

RAHUL SEN

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4. Contact Numbers: 9649426586, 9501115413
5. Institution: Baba Farid College of Engineering and Technology, Bathinda, BFGI Campus, Pin 151002, Punjab, India
6. Academic Qualification:

S.No	Degree	Year	Subject	University/Institution	% of marks
1.	B.E	2009	Mechanical Engineering	University of Rajasthan	70.3
2.	M.Tech	2012	Metallurgical and Materials Engineering	Malaviya National Institute of Technology Jaipur	7.84 CGPA
3.	PhD	2018	Metallurgical and Materials Engineering	Malaviya National Institute of Technology Jaipur	8.33 CGPA
4	Post Doc -Research Associate	2023-24	Centre for Strategic and Sustainable Infrastructure	Indian Institute of Technology, Jammu	NA

7. Work Experience (in chronological order):

S.No.	Positions held	Name of the Institute	From	To
1	Associate Professor	Baba Farid College of Engineering and Technology, Bathinda	July 2024	Till Date
2	Post Doc -Research Associate	Indian Institute of Technology, Jammu	July, 2023	March 2024
3	Associate Professor	Poornima College of Engineering, Jaipur, Rajasthan	Nov., 2018	April 2023
4	Assistant Professor	NIMS University, Jaipur, Rajasthan	Feb., 2018	Nov., 2018
5	PhD- Research Scholar	Malaviya National Institute of Technology Jaipur	July 2013	Jan., 2018
6	Assistant Professor	Poornima College of Engineering, Jaipur, Rajasthan	July 2012	June 2013
7	Lecturer	Ajmer Institute of Technology, Ajmer, Rajasthan	June 2009	June 2010

8. Professional Recognition/Award/Prize/Certificate, Fellowship:

S.No	Name of Award	Awarding Agency	Year
1	Faculty-student Innovation award in Internal Hackathon organized by BFGI on “ Twin Burner Biopellet Project ”	Baba Farid College of Engineering and Technology, Bathinda	2025
2	Best student Faculty project idea presentation award by ISTE on “ Legal Chatbot content for India ”	Baba Farid College of Engineering and Technology, Bathinda	2024
3	Startup challenge competition award on “ Development of Biochar for Agriculture Waste Project ”	MNIT Alumni Association	2022
4	MNIT Tech-O-Thon - Most Promising Idea Award on “ Conversion of Petrol Vehicle into Electric and Hybrid Vehicle ”	MNIT Innovation and Incubation Centre, Jaipur	2022
5	Technovation 2020 -Awarded First prize with student technical project on “ Speed Brake Power Genrator Model Project ”	Poornima College of Engineering, Jaipur, Rajasthan	2020

9. Peer Reviewed Publications:

A. Journal papers (Peer Reviewed)

- 1) Sen, Rahul, and Upender Pandel. "Conceptual kinetic study for the catalytic effect of limestone on mill scale reduction by low grade coal." Powder Technology 378 (2021): 510-520, **I.F: 5.64 (Elsevier SCI Journal)**, <https://doi.org/10.1016/j.powtec.2020.10.024>
- 2) Sen, Rahul, and Upender Pandel. "Closed crucible reduction of lump powdered mill scale or iron ore by coal: The sequential methodology and mechanism for optimization of process parameters." Advanced Powder Technology 31, no. 9 (2020): 3760-3773, **IF: 4.969 (Elsevier SCIE Journal)**, <https://doi.org/10.1016/j.appt.2020.07.017>
- 3) Sharma, Rahul and Rahul Sen. "Synthesis and Testing of Epoxy Based Alumina-Silicon Carbide Particular Reinforced Composite". Advances in Materials Processing and Manufacturing Applications, Lecture Notes in Mechanical Engineering (2021) (**Springer: Scopus publication**), https://doi.org/10.1007/978-981-16-0909-1_14
- 4) Sharma, Rahul and Rahul Sen. "Synthesis and Investigation of Mechanical Behavior of Aluminum Oxide / Silicon Carbide Filled Bi-Directional Woven E- Glass Fiber Reinforcement Epoxy Polymer Composites." Recent Advances in Industrial Production, Lecture Notes in Mechanical Engineering (2021) (**Springer: Scopus publication**), https://doi.org/10.1007/978-981-16-5281-3_1
- 5) Sen, Rahul, Aditya Maan, Ujjwal Goyal, Aditi Birdhaniya, and Upender Pandel. "In crucible reduction of mill scale by lean grade coal: Study of time, temperature and arrangement for optimum reduction conditions." Materials Today: Proceedings 5, no. 2 (2018): 7256-7263. (**Elsevier Scopus Journal**), <https://doi.org/10.1016/j.matpr.2017.11.393>
- 6) Sen, Rahul, Satender Dehiya, Upender Pandel, and M. K. Banerjee. "Utilization of low grade coal for direct reduction of mill scale to obtain sponge iron: effect of reduction time and particle size ."Procedia Earth and Planetary Science 11 (2015): 8-14., (**Elsevier Journal**), <https://doi.org/10.1016/j.proeps.2015.06.003>

