Biodata

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Educational Qualification:

Degree	Branch/Subject	Year	Board/University	%age
Ph. D	Mechanical Engineering	2022	NIT, Agartala	87.5
M.Tech.	Mechanical Engineering	2014	NIT, Rourkela	84.6
B.Tech.	Mechanical Engineering	2009	B.P.U.T(Govt.) Rourkela	6.78
Intermediate	12th std.	2001	C.H.S.E, Orissa	72.44
High School	10th std.	1999	B.S.E, Orissa	73.66

Professional Experience:

S. No	Post held	Organization	Duration		Experience in (Years and Months)
			From	To	
	Assistant Professor	Parala Maharaja Engineering College, Berhampur	02/02/2024	Till now	2 Year 4 Month
1	Assistant professor & Head	Gandhi Institute for Education & Technology, Baniatangi	10/02/2022	30/01/2024	1 Year 11 Month
2	Asst.Professor	Gandhi Institute for Technology, BBSR	10/07/15	12/01/17	1 Year 6 Month
3	Asst.Professor	M.E.M.S, Balasore	01/07/14	09/07/15	1 Year
4	Lecturer	G.H.I.T.M, Puri	09/03/10	19/07/12	2 Year 4 month

- **PhD Thesis Title:** Study of Microstructure and Mechanical Property Analysis of Friction Stir Scarf Welded AA6061/ SiCp Reinforced Composite Joints
- **M.Tech Thesis Title:** Hydrodynamic analysis of different textured profile thrust bearing
- **Subject Taught or Comfortable to Teach:** Basic Mechanical Engineering**,** Engineering Mechanics**,** Mechanics of solid, Advance mechanics of solid, Engineering thermodynamics, Theory of machine, Machine Design. Fluid Mechanics
- **Research Area:**

  Friction Stir Welding, Casting, Tribology

Achievements

- ☆ Best paper presentation award in 38th National Convention of Metallurgical and Materials Engineering & Conference on "Capacity Building in Process Metallurgy" to be held on 26-27th July, 2025 at NIT Rourkela Campus.
- ☆ Best paper presentation award in 1st National conference On Power train, Mechanical Engineering, and Computing (PMEC-2024)
- ☆ Best paper presentation award in International conference On Applications of Mathematical & OR Models for Sustainable Viksit Bharat (ICORSVB 2025)
- ☆ Resource person in faculty development programme organized by Amity School of Engineering and Technology, Amity University, Kolkata.
- ☆ Reviewer in National and International journal (Silicon, Defence Technology, Jordan Journal of Mechanical and Industrial Engineering)

List of Publication:

1. **Sethi, D**., Behera, R.,Behera , & A.,Behera, R. (Accepted). 'Mechanical and Tribological Performance of Al6082 Composites Reinforced with Micro-Sized SiC Particles via Stir Casting. Journal of Mechanical Engineering Science, Part C. Sage **, (Accepted) (SCIE, I.F:1.9).[Q2]**
2. **Sethi, D**., Acharya, U., Kumar, S., Shekhar, S., & Roy, B. S. (2022). Effect of tool rotational speed on friction stir welded AA6061-T6 scarf joint configuration. Advanced Composites and Hybrid Materials, 1-16. Springer, **(SCIE, I.F:23.2).[Q1]**

3. **Sethi, D.,** Acharya, U., Shekhar, S., & Roy, B. S. (2021). Applicability of unique scarf joint configuration in friction stir welding of AA6061-T6: Analysis of torque, force, microstructure and mechanical properties. Defence Technology. **(SCIE,I.F:5) [Q1]**
4. **Sethi, D**., Acharya, U., Kumar, S., Shekhar, S., & Roy, B. S. (2021). Effect of Reinforcement Particles on Friction Stir Welded Joints with Scarf Configuration: an Approach to Achieve High Strength Joints. Silicon, 1-14. (**SCIE, I.F:2.8). [Q2]**
5. **Sethi, D.,** Kumar, S., Shekhar, S., & Roy, B. S. (2021). Friction stir welding of AA7075-T6/TiB2 in situ cast composites plates using scarf joint configuration. Advances in Materials and Processing Technologies, 1-13. **(ESCI, IF: 2.0), [Q2].**
6. **Sethi, D**., Acharya, U., Medhi, T., Shekhar, S., & Roy, B. S. (2021). Microstructural and mechanical property of friction stir welded Al7075/TiB2 aluminium matrix composite. Materials Today: Proceedings, 46, 9180-9186. (**Scopus ,**)
7. **Sethi, D**., Kumar, S., Choudhury, S., Shekhar, S., & Roy, B. S. (2020). Synthesis and characterization of AA7075/TiB2 aluminum matrix composite formed through stir casting method. Materials Today: Proceedings, 26, 1908-1913. (**Scopus,**)
8. Choudhury, S., Das, R**., Sethi, D**., Roy, J., & Roy, B. S. (2023). Critical Assessment 43: Microstructural and mechanical properties of friction stir additively fabricated SiC-Reinforced AA6061 build. Materials Science and Technology, 39(18), 3090-3110. **(SCI, I.F:1.7). [Q2]**
9. Choudhury, S., Acharya, U., **Sethi, D**., Roy, J., & Roy, B. S. (2024). Synergic enhancement of ductility and toughness in friction stir additively fabricated AA6061-T6 build. Journal of Adhesion Science and Technology, 38(16), 3092-3118. **(SCIE, I.F:2.7). [Q2]**
10. Suman, S., **Sethi, D**., Acharya, U., & Roy, B. S. (2023). Exploring the Influence of SiC Particles on Temperature Variations, Microstructural Evolution, and Mechanical Characteristics in the Friction Stir Processing of AA6061-T6 Plates. Silicon, 1-13. **(SCIE, I.F:2.8). [Q2]**
11. Suman, S., **Sethi, D**., Bhargava, M., & Roy, B. S. (2022). Investigating the effect of multi-pass friction stir processing of SiC particles on temperature distribution, microstructure and mechanical properties of AA6061-T6 plate. Silicon, 1-13. **(SCIE, I.F:2.8). [Q2]**
12. Kumar, S., Chaudhary, S**., Sethi, D**., Paulraj, J., Bhargava, M., & Roy, B. S. (2022). Effect of process parameters on third generation of friction stir welded Al–Li alloy plates. CIRP Journal of Manufacturing Science and Technology, 38, 372-385. Elsevier, **(SCIE, I.F:4.6). [Q1]**
13. Kumar, S., Acharya, U**., Sethi, D.,** Medhi, T., Roy, B. S., & Saha, S. C. (2020). Effect of traverse speed on microstructure and mechanical properties of friction-stir-welded third-generation Al–Li alloy. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 42(8), 1-13. **(SCIE, I.F:1.8). [Q2]**
14. Kumar, S., Chaubey, S. K., **Sethi, D**., Saha, S. C., & Roy, B. S. (2021). Performance Analysis of Varying Tool Pin Profile on Friction Stir Welded 2050-T84Al-Cu-Li Alloy Plates. Journal of Materials Engineering and Performance, 1-12. **(SCIE, I.F:2.8). [Q2]**

15. Acharya, U., Medhi, T., **Sethi, D**., Choudhury, S., Banik, A., Saha, S. C., & Roy, B. S. (2021). A Study on the Implication of Modified Joint Configuration in Friction Stir Welding. Soldagem & Inspeção, 26. **(SCIE, I.F:.33). [Q4]**
16. Acharya, U., Choudhury, S., **Sethi, D**., Akinlabi, E., & Roy, B. S. (2024). Enhancing joint performance in friction stir welding through tailored double-butt-lap geometry. Welding in the world, 68(5), 1089-1101. **(SCIE, I.F:2.4). [Q1]**
17. Acharya, U., Choudhury, S., Sethi, D., Roy, B. S., & Thirugnanasambandam, A. (2025). Thermal dynamics and torque-force interplay in friction stir welding of advanced aluminium composites. *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, 14644207251338477**.(SCIE,I.F:2.5)[Q2]**
18. Das, R., Choudhury, S., **Sethi, D**., Medhi, T., & Roy, B. S. (2024). Enhanced corrosion resistance and mechanical behavior in AA2024-T3 alloy composite via friction stir processing with Zn incorporation. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 09544089241276351. **(SCIE, I.F:2.3). [Q2].**
19. Samatra C, **Sethi D**, Effect of weight percentage of coconut ash particles on mechanical and tribological property of AA6061/CSAp metal matrix composite, Advances in Materials and Processing Technologies (**ESCI, Submitted**).
20. Bhoi S, **Sethi D,** Exploring the effect of weight percentage of copper particles on thermo mechanical property of polypropylene copper polymer composite. (**SCI, Defence Technology,Submitted**)
21. Suman, S., **Sethi, D**., Meher, A., Bhargava, M., & Roy, B. S. (2022). Effect of tool rotational speed on microstructure and mechanical properties of AA6061/SiC surface composites using friction stir processing. Materials Today: Proceedings. **(Scopus ,)**
22. Choudhury, S., Medhi, T., **Sethi, D**., Kumar, S., Roy, B. S., & Saha, S. C. (2020). Temperature distribution and residual stress in Friction Stir Welding process. Materials Today: Proceedings, 26, 2296-2301. **(Scopus)**
23. Kumar, **S., Sethi, D**., Choudhury, S., Roy, B. S., & Saha, S. C. (2020). An experimental investigation to the influence of traverse speed on microstructure and mechanical properties of friction stir welded AA2050-T84 Al-Cu-Li alloy plates. Materials Today: Proceedings, 26, 2062-2068. **(Scopus ,)**
24. Kumar, S., **Sethi, D**., Choudhury, S.R Das, Roy, B. S., & Saha, S. C. (2020). Effect of tool pin profiles on surface roughness of friction stir welded 2050-T84 Al-Cu-Li alloys. Mines, Metal& Fuels. **(Scopus)**
25. Das, R., **Sethi, D**., & Roy, B. S. (2021). Microstructure and mechanical characteristics of an in-situ synthesis of AA7075/TiB 2 metal matrix composite. In E3S Web of Conferences (Vol. 309). EDP Sciences. **(Scopus)**
26. Venkatesh, R., **Sethi, D**., Kolli, V., & Roy, B. S. (2019). Experimental investigation of Aluminium Matrix Composite production and joining. Materials Today: Proceedings, 18, 5276-5285. **(Scopus).**
27. Acharya, U., Choudhury, S., Sethi, D., Akinlabi, E., Saxena, K. K., & Roy, B. S. (2024). A comprehensive investigation on various welding facets for FSW of advanced structural AMC.

Patent Detail:

No	Details	Year
1	Lightweight five-axis CNC drilling machine **(Granted)** Application No: 494704-001	2026
2	Duel Axis Outsider Rear View Mirror **(Granted)** Application No: 491979-001	2026
3	Pallet transporter trolley Application No: 478697-001 (**Granted**)	2025
4	Improvement of overall efficiency of four stroke engine by positive scavenging using vacuum exhaust Application No: 457260-001 (**Published**)	2025
5	Weight reduction of the piston using auto generation of tool Application No: 460233-001 (**Granted**)	2025
6	Intelligent forging press machine (**Granted**) Application No: 461195-001	2025
7	Portable 5-axis milling machine, Application No: 418378-001 (**Granted**)	2024
8	Device for Friction Stir Welding, Application No: 436076-001 (**Granted**)	2024
9	Strength Enhancement joint Configuration Design in Friction StirWelding, Application No: 202431037628 (**Accepted**)	2024
10	Friction Stir Based Additive Manufacturing Device, Application Number :402542-001 **(Granted)**	2023
11	ADVANCED SHOCK ABSORBER, Design number: 6302748 (**Granted)**	2023
12	Agriculture Water Level Controlling and Monitoring using IoT-Based Technology. Application Number-202131047456 (**Accepted**)	2022
13	Method of an automatic Motor Operated Jack., Application No: 202231029876 (**Accepted**)	2022

Sponsor Project:

Multi-Purpose Desert Cooler

Issuing Authority- M.S.M.E, Govt of India, Amount (Rs.) - 7.5 Lakhs

Conference/ Seminar Detail

1. 38th National Convention of Metallurgical and Materials Engineering & Conference on "Capacity Building in Process Metallurgy" to be held on 26-27th July, 2025 at NIT Rourkela Campus.
2. International conference On Applications of Mathematical & OR Models for Sustainable Viksit Bharat (ICORSVB 2025). Parala Maharaja Engineering College, Berhampur, Ganjam, Odisha. (21-22Feb 2025))
3. *1st National conference On Power train, Mechanical Engineering, and Computing (PMEC-2024). Parala Maharaja Engineering College, Berhampur, Ganjam, Odisha.*
4. *10th International Conference on Materials Processing and Characterization (ICMPC-2020), GLA, Mathura.* (*21-23 February 2020)*
5. *2nd International Mechanical Engineering Congress-2019, N.I.T, Tiruchirappali (29 November-1st December 2019)*
6. *Recent Advancement in Mechanical Engineering & Engineering Material (RAMEEM-2016),GITA, Bhubaneswar. (29-30th April 2016)*
7. *International Conference on"Recent Innovations in Engineering and Technology",GIET,Gunpur.* (*4-5 November 2016)*
8. An International Conference on"Innovation In Design, Manufacturing And Concurrent Engineering (IDMC2014), N.I.T Rourkela. (01-03 March 2014)
9. *4th International Conference on Recent Innovations and Technological Developments in*
   Mechanical Engineering (ICRITDME-2021)JECRC, Jaipur, India. March 11 - 12, 2022
10. *National Conference on Recent Advances in Technology (NCRAT-2021) GIFT, Bhubaneswar.* (*29 th may 2021)*
11. *International Conference on Sustainable Nanotechnology and Nano material (ICONN-2022) Chandigarh,India.(* 25-26 August2022)

Workshop and FDP Detail

1. Six Days Training Program (Online) on "Green Hydrogen and Flex-Fuel Technologies for Sustainable Mobility" Organized by the School of Mechanical Engineering, Manipal Institute of Technology, Manipal (13.-18 Mar 2026)
2. Five Days Online Faculty Development Program on "Future Prospects in Renewable Energy and Waste Heat Recovery Systems"Organized by the Department of Mechanical Engineering, Dream Institute of Technology, Kolkata (17.-21 Dec 2024)
3. 3 Days Online Faculty Development Program on "Emerging Trends in Design, Materials and Manufacturing" organized by the Department of Mechanical Engineering, Dream Institute of Technology, Kolkata (23- 25 may 2024).
4. Design and Implementation Of Distributed Database Along with Impact on IOT, GIET,Baniatangi, 18-23rd Dec/2023
5. Effective Teaching Learning Process Using Instructional Media NITTTR(Kolkata) (09-11th- Oct 2023).
6. Exposure Visit Cum-Training Program under " Mentor-Mentee Program" Silicon Institute of Technology (19-20th Apr/2022)
7. Online FDP on recent research trends in computational and conventional engineeringAmity University.(13-17th July/2021)
8. Short-term Online QIP Course on Mechanical Behaviour of Materials, IIT Kanpur (15-20th,Mar/2020)
9. Sustainable Manufacturing and Advancement in Non-Traditional machining approaches NIT Agartala (22-26th Jan-2020).
10. Recent Advances in Material Science and Engineering NIT Agartala,(19-23r Aug-2019)
11. Advanced Materials (Fabrication, Characterization and Applications)" KIIT University (20-25th July,2019)
12. Smart and Sustainable City Infrastructure, NIT Agartala (29th Nov. 2018)
13. 6-day GIAN Course on "Workshop on Aerospace Materials: Microstructure, Fracture, and Fatigue.IIT Gandhinagar (16-22th June-2018)
14. Value Analysis-"An Ethical Vision on Engineering Prospects",NIT Agartala (27-31th May/2018).
15. One day Workshop on Current Trends in Scientific Research NIT Agartala (1st Feb. 2018)
16. Work shop on Energy Production and Management NIT Agartala(19-23rd Mar/2018)

Professional Membership:

Associate Member of Institute of Engineers (AMIE), Institute of Engineers India (IEI).

Coordinator Institute Innovation Center, GIET Baniatangi.

Present Address:
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Permanent Address.
Durjyodhan Sethi, At/Po- Ankushpur Via-Kukudakhandi
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Referee:

1. Dr. Barnik Saha Roy, Assistant Professor (Gr-I), Department of Mechanical Engineering, NIT Agartala, Contact: E-mail- barnik.me@nita.ac.in
2. Dr. Shashank Shekhar, Associate Professor, Department of Materials Science and Engineering IIT Kanpur, Contact: Email- shashank@iitk.ac.in
3. Dr. Subhash Chandra Saha, Professor (Retd.), MED, NIT Agartala. Contact: -mail- subashchandrasaha@yahoo.in

I hereby declare that the above information is true to the best of my knowledge

Durjyodhan Sethi