

CURRICULUM VITAE



Dr. RAHUL OMAR

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Educational Qualification

- **Ph.D.** in Chemistry from **AKS University, Satna**, **Thesis Subject:** Chemical Engineering, **Thesis Title:** Hydrodynamics and Phenol Degradation Study of a Trickle Bed.
- **M.Tech.** Chemical Engineering from **Indian Institute of Technology Roorkee** in year 2012 with **7.56*CGPA**.
- **B.Tech.** In Chemical Engineering from **Dr. Ambedkar Institute of Technology for Handicapped, Kanpur** Affiliated to Gautam Buddha Technical University, Lucknow (Formerly Uttar Pradesh Technical University Lucknow), in year 2010 with **72.32%**.
- **HSC (Intermediate)** from **Saraswati Vidya Mandir Inter College Hamirpur** Affiliated to U.P. Board, in year 2005 with **74.40%**.
- **SSC (High School)** from **Saraswati Vidya Mandir Inter College Hamirpur** Affiliated to U.P. Board, in year 2003 with **63.50%**.
*CGPA obtained out of the scale 10.

Professional Experience

- Working as **Assistant Professor** (Department of Cement Technology) in the Faculty of Engineering & Technology of AKS University, Satna (January 2017 – Present)

Research Interest

- Process calculation
- Heat & Mass Transfer
- Computational Fluid Dynamics
- Fluid Mechanics
- Optimization Technique

Skills

- **Technical skills and competences:** Expert in usage and application of Modeling and simulation including commercial packages such as ASPEN PLUS.
- **Computer skills and competences:** Sound knowledge of Computational Fluid Dynamics (CFD) modeling with mesh generation, including commercial packages such as ANSYS FLUENT.

Achievements

- **“Zero Investment Innovations for Education Initiatives”** Award Awarded By Sri Aurobindo Society at 30 September 2019.
- **“GRADUATE APTITUDE TEST IN ENGINEERING” (GATE)** Qualified (2010), Discipline in CHEMICAL ENGINEERING, Score-396 All India Rank- 988.
- **"CHEMICAL QUIZ"** Organized by the Dr. Ambedkar Institute of Technology for Handicapped, Kanpur (**UDAYAYA**) (2009) Secured Third Prize.
- **"Computer Training"** Organized at the Saraswati Vidya Mandir Inter College Hamirpur, Uttar Pradesh, India; (2003–2004) Secured "A" Grade.

Internship

- Successfully underwent one month summer training at **“HINDUSTAN AERONAUTICS LIMITED”**, **LUCKNOW** during 18 June 2009-17 July 2009.
- Successfully underwent one month summer training at **“SYNTHETIC SILICA PRODUCTS”**, **KANPUR** during 01 June 2008-30 June 2008.

Membership in Professional Societies

- RMS (Reviewer/Referral Management System) member of Journal of Emerging Technologies and Innovative Research (JETIR), (Member No. 117105).
- RMS (Reviewer/Referral Management System) member of International Journal of Creative Research Thoughts (IJCRT), (Member No. 112411).
- RMS (Reviewer/Referral Management System) member of International Journal of Research and Analytical Reviews (IJRAR), (Member No. 117107).
- Associate Member of Indian Institute of Chemical Engineers (IChE), (Membership No. AM-49372).
- Member of International Association of Engineers (IAENG), (Membership No. 134622).
- Member of Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBES), (Membership No. 201048).

