

Correspondence Address

Amit Kumar Sinha
Assistant Professor
School of Mechanical Engineering
Shri Mata Vaishno Devi University
Katra, J&K-182320
India
Phone Number: 91-8493023061
E-mail Address:
amitsinha5050@gmail.com
amit.sinha@smvdu.ac.in

Permanent Address

S/O: Om Prakash Sinha
Behind Power House,
Karyanand Nagar
Lakhisarai, Bihar, India
Postal Code: 811311
Phone Number: 91-9431857295;
8797170673

AMIT KUMAR SINHA

Asst. Prof. SoME,
Shri Mata Vaishno Devi University
Katra
Jammu & Kashmir

OBJECTIVE

To find a suitable teaching position, where I can apply my knowledge gained during my education, industrial, and academic work experience.

INTRODUCTION

- 1st Jan 2015-Continue: **Assistant Professor** in School of Mechanical Engg. at Shri Mata Vaishno Devi University (SMVDU) Katra
- 19th March 2014 to 12th Dec 2014: **Lecturer** (Temporary Faculty) in Department of Mechanical Engg. at **NIT Srinagar**
- Feb 2012- 25th Feb 2014: **M.S in Human & System Engineering** from **Ulsan National Institute of Science & Technology (UNIST), South Korea (Total Grade Point Average: 3.66/4.3)**
- Jan 2011-Feb 2012: **Project Assistant** under **Prof. M.K.Tiwari** of **Department of Industrial Engineering and Management, Indian institute of Technology, Kharagpur**
- 25th July 2006- 27th Dec 2010: **Lecturer** at Jamshedpur Institute of Engineering and Technology, Jamshedpur
- July 2005-July 2006: **Graduate. Engineering Training** in Amtek India Ltd. (Foundry Division), Bhiwadi, Rajasthan
- 2001-12th July 2005: **B.Tech in Manufacturing Engineering** from **National Institute of Foundry & Forge Technology (NIFFT), Ranchi** (Cumulative Grade Point Average: 8.17/10)

ACADEMIC QUALIFICATION

Ph.D. in Mechanical Engineering from Shri Mata Vaishno Devi University, Katra, 10th June 2020; Thesis Title: Supply chain configuration for sustainable new product development: A multi objective model and its solution approach

Retrieved at: (<https://shodhganga.inflibnet.ac.in/handle/10603/295428>) on 17th Sept 2024

M.S in Human & Systems Engineering from Ulsan National Institute of Science and Technology, S. Korea, Feb 2012- 25th Feb 2014; Total Grade Point Average: 3.66/4.3

Thesis: Effects of part-to-part gap and the variation of weld seam on the laser welding quality

Retrieved at: (<https://core.ac.uk/download/pdf/50565557.pdf>) on 17th Sept 2024

Retrieved at: (<http://scholarworks.unist.ac.kr/handle/201301/1214>) on 16 Feb 2014

B.Tech in Manufacturing Engineering from National Institute of Foundry & Forge Technology (NIFFT), Ranchi, 2001-12th July 2005; Ranchi University; CGPA 8.17/10

Intermediate Examination (XII) in Science from Bihar Intermediate Education Council, Patna; 60.33% (543/900), 30th May 1997

Secondary School Examination (X) from Bihar School Examination Board, Patna, 1995; 70.5% (564/800)

WORKING EXPERIENCE

- **Assistant Professor** at Shri Mata Vaishno Devi University (**SMVDU**), Katra from 1st Jan 2015 to till date
- **Lecturer** (Temporary Faculty) at **NIT Srinagar** during March 2014-Dec 2014 (Rs 33,000/- per month)
- **Lecturer** at Jamshedpur Institute of Engineering and Technology, Jamshedpur during July 2006 – Dec 2010.
- Working Experience as a **G.E.T** in Amtek India Ltd. (Foundry Division), Bhiwadi, Rajasthan during July 2005-July 2006.

