

## **Dr. Pranava Chaudhari**

Assistant Professor, Chemical Engineering.  
Harcourt Butler Technical University, Kanpur (India)



Orcid ID <https://orcid.org/0000-0002-5701-5858>

Google Scholar ID sJLrHnQAAAAJ

Vidwan ID 96927

Ph. D. IIT Kanpur (2017)

M. Tech. IIT Bombay (Converted to PhD and shifted to IIT Kanpur with Supervisor 2008-10)

B. Tech. (with Hons.) HBTI Kanpur (2008)

Email ID: pranava.chaudhari @outlook.com

Contact Information Mob:+917607489600

### **Academic Experience**

Assistant Professor (SS), UPES, Dehradun (Aug 2017 – Aug 2018)

Assistant Professor (SG), UPES, Dehradun (Sep 2018 – June 2022)

Assistant Professor HBTU, Kanpur (June 2022– till now)

### **Patent**

1. “A reusable article for absorbing oil from oil Spills” N. Saxena, N. S. Mohammed, A. Bontha, P. Chaudhari, A. K. Thakur, Serial No. 011146815, Application No. 202011015615, Patent No. 397627, Date of grant: 25/05/2022

### **Papers Published in SCI/SCOPUS Journals**

1. **P. Chaudhari**, S. K. Gupta, Multiobjective Optimization of a Fixed Bed Maleic Anhydride Reactor Using an Improved Biomimetic Adaptation of NSGA-II, Ind. Eng. Chem. Res. (2012), 51, 8, 3279–3294 (IF: 3.72)  
DOI: <https://doi.org/10.1021/ie202276q>
2. **P. Chaudhari**, S. Garg, Modeling of the maleic anhydride circulating fluidized bed reactor. Computers & Chemical Engineering (2017), 100, 198-218 (IF: 3.8).  
DOI: <https://doi.org/10.1016/j.compchemeng.2017.02.012>
3. **P. Chaudhari**, S. Garg, Multi-objective optimization of maleic anhydride circulating fluidized bed (CFB) reactors, Chemical Engineering Research and Design, (2019) 141, 115-132 (IF: 3.74). DOI: <https://doi.org/10.1016/j.cherd.2018.10.020>
4. A. K. Thakur, S K. Gupta, **P. Chaudhari**, Slurry-phase ethylene polymerization processes: a review on multiscale modeling and simulations, Rev. Chem Eng. (2020). (IF: 6.3). DOI: <https://doi.org/10.1515/revce-2020-0048>
5. A. K. Thakur, S. K. Gupta, **P. Chaudhari**, Modeling and simulation of an industrial slurry phase ethylene polymerization reactor: effect of reactor operating variables, Iran. Pol. J. (2020); 9: 811-825 (IF:1.9).  
DOI: <https://doi.org/10.1007/s13726-020-00840-6>
6. A. K. Thakur, S. K. Gupta, R. Kumar, N. Banerjee, **P. Chaudhari**, Multi-objective optimization of an industrial slurry phase ethylene polymerization reactor. Int. J. Chem. React. Eng. (2021) (IF: 1.51). DOI: <https://doi.org/10.1515/ijcre-2021-0196>

7. R. Kumar, A. K. Thakur, N. Banerjee, **P. Chaudhari**, A critical review on the particle generation and other applications of rapid expansion of supercritical solution. *International Journal of Pharmaceutics*. (2021). (IF: 5.875). DOI: [10.1016/j.ijpharm.2021.121089](https://doi.org/10.1016/j.ijpharm.2021.121089)
8. R. Kumar, A. K. Thakur, **P. Chaudhari**, N. Banerjee. Particle size reduction techniques of pharmaceutical compounds for the enhancement of their dissolution rate and bioavailability. *J. Pharm. Innov.* (2021): AOP (IF: 2.75). DOI: <https://doi.org/10.1007/s12247-020-09530-5>
9. R. Kumar, S. Kumar, **P. Chaudhari**, A. K. Thakur. Liquid Antisolvent recrystallization and solid dispersion of Flufenamic Acid with polyvinylpyrrolidone K-30. *Int. J. Chem. React. Eng.* (2021). 19: 663-671 (IF: 1.51). DOI: <https://doi.org/10.1515/ijcre-2020-0168>
10. R. Kumar, A. K. Thakur, **P. Chaudhari**, N. Banerjee. Investigation on Crystallization Phenomena with Supercritical Carbon dioxide (CO<sub>2</sub>) as the Antisolvent, *Int. J. Chem. React. Eng.* (2021). 19: 861-871 (IF: 1.51). DOI: <https://doi.org/10.1515/ijcre-2020-0189>
11. A. K. Thakur, R. Kumar, N. Banerjee, **P. Chaudhari**, Gajendra Kumar Gaurav, Hydrodynamic modeling of liquid-solid flow in polyolefin slurry reactors using CFD techniques – A critical analysis, *Powder Technology*, 2022, 405, 117544. DOI: <https://doi.org/10.1016/j.powtec.2022.117544>
12. A. K. Thakur, R. Kumar, N. Banerjee, **P. Chaudhari**, Amit Kumar, “Simulation of ethylene polymerization in continuous slurry reactors”, *Material Today's Proceedings*, 2021. <https://doi.org/10.1016/j.matpr.2021.11.235>
13. R. Kumar, D. S. Rawat, A. K. Thakur, N. Banerjee, **P. Chaudhari**, “Experimental measurement and thermodynamic modeling of solubility of Flufenamic acid in different pure solvents”, *Material Today's Proceedings*, 2021. <https://doi.org/10.1016/j.matpr.2021.11.532>
14. A. Kumar, A. K. Thakur, R. Kumar, **P. Chaudhari**, MD Aurangzeb, Gajendra Kumar Gaurav, Experimental investigation on in-situ void fraction of air-water co-current flow-through milli-channels”, *Material Today's Proceedings*, 2021. <https://doi.org/10.1016/j.matpr.2021.12.317>
15. **P. Chaudhari**, A. K. Thakur, R. Kumar, A. Kumar, N. Banerjee, Comparison of NSGA-III with NSGA-II for Multi Objective Optimization of adiabatic Styrene Reactor”, *Material Today's Proceedings*, 2021. <https://doi.org/10.1016/j.matpr.2021.12.047>
16. N. Banerjee, Sukhichandran P, **P. Chaudhari**, A. K. Thakur, R. Kumar, Energy Analysis and Feasibility Studies for Algal Biomass and Biofuels”, *Material Today's Proceedings*, 2021. <https://doi.org/10.1016/j.matpr.2021.11.223>