- 7) Gade, Nikitha, Gaurav Verma, Rahul Sen, and Upender Pandel. "Effect of calcium carbonate on the reduction behaviour of mill scale." *Proceedia Earth and Planetary Science* 11 (2015): 319-324. (**Elsevier Journal**) , <https://doi.org/10.1016/j.proeps.2015.06.067>
- 8) Sen, Rahul, N. C. Upadhayay, and Upender Pandel. "Bio-degradable composite made from starch and coconut fiber: mechanical strength and biodegradation characteristics." *International Journal of Engineering Technology Science and Research (IJETSR)* 2, no. 1 (2015), available online at www.google.com

B. Conference papers (Peer Reviewed)- Available on Research Gate

- 1) **Rahul Sen**, "Design of Centralized College Lab on Waste Recycling and Product Development," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 590–599.
- 2) Atirek Gaur, Upender Pandel, and **Rahul Sen**, "State-of-the-Art in High-Entropy Alloy Coatings," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 34–40.
- 3) Ram Singh, **Rahul Sen**, and Manpreet Singh, "Design and Construction of 6-Seater Electric Golf Machine for College," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 57–62.
- 4) Bhupinder Singh, **Rahul Sen**, and Tejinder Pal Singh Sarao, "Solar Panel Cleaning Automatic Machine," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 437–439.
- 5) Ramandeep Singh Brar, Lovepreet Singh, **Rahul Sen**, "Design of a High-Speed Six-Wing Drone: A Technical Exploration," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 440–443.
- 6) Amreek Singh, Keshav Sharma, and **Rahul Sen**, "Review on Rusting Factors and Methodology," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 444–449.
- 7) Maninder Singh, Karan Kumar, and **Rahul Sen**, "Design and Construction of Lightweight Fly Ash Geopolymer Brick," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 450–453.
- 8) Lakshman Kumar, Akshay Kumar, Parvinkal Singh, and **Rahul Sen**, "Plastic Waste Recycling and Product Development," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 463–465.
- 9) Ayush Chauhan, Manish Kumara, and **Rahul Sen**, "Review On Waste Water Recycling," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 475–480.
- 10) Khushdeep Singh, Lakhwinder Singh, and **Rahul Sen**, "Bicycle-Powered Battery Charging System," Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 485–488.

- 11) Samita, Babblu, Tejinder Pal Singh Saro, **Rahul Sen**, “Paper Recycling and Useful Product Development,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 494–496.
- 12) Mehak Paswan, Manpreet Kaur, and **Rahul Sen**, “Development of Sustainable Products from Recycled Wastepaper: Challenges and Opportunities,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 497–500.
- 13) Karanveer, Kanawaljeet Kaur, and **Rahul Sen**, “Design of Automatic Pellet Making Machine from Cow Dung and Agriculture Waste,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 508–512.
- 14) Armaandeeep Singh, Kanwaljeet Kaur, and **Rahul Sen**, “Design of Biopellet Stove for Sustainability,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 513–519.
- 15) Pankaj Kumar Singh, Kanwaljeet Kaur, and **Rahul Sen**, “Green Technologies and Smart Innovations: Shaping a Sustainable Future,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 520–525.
- 16) Gagan Preet Kour, Manish Kumar, and **Rahul Sen**, “Design and Development of a Prototype Free Energy Generator Using Overbalanced Wheel Concept,” Proc. National Conf on Recent Innovations in Engg., Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 526–532.
- 17) Abhay Verma and **Rahul Sen**, “Trends and Review of Cold Metal Additive Manufacturing Process,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 565–571.
- 18) Pawan Kumar, **Rahul Sen**, and Gagandeep Singh, “Design and Construction of Automatic Leaf Collector Machine,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 580–584.
- 19) Arshdeep Singh, Pradeep Kumar, **Rahul Sen**, and Lakhwinder Singh, “Design and Development of a Sand Filtration System,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 600–603.
- 20) Chamkaur Singh, Krishan, Tejveer Singh, and **Rahul Sen**, “Designing of Chaff Cutter Machine,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 604–608.
- 21) Jaspreet Kaur, Basit Ahmad Bhat, and **Rahul Sen**, “Designing Pellet Making Machine from Cow Dung and Agricultural Waste,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 609–612.
- 22) Ishant Kumar and **Rahul Sen**, “Design and Development of a Multipurpose Chaff Cutter Machine,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical

- Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 613–619.
- 23) Divyansh Verma, Harjit Singh, and **Rahul Sen**, “A Mechanical Approach to Free Energy: Overbalanced Wheel Design,” Proc. National Conference on Recent Innovations in Engineering, Sciences and Networking (RISEN-2025), Dept. of Mechanical Engineering, BFCET Bathinda, 25 April 2025, ISBN: 978-93-342-7367-0, pp. 620–625.
- 24) **Rahul Sen**, Aditya Kashyap, “Speed Break Power Generator”, 3rd National level paper & Model Contest (Technovation-2020), held at Poornima College of Engineering, Jaipur on 12-13 December 2020.
- 25) Rahul Sen, Deeksha Gupta, Upender Pandel, "Reduction of waste and lean grade iron resources to give DRI: The study of its reduction parameters, ACN International Conference, Istanbul, Turkey, 5-6 March, 2023, pp. 55-58, ISBN No. 978-93-90150-28-1
- 26) Hrishikesh Kumawat, **Rahul Sen**, “Management of Temple Floral Waste and Utilization of Value Added Floral Waste Product: A Review”, International Conference on Emerging Trends in Engineering, Science & Technology (ETEST-2022) organized by Poornima University, Jaipur on May 06-07, 2022, pp. 159-163, ISBN No. 978-93-5620-284-9.
- 27) Mohsin Khan, **Rahul Sen**, “Waste Identification Using VSM For Tyre-Rim Assembly Manufacturing”, ”, Int. Conf. On Emrg. Trends in Engg., Sci & Tech (ETEST-2022) organized by Poornima Univ., Jaipur on May 06-07, 2022, pp. 123- 126, ISBN No. 978-93-5620-284-9.
- 28) Neeraj Kumar, **Rahul Sen**, “Plastic Waste Reuse and Disposal: A Review”, Int. Conf. On Emrg. Trends in Engg., Sci & Tech (ETEST-2022) organized by Poornima University, Jaipur on May 06-07, 2022, pp. 127-130, ISBN No. 978-93-5620-284-9.
- 29) Abhishek Singh, **Rahul Sen**, “Review On Development Of Biobricks From Construction And Agriculture Waste”, International Conference on Emerging Trends in Engineering, Science & Technology (ETEST-2022) organized by Poornima University, Jaipur on May 06-07, 2022, pp. 131- 135, ISBN No. 978-93-5620-284-9.
- 30) Prajwal Verma, **Rahul Sen**, “Power Generation Through Speed Breaker”, ”, Int. Conf. On Emrg. Trends in Engg., Sci & Tech (ETEST-2022) organized by Poornima University, Jaipur on May 06-07, 2022, pp. 118-122, ISBN No. 978-93-5620-284-9.
- 31) Lokesh Kumawat, **Rahul Sen**, “A Review On Activated Carbon Production Methods From Coconut Shell And Its Applications”, Int. Conf. On Emrg. Trends in Engg., Sci & Tech (ETEST-2022) organized by Poornima University, Jaipur on May 06-07, 2022, pp. 97- 103, ISBN No. 978-93-5620-284-9.
- 32) Shubham Pareek, **Rahul Sen**, “Highways Automatic Plant Watering System”, ”, Int. Conf. On Emrg. Trends in Engg., Sci & Tech (ETEST-2022) organized by Poornima University, Jaipur on May 06-07, 2022, pp. 94-96, ISBN No. 978-93-5620-284-9.
- 33) Shubham Sharma, Sangeeta Sharma, **Rahul Sen**, “A Review On Utilization of Plastic, Rubber Waste in Road Construction”, International Conference on Emerging Trends in Engineering, Science & Technology (ETEST-2022) organized by Poornima University, Jaipur on May 06-07, 2022, pp. 151- 154, ISBN 978-93-5620-284-9.
- 34) Daksh Arya, Yashpal, **Rahul Sen**, “A Review Paper on Underwater Windmill”, 3rd International Online Conference on Emerging Trends in Multi-Disciplinary Research (ETMDR-2022), organized by Poornima University (PU), Jaipur on January 20-22, 2022, pp. 544-538, ISBN No. 978-93-5593-524-3.
- 35) Ankita Chatterjee, Yashpal, **Rahul Sen**, “A Review on Pyrolysis of Petroleum Based Plastics”, 3rd International Online Conference on Emerging Trends in Multi-Disciplinary Research (ETMDR- 2022), organized by PU, Jaipur