ADMINISTRATIVE EXPERIENCE

- **Warden** of Kailash Hostel (2020 till date)
- **Faculty In-Charge** Central Facilities
- Member of Board of Studies (BoS) at SoME
- Member of **School Research Committee** (SoME)
- Faculty In-Charge School Library (SoME)
- Faculty In-Charge School Newsletters (SoME)

TOPICS OF INTEREST

Industrial Engineering, Artificial Intelligence, Simulation and Modelling, Manufacturing processes, Optimization, Supply chain management, Fault diagnosis, Laser welding, Knowledge discovery in databases,

TOP FIVE PUBLICATIONS

1. **Sinha, Amit Kumar, & Anand, A., (2018).** Development of sustainable supplier selection index for new product development using multi criteria decision making. *Journal of Cleaner Production*, 197, pp.1587-1596. (SCIE, **Impact Factor: 9.7**).
2. **Sinha, Amit Kumar, & Anand, A. (2019).** Optimizing supply chain network for perishable products using improved bacteria foraging algorithm. *Applied Soft Computing*, 105921. DOI: <https://doi.org/10.1016/j.asoc.2019.105921>, Online Available, (SCIE, **Impact Factor: 7.2**).
3. **Sinha, Amit Kumar, & Anand, A., (2017).** Towards fuzzy preference relationship based on decision making approach to access the performance of suppliers in environmental conscious manufacturing domain, *Computers & Industrial Engineering*, 105, pp. 39-34. (SCIE, **Impact Factor: 6.7**).

4. **Sinha, Amit Kumar**, Kim, D. Y., & Ceglarek, D. (2013). Correlation analysis of the variation of weld seam and tensile strength in laser welding of galvanized steel. *Optics and Lasers in Engineering*, 51(10), pp. 1143-1152. (SCIE, Impact Factor: 3.5).
5. **Sinha, Amit Kumar**, & Ankush Anand. (2021). Development of a supply chain configuration model for new product development: a multi-objective solution approach. *Soft Computing* 25 (2021): 8371-8389. (SCIE, Impact Factor: 3.1).

PUBLICATION

Paper Published in

A. Science Citation Index (SCI)/Science Citation Index Expanded (SCIE)

1. Vohra, **Sinha, Amit Kumar**, & Ankush Anand (2024). Development of Industry 4.0 based technology selection index using multi criteria decision making. *RAIRO: Operation Research*. DOI: <https://doi.org/10.1051/ro/2024172>. Accepted on 30th Aug 2024. (SCIE, Impact Factor: 1.8).
2. Charak, V., & **Sinha, Amit Kumar**. (2022). Design and development of a rapid prototyping system combining traditional fused deposition modeling and reconfigurable pins platform. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, 236(5), 2229-2239. (SCIE, Impact Factor: 2.3).
3. Khan, Muhammad Najeeb, & **Sinha, Amit Kumar**. (2022). Development of a sustainable supply chain network for the cement manufacturing industry using real-coded genetic algorithm. *Soft Computing* 26, no. 22 (2022): 12235-12255. (SCIE, Impact Factor: 3.1).
4. **Sinha, Amit Kumar**, & Ankush Anand. (2021). Development of a supply chain configuration model for new product development: a multi-objective solution approach. *Soft Computing* 25 (2021): 8371-8389. (SCIE, Impact Factor: 3.1).

5. **Sinha, Amit Kumar, & Anand, A.** (2019). Optimizing supply chain network for perishable products using improved bacteria foraging algorithm. *Applied Soft Computing*, 105921. DOI: <https://doi.org/10.1016/j.asoc.2019.105921>, Online Available, **(SCIE, Impact Factor: 7.2)**.
6. **Sinha, Amit Kumar, & Anand, A.,** (2020) A holistic framework for lot sizing problem in fast-moving perishable products. *Scientia Iranica*, 27(4), 2021-2039. **(SCIE, Impact Factor: 3.0)**.
7. **Sinha, Amit Kumar, & Anand, A.** (2018). Lot sizing problem for fast moving perishable product: modeling and solution approach. *International Journal of Industrial Engineering*, 25(6), pp. 757-778. **(SCIE, Impact Factor: 1.2)**.
8. **Sinha, Amit Kumar, & Anand, A.,** (2018). Development of sustainable supplier selection index for new product development using multi criteria decision making. *Journal of Cleaner Production*, 197, pp.1587-1596. **(SCIE, Impact Factor: 9.7)**.
9. **Sinha, Amit Kumar, & Anand, A.,** (2017). Towards fuzzy preference relationship based on decision making approach to access the performance of suppliers in environmental conscious manufacturing domain, *Computers & Industrial Engineering*, 105, pp. 39-34. **(SCIE, Impact Factor: 6.7)**.
10. **Sinha, Amit Kumar, Kim, D. Y., & Ceglarek, D.** (2013). Correlation analysis of the variation of weld seam and tensile strength in laser welding of galvanized steel. *Optics and Lasers in Engineering*, 51(10), pp. 1143-1152. **(SCIE, Impact Factor: 3.5)**.