### Papers Published in Non SCI/SCOPUS Journals

1. Saxena, Neha and Shirqhi, Numair and Bontha, Adithya and Thakur, Amit K. and Kumar, Rahul and **Chaudhari, Pranava**, Di-Tube Cleanup and Recovery of Oil from Oil Spills (February 5, 2020). *Proceedings of the International Conference on Advances in Chemical Engineering (AdChE) 2020*, Available at SSRN: DOI: <http://dx.doi.org/10.2139/ssrn.3633846>
2. L. Tang, A. Patel, D. Sweeney, N. Banerjee, **P. Chaudhari**, A. K. Thakur, R. Kumar, J. B. Joshi, A. Kelkar, A. P. Anthony, “Cleaner cooking in the Himalayan region: A case study of participatory design in the developing world”, *International Design Engineering Technical Conference & Computers and Information in Engineering*

Conference (virtual) (IDETC/CIE 2021), ASME, 17 – 20 August (2021).  
DOI: <https://doi.org/10.1115/DETC2021-67972>

### **Book chapters**

Amit K. Thakur, Rahul Kumar, **Pranava Chaudhari**, Ravi Shankar R. Removal of heavy metals using bentonite clay and inorganic coagulants. In: Shah M.P. (eds) Removal of Emerging Contaminants Through Microbial Processes. (2020). Springer, Singapore. DOI: [https://doi.org/10.1007/978-981-15-5901-3\\_3](https://doi.org/10.1007/978-981-15-5901-3_3)

### **Papers presented in International/National Conferences**

Chaudhari, P., Garg, S. (2015). Use of multi-objective optimization in tuning a reactor model with multicomponent systems. CHEMCON 2015, Indian Chemical Engineering Congress, 68th Annual Session of the Institute of Chemical Engineers, IIT Guwahati.

### **Invited Lectures**

“Genetic Algorithm (GA) for solving multi objective optimization (MOO) problems”, AICTE-ISTE sponsored FDP on Computer aided software for process Intensification at Gharda University, Lavel, Maharashtra, 24-29 May 2021.

### **Certification Course**

Post-Graduation Certification on Academic Practices (PGCAP), UPES, Dehradun

### **Ph.D. Guidance**

“Modeling and multi-objective optimization of an industrial high density polyethylene slurry reactor” by Amit Kumar Thakur under supervision of P. Chaudhari (Supervisor), S. K. Gupta (Co-Supervisor)

### **Achievement**

Scored AIR 18 GATE 2007, Chemical Engineering in B. Tech. 3<sup>rd</sup> year.

### **Administrative Responsibilities**

1. Organizing Secretary, International Conference “Advances in Chemical Engineering–2020 (AdChE2020)” Feb 5-7 2020, UPES, Dehradun.
2. Course Coordinator of BTech CERP 2<sup>nd</sup> Year 2018-22, UPES Dehradun.
3. Activity Coordinator of B. Tech. CERP 3<sup>rd</sup> year 2019-21, UPES Dehradun.
4. Program Leader Group Member for Energy Cluster 2021-2022, UPES Dehradun.
5. Virtual Lab Coordinator, BTech CERP, 2020-2021, UPES Dehradun.
6. NBA File Champion of Criteria 3, BTech CERP, 2019, UPES Dehradun.