proceedings of IMechE (UK), Journal of Mechanical Engineering Science, Part C (online)**
4. Sinha R, **Sahoo V.** (2020): Effect of Relative Movement between Bearing Races on Load Distribution on Ball Bearings. ***SN Applied Sciences***. 2(12), 1-12 DOI: 10.1007/s42452-020-03833-5 **(Online)**
5. Das I, **Sahoo V,** Rao VV. (2020): Structural Analysis of High Temperature Superconducting Cable. ***PhysicaC: Superconductivity and its Applications***; DOI: 10.1016/j.physc.2020.1353771. **(online)**
6. **Sahoo V**, **Mohanto B,** Maiti R. (2020): Stresses in flex gear of a novel harmonic drive with and without pay load, ***Australian Journal of Mechanical Engineering***, DOI: 10.1080/14484846.2020.1769462. (Online)
7. **Sahoo V**, Mohanto B, Maiti R. (2018): Effect of Cam Insertion on Stresses in Harmonic Drive in Industrial Robotic Joints. ***Procedia Computer Science***, Vol. 133, Pages 432-439
8. **Sahoo V**, Maiti R. (2018): Load Sharing by Tooth Pairs in Involute Toothed Harmonic Drive with Conventional Wave Generator Cam. ***Meccanica,*** 53, 373-394. DOI: 10.1007/s11012-017-0698-x.
9. **Sahoo, V.** and Maiti, R. (2018): Evidence of Secondary Tooth Contact in Harmonic Drive, with Involute Toothed Gear Pair, through Experimental and Finite Element Analyses of Stresses in Flex-Gear Cup, ***IMechE, Part C: Journal of Mechanical Engineering Science***, 232(2), 341-357. DOI:10.1177/0954406216682541**.**
10. **Sahoo V.**, Mukherjee U,. Das M.K., Maiti R., (2017): Visualization of Leakage Flow through Active Contacts in External Toothed Gear Pumps-CFD and Photo Imaging Techniques, ***Journal of Flow Visualization and Image Processing,*** 23(3–4), 345–376 DOI: 10.1615/JFlowVisImageProc. 2017019580.
11. **Sahoo, V**. &Maiti, R. (2016): Static Load Sharing by Tooth Pairs in Contact in Internal Involute Spur Gearing with Thin Rimmed Pinion, ***Proceedings of IMechE (UK), Journal of Mechanical Engineering Science, Part C***, 230(4), 485-499. DOI: 10.1177/0954406215618424.
12. Pradhan, AR., **Sahoo, V**. (2020): Inter-Chamber Leakage Flow through the Transition Contacts in Epitrochoid Generated Star and Ring Hydrostatic Units. **(In Review)**

## Conference Publication

1. **Sahoo, V.** (2021): Effect of cavitation on leakages through active contact of involute toothed external gear pump, ***1st National Conference on Materials, Mechanics & Modelling*****, Jamshedpur**, India 29th & 30th Aug 2020, AIP Conference Proceedings 2341, 020041 (2021) https://doi.org/10.1063/5.0049950

2. **Sahoo V**, Mohanto B, Maiti R. (2018): Contact loading of split cam SWG with flex-gear cup: A theoretical analysis. ***IFToMM Asian Mechanism and Machine Science 2018***, Bangalore, India**.**
3. **Sahoo V**, Maiti R (2018): Initial Tooth Contacts and Stresses in Flex-gear Cup on Assembling the Conventional Involute Toothed Gear Set and Cam in Harmonic Drive. ***IFToMM Asian Mechanism and Machine Science 2018***, Bangalore, India.
4. Roy D, Maiti R, Das P.K. & **Sahoo V** (2018):FEM estimation of deformations and gaps in form closed epitrochoidal gears used in HST units. ***International Gear Conference***, 29-30 Aug 2018, Lyon France.
5. **Sahoo V**, Roy D, Maiti R. (2017): Analysis of Leakage Flow through the Flank Contacts in Transition Zone in Involute External Toothed Gear Pump. ***ASME/BATH 2017 Symposium on Fluid Power and Motion Control***, (October 16-19, Florida, USA), Paper No. FPMC2017-4287, pp. V001T01A044, doi:10.1115/FPMC2017-4287.
6. Maiti, R., Kumar, S. **Sahoo, V**. (2016) Performance comparison of half and full toroidal traction drive CVTs. ***Int. Conf. and exhibition on Automobile Engineering***, *Valencia, Spain*, December 1-2 2016, DOI: 10.4172/2167-7670.C1.006.
7. **Sahoo, V.** & Maiti, R. (2016): State of Stress in Strain Wave Gear Flexspline Cup on Insertion of Drive Cam - Experiment and Analysis, ***2016 International Conference on Mechanical Engineering, World Congress on Engineering***, 29 June - 01 July 2016, London, UK, Vol. II, pp. 966-971.

## Reviewer Experience

- Reviewer of ASME/BATH Fluid Power and Motion Control Conference
- Reviewer of Engineer Australia Technical Journal, Taylor and Francis
- Reviewer of Mechanics Based Design of Structures and Machines, An International Journal, Taylor and Francis
- Reviewer of Mechanism and Machine Theory, Elsevier
- Reviewer of Meccanica, Springer

## Membership

- Life Member of IFFTOMM

## Declaration

I do here-by declare that all the statements and data given above are true in my knowledge and belief.

Place: Jamshedpur

Date: