Resume of Prof. Siba Sankar Mahapatra

Name and Designation: Siba Sankar Mahapatra
Professor (HAG)

Organization: Department of Mechanical Engineering
National Institute of Technology Rourkela 769008 Odisha

Educational Qualification

Ph.D. from Indian Institute of Technology, Kharagpur in 1999.
Thesis Title: Studies on Some Aspects of Just-in-Time (JIT) Implementation in Indian Manufacturing Organizations

Professional Experience

Organization with address	Post held	From	To
Department of Mechanical Engineering Regional Engineering College (Presently National Institute of Technology) Rourkela	Lecturer	20th October 1986	19th October 1992
Department of Mechanical Engineering Regional Engineering College Rourkela	Senior Lecturer	20th October 1992	14th January 1999
Department of Mechanical Engineering Regional Engineering College Rourkela	Assistant Professor	15th January 1999	30th June 2007
Department of Mechanical Engineering National Institute of Technology Rourkela	Professor	1st July 2007	27th February 2019
Department of Mechanical Engineering National Institute of Technology Rourkela	Professor (HAG)	28th February 2019	Continuing

Specialization and Expertise

Specialization : Additive Manufacturing; Non-traditional Machining; Soft Computing; Prediction Tools; Non-traditional Optimization; Modelling & Simulation.

Expertise : Expertise in empirical modelling

Awards and Distinctions

1. Brundaban Sahu Memorial Award for the technical paper entitled “Cell Formation Using Workload Data in Cellular Manufacturing Systems – A Metaheuristic Approach”, authored by Dr.S.S.Mahapatra and R.SudhakaraPandian on 47th Annual Technical Session of Orissa State Center, Institution of Engineers (India) on 22.01.06.
2. Brundaban Sahu Memorial Award for the technical paper entitled “Performance Measurement and Benchmarking of Technical Institutes in India: A Data Envelopment Analysis Approach”, authored by M.S.Khan and Dr. S.S.Mahapatra on 48th Annual Technical Session of Orissa State Center, Institution of Engineers (India) on 30.01.07.
3. Secured second best paper prize for the paper entitled “Managing Service Quality in Technical Institutes: A Data Envelopment Analysis Approach” by M.S.Khan, S.S.Mahapatra and Shreekumar, at 1st International Conference on Quality Management Practices (ICQMP – 07), 16-17th August 2007, ITC Grand Central, jointly organized by Institute for Technology and Management, Navi Mumbai and National Centre for Quality Management, Mumbai.
4. Brundaban Sahu Memorial Award for the technical paper entitled “A Novel Immune Approach for Solving Machine Loading problem in Flexible Manufacturing System”, authored by S.S.Mahapatra and Sandhyarani Biswas on 49th Annual Technical Session of Orissa State Center, Institution of Engineers (India) on 20.01.08.
5. Professor B.G.Raghavendra Memorial Award for Best Student paper entitled “Robotic Assembly of Printed Circuit Board using Evolutionary Algorithms”, authored by A.K.Shrivastava and S.S.Mahapatra in the International Conference on Operational Research for Urban and Rural Development held at Thiagarajar College of Engineering, Madurai, India during December 15-17, 2010.
6. Second best paper award for the paper entitled “Optimization of FDM Process Parameters”, authored by Anoop Kumar Sood, R.K.Ohdar and S.S.Mahapatra in the National Conference on Design and Manufacturing (NaConDM2011) organized by Indian Institute of Information Technology Design and Manufacturing (IIITD & M) Kancheepuram held at Indian Institute of Technology Madras Campus Chennai during May 27-28, 2011.
7. Best paper award for the paper entitled, “Parametric Optimization of Electrochemical Discharge Machining of Silicon Nitride Ceramics using Evolutionary Optimization Techniques”, authored by V.R.Kumar, S.S.Mahapatra, A.Ganguly and S.K.Patel in the International Conference on

Emerging Trends in Intelligent Sustainable Technologies, Information Technology Society of India, Pune, India, 27th April 2013.

8. Highly Commended Award Winner at the Literati Network Awards for Excellence 2012 for the paper, "Establishing green supplier appraisement platform using grey concepts" contributed by Nitin Kumar Sahu, Saurav Datta, and Siba Sankar Mahapatra published in Grey Systems: Theory and Application, Vol. 2, Iss. 3, 2012, pp. 395-418.
9. Highly Commended Award Winner at the Literati Network Awards for Excellence 2013 for the paper, "Robot Selection Based on Grey-MULTIMOORA Approach" contributed by Nitin Kumar Sahu, Saurav Datta, and Siba Sankar Mahapatra published in Grey Systems: Theory and Application, Vol. 3, Iss. 2, 2013, pp. 201-232.
10. **India's most prolific paper publisher in Business, Management and Accounting as cited by CAREER 360 Magazine in March 2014 Issue.**
11. **Conferred Fellowship Award from Indian Institution of Industrial Engineering on 23rd October 2016 at Nagpur during 58th National Convention.**
12. Awarded for Outstanding Contribution in Reviewing in April, 2017 by Journal of Materials Processing Technology.
13. Awarded for Outstanding Contribution in Reviewing in June, 2017 by Groundwater for Sustainable Development.
14. Awarded for Outstanding Contribution in Reviewing in July, 2017 by Measurement.
15. **Outstanding Research Faculty Award in Business, Management and Accounting discipline by Career 360 based on Scopus data at Teen Murti Bhavan, New Delhi on 20.03.2018 by Honourable Minister for Human Resources Development Prakash Javedkar.**
16. Awarded for Outstanding Contribution in Reviewing in September, 2018 by Engineering Applications of Artificial Intelligence.
17. Awarded for Outstanding Contribution in Reviewing in July, 2018 by Waste Management.
18. Awarded **Top Cited Paper** (2015-2019) for the paper, "A simulation approach for estimating flank wear and material removal rate in turning of Inconel 718" authored by Rajiv Kumar Yadav, Kumar Abhishek, Siba Sankar Mahapatra in the journal Simulation Modelling Practice and Theory.
19. Awarded **Top Cited Paper** (2015-2019) for the paper, "Simulation and optimization of machining parameters in drilling of titanium alloys" authored by Suman Chatterjee, Siba Sankar Mahapatra, Kumar Abhishek in the journal Simulation Modelling Practice and Theory.
20. **Featured in Indian Researchers in Stanford University's Top 2% Scientist for the Year 2020, 2021 and 2022.**

Top ten publications in last five years

1. Kumar Abhishek, Saurav Datta and **Siba Sankar Mahapatra**, "Multi-objective Optimization in Drilling of CFRP (Polyester) Composites: Application of a Fuzzy Embedded Harmony Search (HS) Algorithm", Measurement, Vol. 77, 2016, pp. 222-239.
2. Suman Chatterjee, **Siba Sankar Mahapatra**, and Kumar Abhishek, "Simulation and Optimization of Machining Parameters in Drilling of Titanium Alloys", Simulation Modelling Practice and Theory, Vol. 62, 2016, pp. 31-48.
3. Suman Chatterjee, **Siba Sankar Mahapatra**, Vijay Bhardwaj, Ambar Choubey, Brahma N. Upadhyay and Kushvinder S. Bindra, "Drilling of Micro-holes on Titanium Alloy using Pulsed Nd:YAG Laser: Parametric Appraisal and Prediction of Performance Characteristics", Proceedings of Institution of Mechanical Engineers Part B: Journal of Engineering Manufacture, 2018, DOI 10.1177/0954405418805604.
4. Anshuman Kumar Sahu and **Siba Sankar Mahapatra**, "Performance Analysis of Tool Electrode prepared through Laser Sintering Process during Electrical Discharge Machining of Titanium", International Journal of Advanced Manufacturing Technology, 2019, https://doi.org/10.1007/s00170-019-04675-1.
5. Suman Chatterjee, Sushanta Kumar Sahoo, B. Swain, **Siba Sankar Mahapatra** and Tarapada Roy, "Quality Characterization of Dissimilar Laser Welded Joints of Ti6Al4V with AISI 304 by using Copper Deposition Technique", International Journal of Advanced Manufacturing Technology, 2020, https://doi.org/10.1007/s00170-020-04935-5.
6. Suman Chatterjee, **Siba Sankar Mahapatra**, Vijay Bharadwaj, Brahma N Upadhyay and Khushvinder S. Bindra, "Prediction of Quality Characteristics of Laser Drilled Holes using Artificial Intelligence Techniques", Engineering with Computers, 2019, https://doi.org/10.1007/s00366-019-00878-y.
7. Suman Chatterjee, **S. S. Mahapatra**, V. Bharadwaj, B. N. Upadhyaya and K. S. Bindra, "Estimation of Quality Characteristics of Pulsed Nd:YAG Fibre Laser Welded Thin Sheets of Ti6Al4V", Lasers in Engineering, Vol. 46, 2020, pp. 111-134.
8. Anshuman Kumar Sahu and **Siba Sankar Mahapatra**, "Prediction and Optimization of Performance Measures in Electrical Discharge Machining using Rapid Prototyping Tool Electrodes", Journal of Intelligent Manufacturing, 2020, https://doi.org/10.1007/s10845-020-01624-8.
9. Sabana Azim, Soumya Gangopadhyay, **Siba Sankar Mahapatra**, Rinku Kumar Mittal and Ramesh Kumar Singh, "Role of PVD coating on wear and surface integrity during environment-

friendly micro-drilling of Ni-based superalloy", Journal of Cleaner Production, Vol. 272, 2020, pp. 1-14, https://doi.org/10.1016/j.jclepro.2020.122741

10. Anshuman Kumar Sahu, Joji Thomas and **Siba Sankar Mahapatra**, "An Intelligent Approach to Optimize the Electrical Discharge Machining of Titanium Alloy by Simple Optimization Algorithm", 2020, Proceedings of Institution of Mechanical Engineers Part E: Journal of Process Mechanical Engineering, **DOI: 10.1177/0954408920964685**

Summary of research output

	Details of Publications	
i	International Journals	356 (Scopus data)
ii	National Journals	36
iii	International Conferences	225
iv	National Conference	65
v	Book Chapters	25
vi	Ph.D. guidance	30
vii	M.Tech. (R) guidance	05
viii	M.Tech. thesis guidance	63

Patents and Design Registration

1. Patent **granted** for Ultra Portable Washing Machine (Application Number: 916/KOL/2014) (Patent Number: 420038) on 08.09.2014. (Siba Sankar Mahapatra, Ayas Kanta Swain, Kirti Sai Shukla, Mrityunjay Sharma and Anurag Mishra).
2. Patent **granted** for Gravity Flow Portable Water Bottle with Filtration System (961/KOL/2014) on 18.09.2014. (Raj Kishore Patel, Siba Sankar Mahapatra, Sandip Mondal and Swayam Bikash Mishra).
3. Patent **granted** for Automated GupChup Machine (201631001687) on 18.01.2016. (Prakash Sarangi, Subrat Kumar Panda and Siba Sankar Mahapatra).
4. Registration of Design **granted** for Portable Water Bottle (265832) on 18.09.2014. (Raj Kishore Patel, Siba Sankar Mahapatra, Sandip Mondal and Swayam Bikash Mishra).

Five major sponsored R&D projects completed/handled

1. Project on "Development of a Laboratory on Intelligent Manufacturing System", funded by MHRD in 2003 for Rs. 8 lakhs for three years (Sanction No. F-26-4/2002-TS.V)
2. FIST Project on infrastructure development for research funded by Department of Science & Technology for Rs. 56 lakhs in 2004 for five years. (Sanction No. SR/FST/ET II – 011/2003)
3. Obtained a grant of Rs. 1 lakh from Department of Education for conducting one day workshop on IPR issues for one year. (F.No. 17-171/2005 – IC)
4. FIST Project on infrastructure development for research funded by Department of Science & Technology for Rs. 170 lakhs in 2010 for five years. (Sanction No. SR/FST/ET II – 025/2010)\
5. Project on, "Experimental and numerical investigation of dynamic behavior of de-laminated carbon-epoxy composite rocket motor casings (CRMCs) under hygro-thermal-mechanical loading – role of delamination/defects", for Rs. 59.60 L, DRDO with Prof. S.K.Panda
6. Project on, "Synthesis of magnetic iron-oxide nanoparticles through micro emulsion for a sustainable arsenic removal water filter" for Rs. 29.00 L, BRNS with Prof. R.K.Patel

Administrative Responsibility

1. Superitendent of Hall of Residence No. 6 during 2004-2006.
2. Prof-in-Charge of IPR issues of the Institute.
3. **First President of Students' Activity Centre from 2006-2008.**
4. HOD, Central Workshop from 2007 to 2010.
5. Nodal Officer (Procurement) of TEQIP II.
6. Nodal Officer for All India Survey of Higher Education (AISHE).
7. Professor-in-charge, Institute Seminar from 2012 to 2014
8. HOD, Mechanical Engineering Department from 2014 to 2017
9. Expert Committee Member of AICTE.
10. Expert committee member for OPSC, CHPSC and BPSC
11. HOD, Technology Innovation and Industrial Relations from May 2017 to 2019.

Foreign Assignments

Visiting faculty to Industrial Systems Engineering, School of Engineering and Technology, Asian Institute of Technology, Bangkok as Secondment faculty from India during 17th August to 5th December 2009.

Visiting faculty to Industrial Systems Engineering, School of Engineering and Technology, Asian Institute of Technology, Bangkok as Secondment faculty from India during 26th September to 15th December 2012.

Scopus Citations
For **356** documents:
Scopus Citations: 9289 h_index: 48

A paper entitled, "Parametric appraisal of mechanical property of fused deposition modelling processed parts", published in Materials and Design Volume 31, Issue 1, January 2010, Pages 287-295 received **869** citations so far.

A paper entitled, "Improving dimensional accuracy of Fused Deposition Modelling processed part using grey Taguchi method", published in Materials and Design Volume 30, Issue 10, December 2009, Pages 4243-4252 received **458** citation so far.

A paper entitled, "Experimental investigation and empirical modelling of FDM process for compressive strength improvement", published in Journal of Advanced Research**,** Volume 3, Issue 1, 2012, Pages 81-90 received **397** citations so far.

Google Scholar Citations
Google Scholar Citation: 15562 h_index: 61 i-10 index: 265

A paper entitled, "Parametric appraisal of mechanical property of fused deposition modelling processed parts", published in Materials and Design Volume 31, Issue 1, January 2010, Pages 287-295 received **1313** citations so far.

A paper entitled, "Improving dimensional accuracy of Fused Deposition Modelling processed part using grey Taguchi method", published in Materials and Design Volume 30, Issue 10, December 2009, Pages 4243-4252 received **692** citation so far.

A paper entitled, "Optimization of wire electrical discharge machining (WEDM) process parameters using Taguchi method" published in International Journal of Advanced Manufacturing Technology**,** Volume 34, Issue 9-10, October 2007, Pages 911-925 received **573** citations so far.

Research.com
h_index: 50 Citations: 9430 Publications: 290
National Ranking: 18 World Ranking:1509
https://research.com/scientists-rankings/engineering-and-technology/in

AD Scientific Index
h_index: 62 i-10 index: 262 Citations: 15255 University Ranking: 1 Country Ranking: 216 Region Ranking: 3436 World Ranking: 34042
https://www.adscientificindex.com/?con=&tit=&q=National+Institute+of+Technology+Rourkela

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(Available at:.http://www.iiie-india.com/IIIE/journal_editorial.php)

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(Available at: http://growingscience.com/dsl/EditorialBoard_dsl.html)

Editorial Board Member of Journal of Industrial Engineering
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(Available at: https://www.iet-review.rivervalleytechnologies.com/confirmation/621deca553b7a7d410af2f05b0fb3a7d)

Prof. Siba Sankar Mahapatra