Role of Reviewer

- International Journal for Quality Research

Academic Projects

- Modeling of CO₂ absorption with various solvents
- Hydrodynamic characteristics of low density particle in a three-phase fluidized bed
- Hydrodynamic behavior of a trickle bed with hollow cylindrical and spherical particles
- CFD Simulation of hydrodynamic study in a trickle bed
- Analyze the pressure drop and degree of pressure reduction in a trickle bed
- Experimental investigation of the mass transfer coefficient in a trickle bed
- Microbial phenol degradation study of a trickle bed bioreactor

Workshop/Short Term Course (Under Quality Improvement Programme)

- Faculty Development Programme on “Virtual Labs” organized by the Department of Computer Science and Engineering, AKS University, Satna (M.P.) on 01 October 2021.
- Faculty Development Programme in “Entrepreneurship” sponsored by NSTEDB, Department of Science and Technology, Government of India, New Delhi, organized from 05-16 November, 2019 at Satna (M.P.)
- QIP Workshop on “Finite Element Method and Computational Structural Dynamics” organized at the Department of Earthquake Engineering and Mathematics, Indian Institute of Technology, Roorkee, Uttarakhand, India, June 10-14, 2019.
- QIP Workshop on “Statistical Analysis for Engineering and Researchers” organized at the Department of Mathematics & Statistics, Indian Institute of Technology, Kanpur, Uttar Pradesh, India, September 04-08, 2017.
- Short Term Training Program on “Design of Experiments: An Optimization Tool (DOEOT-2014)”, held at the Department of Mechanical Engineering, National Institute of Technology, Rourkela, Odisha, India, December 22–25, 2014.

National/International Workshop

- National Workshop cum Training on “Synthesis of Nano Materials and Nano Composites” Conducted by AKS University, Satna in Collaboration with Wetlab Championship and Shastra (IIT Madras) on 01-02 October 2019.
- Workshop on “Safety engineering education” organized at the Department of Chemical Engineering, National Institute of Technology, Rourkela, Odisha, India, April 29, 2016.
- Workshop on “Drinking water purification and industrial wastewater treatment” organized on occasion of the International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE-2015), Department of Chemical Engineering, National Institute of Technology, Warangal, Telangana, India, March 19, 2015.

Training Program

- Participated as delegate in International keynote lecture session on Environmental Pharmacovigilance, under the National Conference on “Recent Advances in Pharmacovigilance in Drug Discovery & Development” organized by Department of Pharmaceutical Science & Technology, AKS University, Satna, Madhya Pradesh, India, April 12, 2019.
- Short Term Course on “Research Support e-Resources, Tools & Techniques and Scholarly Publishing (RSTSP-2016)”, Jointly organized by Electronics and Communications & Biju Patnaik Central Library, National Institute of Technology, Rourkela, Odisha, India, October 27, 2016.
- Short Term Course on “Thesis and Scientific writing”, organized by National Institute of Technology, Rourkela, Odisha, India, October 18–19, 2016.
- IARP-Public Awareness on "Atoms For Peace" Organized by the Harcourt Butler Technological Institute, Kanpur, Uttar Pradesh, India, August 25–26, 2008.

Academic Responsibilities

- Conducted assignments/tutorials as “Teaching Assistant” in UG courses (Computational Fluid Dynamics & Fluid Mechanics) at Indian Institute of Technology, Roorkee.
- Volunteer for “International Conference on Frontiers in Chemical Engineering (ICFCE-2013), Department of Chemical Engineering, National Institute of Technology, Rourkela, Odisha, India, December 09–11, 2013.

Publication (Book)

- Omar, R., Kumar, V., Modeling of CO₂ Absorption with Various Solvents, LAP LAMBERT Academic Publishing, ISBN: 978-3-659-89693-4.

Publication (International Journals)