11. Sinha, S. K., **Sinha, Amit Kumar**, Kour, P., & Barhai, P. K. (2011). Nickel doped PZT ceramics by a spray dried-PVA assisted method. *Journal of Ceramic Processing Research*, 12(1), pp.93-95. (**SCI, Impact Factor: 1.4**).

B. SCOPUS Index

12. Jammoria, Nitish Singh, & **Sinha, Amit Kumar**. (2024). Assessment of Green Supply Chain Management Practices Using Fuzzy Analytical Hierarchy Process. *Process Integration and Optimization for Sustainability*: 1-14. (**SCOPUS, Impact Factor: 2.1**).
13. Charak, Vikrant, **Sinha, Amit Kumar**, & Ankush Anand. (2024). A holistic approach of reconfigurable mould based fused deposition modelling for producing overhanging parts. *Australian Journal of Mechanical Engineering* 22(4): 810-824. (**SCOPUS**).
14. Khan, Muhammad Najeeb, & **Sinha, Amit Kumar**. (2022). Cloud computing leads towards sustainable supply chain management. *ECS Transactions* 107(1): 16573-16579. (**SCOPUS**).
15. **Sinha, Amit Kumar**, & Ankush Anand. (2021). Development of an alternative for corrosive resistant galvanized steel compatible for laser welding. *Materials Today: Proceedings* 46: 9561-9563. (**SCOPUS**).
16. **Sinha, Amit Kumar**, and Ankush Anand. (2020). A Graph-Theoretic Approach for Sustainable New Product Development (SNPD) in Supply Chain Environment. *Advances in Intelligent Systems and Computing, In Soft Computing: Theories and Applications*: 671-675. Springer Singapore. (**SCOPUS**).
17. Vikrant, C., & **Sinha, Amit Kumar**. (2019). Divergent linkage reconfigurable mould for rapid prototyping. *Materials Today: Proceedings*. 2903-2908. (**SCOPUS**).

18. Sharma, A., & Sinha, Amit Kumar. (2018). Rotary electric discharge machining of AISI D2 tool steel: present and future scope. *Materials Today: Proceedings*, 5(9), pp. 18562-18567. (SCOPUS).
19. Sharma, A., and Sinha, Amit Kumar. (2018). Ultrasonic testing for mechanical engineering domain: present and future perspective. *International journal of research in industrial engineering* 7, no. 2 (2018): 243-253.
20. M Bairagi, Sinha, Amit Kumar, & A Anand, (2016). Guillotine side trimming shear machine: A case study of plate mill in Bhilai steel plant, *Engineering Solid Mechanics*, 2016, 4 (4), pp. 226-234. (SCOPUS).
21. Sinha, Amit Kumar, P Swati, & A Anand, Responsive supply chain: Modeling and Simulation, 2016, *Management Science Letters* 5 (6), pp. 639-650. (SCOPUS).
22. Sinha, Amit Kumar, & Swati, P. (2014). Supply Chain: Next generation issues and concerns. *Uncertain Supply Chain Management*, 2(1), pp. 1-14. (SCOPUS).