on January 20-22, 2022, pp. 522-527, ISBN No. 978-93-5593-524-3.

10. Details of Patents (if any):

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/ Country	Status
1	VISAVENTURES: A Technology-Driven Platform for Secure, Transparent, and AI-Assisted Visa Application	Chotu Kumar, Praveen Kumar, Rahul Sen	Application No.: 202511057865	04-07-2025	IPR, India	Published
2	A Legal Chatbot System and a Method Thereof	Nikhil, Bhavik Jain, Parteek Singh, Rahul Sen	Application No.: 202511060470	11-07-2025	IPR, India	Published
3	Smart Travel Companion Matching System	Yuvraj Singh, Sandeep Kaur, Paryash, Vishal, Rahul Sen	Application No.: 202511060064	11-07-2025	IPR, India	Published
4	Privacy-Controlled Messaging System with Screen Capture Restriction (SF Messenger)	Raj Kumar Mahato, Subhash Kumar, Dularchand Kumar, Rahul Sen	Application No.: 202511060446	11-07-2025	IPR, India	Published
5	A System and Method For Multi-Mode Chaff Cutting And Pellet Formation	Rahul Sen, Amandeep Singh, Chand Parkash, Manish Kumar, Sukhwant Singh	Application No.2026110106 77 A	20-03-2026	IPR, India	Published
6	Portable Reverse Osmosis System And Method With Adaptive Energy Recovery	Rahul Sen, Gurdas Singh Harshit Bansal	Application No. 202611018305		IPR, India	Published

11. Books/Reports/Chapters/General Articles etc.:

S.No	Title of Book Chapters	Author's Name	Publisher	Year of Publication
1	Synthesis and Testing of Epoxy Based Alumina-Silicon Carbide Particular Reinforced Composite". https://doi.org/10.1007/978-981-16-0909-1_14	Rahul Sharma, Rahul Sen	Springer	2021
2	Synthesis and Investigation of Mechanical Behavior of Aluminum Oxide / Silicon Carbide Filled Bi-Directional Woven E- Glass Fiber Reinforcement Epoxy Polymer Composites." https://doi.org/10.1007/978-981-16-5281-3_1	Rahul Sharma, Rahul Sen	Springer	2021

12. Ongoing/completed Projects during the last 5 years:

S. No.	Title of Research Project	Funding Agency	Role	Sanction Number and Date	Status

1	Portable Twin Burner Biopellet Chulha with Hybrid Air Blower System for Sustainable and Economical Cooking	BFGI	PI	Dec 2025	Ongoing
2	Conversion of Petrol Bike Electric Bike	Poornima University	PI	2022	Completed

References:

1. Dr. Upender Pandel, Prof. HAG & Head, Department of Metallurgical and Materials Engineering, Malaviya National Institute of Technology Jaipur, Rajasthan, Pin-302017, E.Mail: upandel.meta@mnit.ac.in , and upenderpandel@yahoo.in, Contact: 9549654366, 9414547872.
2. Prof. Dr. M.P Poonia, Director, Baba Farid Group of Institutions, Muktar Road, Bathinda, Punjab, Pin 151002. Email: director.bfgi@bfgi.edu.in , Contact: 9815575260, 9815575260,
3. Dr. Manoj Gupta, Pro-President, Poornima University, Plot No. IS-2027-2031, Ramchandrapura P.O. Vidhani Vatika Road Sitapura, Jaipur, Rajasthan, 303905, E.Mail: proppresident@poornima.edu.in , manojg@poornima.edu.in , Contact: 9928015793
4. Dr. Mahesh Bunde, Director, Poornima College of Engineering, ISI-6, RIICO Institutional Area, Sitapura, Jaipur, Rajasthan 302022, Email: maheshbunde@poornima.org, pcedirector@poornima.org, Contact: 9828999440.

Dr. Rahul Sen