C. Book Chapter (SCOPUS Index)

23. Kumari, Arya, Muhammad Najeeb Khan, & Sinha, Amit Kumar. (2024). Harvesting Intelligence: AI and ML Revolutionizing Agriculture. *Data-Driven Farming: Harnessing the Power of AI and Machine Learning in Agriculture*, pp. 126-141. Auerbach Publications. *ISBN: 9781032778723*. (SCOPUS).
24. Khan, Muhammad Najeeb, & Sinha, Amit Kumar. (2024). Whale optimization algorithm for scheduling and sequencing. In *Handbook of Whale Optimization Algorithm: Variants, Hybrids, Improvements, and Applications*, pp. 487-494. Academic Press. *Paperback ISBN: 9780323953658* (SCOPUS).

25. **Sinha, Amit Kumar**, and Ankush Anand. (2024). Development in Additive Manufacturing Through Enablers of IoT in Industry 4.0 Domain. In *Advancements in Science and Technology for Healthcare, Agriculture, and Environmental Sustainability*, pp. 144-149, CRC Press. **ISBN 9781032708324**
26. Vohra, Karan, **Sinha, Amit Kumar**, & Ankush Ananda. (2024). An Optimization Approach for Industry 4.0 Utilizing IoT Enablers. In *Advancements in Science and Technology for Healthcare, Agriculture, and Environmental Sustainability*, pp. 184-189. CRC Press, 2024. **ISBN 9781032708324**
27. Khan, Muhammad Najeeb, & **Sinha, Amit Kumar**, and Ankush Anand. (2023). Use of metaheuristics in industrial development and their future perspectives. In *Comprehensive Metaheuristics*, pp. 195-202. Academic Press, 2023. **ISBN: 978-0-323-91781-0, (SCOPUS)**.
28. Karan, Vohra, **Sinha, Amit Kumar**, & Ankush Anand. (2023). Sustainable Additive Manufacturing Process Selection in Industry 4.0 Environment, 11th International Conference on Advancements in Engineering and technology (ICAET-2023). Bhai Gurudas institute of Engineering & technology, Sangrur, Punjab, 7th Dec 2023, **ISBN No. 978-81-924893-8-4**. Pp.63-69.
29. **Sinha, Amit Kumar**, & Ankush Anand. (2023). Development of Sustainable Manufacturing index for factory of future. 11th International Conference on Advancements in Engineering and technology (ICAET-2023). Bhai Gurudas institute of Engineering & technology, Sangrur, Punjab, 7th Dec 2023, **ISBN No. 978-81-924893-8-4**. pp.93-95.

D. Publication in International/National Conferences

- 1. Amit Kumar Sinha.** Industry 4.0 as a blessing for elderly and disabled: present, past and future aspects, First International Conference on Technology Intervention for Elderly and Disabled, NIT Srinagar, 18th May 2024.
- 2. Amit Kumar Sinha.** Artificial intelligence based framework for health care systems, International Conference on Data Science, Artificial Intelligence and machine learning ICDSAIML-24, Mazharul Uloom College, Ambur, Tamil Naidu, 21th March 2024.
- 3. Amit Kumar Sinha, and Ankush Anand,** An optimization approach of carbon foot print at sequencing and scheduling level of manufacturing industry, International conference on Pure and applied Mathematics (ICPAM-2023), NIT Jalandhar & MNIT Jaipur, 26-28th Oct 2023.
- 4. Amit Kumar Sinha, and Ankush Anand.** Development in Additive Manufacturing Through Enables of IoT in Industry 4.0 Domain, International Analytics Conference (IAC-2023), IIT Patna, 26th Feb 2023.
- 5. Karan Vohra, Amit Kumar Sinha, and Ankush Anand** An Optimization approach for Industry 4.0 Utilizing IoT Enablers, International Analytics Conference (IAC-2023), IIT Patna, 26th Feb 2023.
- 6. Amit Kumar Sinha,** Challenging in Implementing an industry 4.0 based Manufacturing system – A Sustainable Perspective, International Conference Advanced Materials and Technologies for Industry 4.0 (ICAMT 4.0), 23-24th March 2023.

7. Gopal, and **Amit Kumar Sinha**. Optimization approach for reducing manufacturing carbon footprints in flexible job-shop scheduling systems, Recent advance in materials, manufacturing and machine learning (RAMMML-2022), Yeshwant Chavan College of Engg. (Nagpur), 27-27th April 2022
8. Aftab, and **Amit Kumar Sinha**. Modelling and Optimizing Patient Flows in a Hospital to Reduce Outpatient Waiting Time, Int. Conf. on Technologies for Smart Green Connected Societies 2021 (ICTSGS-2021), NIT Patna, 29-30th Nov 2021.
9. **Amit Kumar Sinha**, and Ankush Anand, A graph theoretical approach for sustainable new product (SNPD) in supply chain environment, 4th *International Conference* on Soft Computing: Theories and Applications, NIT Patna, 27-29th Dec 2019.
10. **Amit Kumar Sinha**, and Ankush Anand, Development of alternative of corrosive resistance galvanized steel compatible for laser welding, *International Mechanical Engineering Congress* (IMEC-2019) at NIT, Tiruchirappalli. 29th Nov-1st Dec 2019.
11. **Amit Kumar Sinha**, and Ankush Anand, Sustainable supplier selection for new product development: A multi-objective framework, 6th *International Conference* of Advance Research and Innovation (ICARI-2019); Institution of Engineers (India), Delhi, 25th Feb 2019. ISBN-978-93-5346-324-3.
12. Vikrant Charak, and **Amit Kumar Sinha**, Divergent linkage reconfigurable mould for RP, 9th *International Conference* on Materials Processing and Characterization (ICMPC-2019), Hyderabad, 17-19th March 2019. ISSN: 2214-7853.

13. Vikrant Charak, and **Amit Kumar Sinha**, Overview of disc and drum break parts and operational problem, 19th *ISME* Conference, NIT Jalandhar, 20-22th Dec 2018.
14. **Amit Kumar Sinha**, and Ankush Anand, Sustainable new product development leads towards SCM: Issues & concerns; 5th *International Conference* on Recent Trends & Advancements in Engg. & Technology (ICRTAET); 25-26th Oct 2018, SMVDU, Katra, ISBN 978-93-86240453.
15. **Amit Kumar Sinha**, and Ankush Anand, Sustainable supplier selection for new product development. *International Conference* on Mechanical Engineering & Allied Sciences (ICMEAS2018), at SMVDU, Katra, on 14-15th Sep 2018. ISBN-978-93-86240330.
16. Ameikav Sharma, and **Amit Kumar Sinha**, Rotary electric discharge machining of AISI D2 tool steel: present and future scope, 8th *International Conference* on Materials Processing and Characterization (ICMPC-2019), Hyderabad, 16-18th March 2018.
17. **Amit Kumar Sinha**, and Ankush Anand, Enhancing speed of inspection in coordinate measuring machine using GA. *International conference* of advance research and innovation, Institution of Engineers (India), Delhi, 28th Jan 2018.
18. Ameikav Sharma, and **Amit Kumar Sinha**, Potential of ultrasonic testing approach in mechanical engineering applications, *National Conference* on Innovative Trends in Mechanical Engineering (NCITME 2017); 3-4th March 2017, SMVDU, Katra.
19. **Amit Kumar Sinha**, Duck Young Kim, Laser welding quality monitoring using plasma, back reflection and temperature signals based on Dempster-Shafer

theory, Proceeding of the society of CAD/CAM conference, South Korea, S6-4, 240-242. 2013.

- 20. Amit Kumar Sinha,** Anand Mohan Choubey, A. K Choudhury, M. K. Tiwari. Selection of Casting Process using Analytical Hierarchy Process (AHP) based Six Sigma Compliant Approach. *National* Conference on Application of Six Sigma in Foundry & Forge Industry, 6th-2004, NIFFT Ranchi, India, April 10-11, 2004.

REVIEWERS

- IJPR
- IJPE
- Computers & Industrial Engg.
- EJOR
- Applied Soft Computing
- IJAMT etc.

FDP/WORKSHOP ORGANIZED

- Co-coordinator of One Week FDP on Sustainable Product Design and Manufacturing, Organized by SMVDU in collaboration with MMTTC-SMVDU, 22th To 27th July 2024.
- Co-coordinator of One Week FDP on Green Manufacturing, Organized by SMVDU in collaboration with MMTTC-SMVDU, 4th To 8th March 2024.
- Co-coordinator of Workshop on Celebration of Engineers Day 2023, 15th Sept 2023.
- Secretary of STC under TEQIP III on “**Engineering Optimization**”, October 2019 at SoME, SMVDU.

INVITED LECTURE/TALK DELIVERED

- As Invited Speaker, Delivered a talk on “Outcomes of soft computing lead towards factory of future “ in 5th National Conference on Recent Trends in Mathematical Science-2024 (NCR-TMS-2024), at SMVDU, Katra, 21-22th March 2024.
- As Invited Speaker, Delivered a talk on “Modelling and Solution Approach for Green Manufacturing” in FDP on Green Manufacturing, at SMVDU, Katra, 4-8th March 2024.

FDP/WORKSHOP ATTENDED

- 5 days Faculty development Program on Building Advanced data Analytics applications with Cloud, conducted by Next Gen Employability Program by AICTE & ATAL under Skill India, 18th – 22th Dec 2023.
- One Week FDP on Data driven research with advanced data analysis tools, conducted by AIU-Academic and administrative development centre, Atal Bihari Vajpayee University, Bilaspur & Association of Indian University, new delhi20-26 Sept 2023.
- IIT Bombay June 2018, TEQIP-III Sponsored.
- Two Week AICTE approved Faculty Development Program (FDP101x) on Foundation Program in ICT for Education, conducted by IIT Bombay from March 8, 2018 to April 12, 2018.
- Attended a Week Long TEQIP-III Sponsored Short Term Course on Best Manufacturing Practices in Industry, (17-21, Dec., 2018), SMVDU.
- TEQIP-III sponsored Workshop on NBA Accreditation organized by The Institution of Engineers (India) from 08-10 December 2017.

PROFESSIONAL EXPERIENCE

Intern – Lean Six Sigma

Heavy Engineering Corporation, Ranchi, India (During B.Tech. Summer Internship)

- **Lean Six Sigma**
 - Worked in a team of Six Sigma Green Belt professionals for the implementation of Lean Six-Sigma process improvement concepts in the assembly line of Earth-movers. Conducted value stream mapping; identified non-value added processes and made recommendations to reduce them
 - Performed an in depth cost analysis and payback analysis for the proposed solutions

TECHNICAL SKILLS

- **Computer skills:**

Operating systems:	Windows,
Mathematical software	Matlab, Minitab
Simulation software	QUEST
Programming Languages	C
Drawing software	CATIA V5

- **Nicely coded following algorithms in MATLAB for my research and project related works**
 - Genetic Algorithm (GA)
 - Particle Swarm Optimization (PSO).
 - Non-dominated Sort Genetic Algorithm-II (NSGA-II)

STRENGTHS

- Operations and strategy professional with analytical mindset, good problem solving skills, intellectual curiosity, and an investigative mind
- Good at imagination, analytical application and creativity.
- Fluent at English and communicating with people in general.
- Quick at learning and adapting to working environment.
- Experience working with/ coordinating highly technical teams based in various locations.

DECLARATION

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

Date: 18.09.2024

Signature: Amit Kumar Sinha

REFERENCES

1. Prof. (Dr.) Ankush Anand
School of Mechanical Engg.
Shri Mata Vaishno Devi University, Katra, J&K
E-mail: ankush.anand@smvdu.ac.in
2. Prof. (Dr.) M.K. Tiwari
Department of Industrial Engineering and Management
IIT Kharagpur, India
E-mail: mkt09@hotmail.com
3. Prof. (Dr.) Dariusz Ceglarek
University of Warwick
E-mail: D.J.Ceglarek@warwick.ac.uk
4. Prof. (Dr.) Duck Young Kim
POSTECH
E-mail: dy.kim@postech.ac.kr
5. Prof. Alok Choudhary
Professor of Supply Chain Management
Loughborough University London
Email: A.Choudhary@lboro.ac.uk