- Omar, R., Mishra, D., Omar, R., Kumar, S., Pressure drop and its reduction in trickle bed using xanthan gum. Macromolecular Symposia, Accepted.
- Omar, R., Omar, R., Effect of Hydrochloric Acid in the Self-Assembled Structure of Sodium Carboxymethyl Cellulose. Journal of Emerging Technologies and Innovative Research (JETIR), 2022; 9 (4): 724-736.
- Omar, R., Omar, R., Effect of Oxalic Acid in the Self-Assembled Structure of Sodium Carboxymethyl Cellulose. International Journal of Creative Research Thoughts (IJCRT), 2022; 10 (4): 565-577.
- Omar, R., Mishra, D., Nigam, R.S., Microbial Phenol Degradation Study of a Trickle Bed Bioreactor. International Journal of Research and Analytical Reviews (IJRAR), 2020; 7 (4): 120-125.
- Omar, R., Mishra, D., Nigam, R.S., Experimental and CFD Simulation Study of a Trickle Bed with Foaming Liquid at Different Concentrations. International Journal of Engineering Research & Technology (IJERT), 2019; 8(10):501-505.
- Omar, R., Hydrodynamics of Hollow Cylindrical Particle in a Trickle Bed for Non-Newtonian Liquid and Foaming Liquid. International Journal of Engineering Research and Advanced Development, 2018; 4(1):11-23.
- Omar, R., Pressure reduction study in a trickle bed using polyacrylamide. International Journal of Chemical Studies, 2017; 5(6):1560-1563.
- Omar R, Jena H.M., Statistical Analysis of the Dynamic Liquid Saturation in a Trickle Bed. International Journal of Chemical Sciences, 2017; 15(2):133-145.

Publication (Conferences)

- Omar, R., 2021. Pressure drop and its reduction in Trickle Bed using Xanthan gum. 2nd National Conference on “Materials and Devices (NCMD-2021), 16-17 September, Teerthanker Mahaveer University Moradabad, India.
- Omar, R., 2020. Pressure Reduction in Trickle bed using Polyethylene Oxide. International Conference on Functional Materials (ICFM-2020), 6-8 January, Indian Institutes of Technology, Kharagpur, India.

- Omar, R., 2019. Study of molecular interaction of medicinal Drug in different solvent at different temperatures. National Conference on Recent Advances in Pharmacovigilance in Drug Discovery & Development, 2019, 12 April. Department of Pharmaceutical Science & Technology, AKS University, Satna, Madhya Pradesh, India.
- Omar, R., 2018. CFD simulation of a trickle bed with foaming liquid. International Conference on Mathematical Modeling and Scientific Computing (ICMMS-2018), 19-21 July. Indian Institutes of Technology, Indore, India.
- Omar, R., Jena, H.M., 2016. Computational Study of bed pressure drop in Trickle bed for non-Newtonian liquids. International Conference on Chemical Engineering and Advanced Polymeric Material (ICEAPM-2016), 18-20 August. Department of Chemical Engineering, Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India.
- Omar, R., Jena, H.M., 2015. Dynamic Liquid Saturation in a Trickle Bed Involving Water and CMC Solution. International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE-2015), 20-21 March. Department of Chemical Engineering, National Institute of Technology, Warangal, Telangana, India.
- Omar, R., Meher, B.B., Jena, H.M., 2013. CFD Simulation of Liquid holdup Characteristics of a Gas-Liquid-Solid Trickle Bed. Indian Chemical Engineering Congress-2013 (CHEMCON-2013), 27-30 December. Department of Chemical Engineering, Institute of Chemical Technology, Mumbai, India.
- Omar, R., Jena, H.M., 2013. CFD Simulation of Pressure Drop in co-current Three-Phase Trickle Bed. International Conference on Frontiers in Chemical Engineering (ICFCE-2013), 09-11 December. Department of Chemical Engineering, National Institute of Technology, Rourkela, Odisha, India.

Online Courses Participated

S.No.	Name of Course Participated	Name of Organization	Organized Date
1	Quiz on Awareness on Covid-19	AKS University, Satna	13 May 2020
2	Webinar on Effective Research Paper Writing	Career College, Bhopal	17 May 2020
3	Webinar on Advance in Biotechnology for Health, food and Nutrition to Encounter Covid-19	AKS University, Satna	22-23 May 2020
4	Webinar on VIRTUAL LABS	AKS University, Satna	27 May 2020
5	Webinar on Drone Technology	AKS University, Satna	30 May 2020
6	General Awareness Quiz on Chemical Science & Covid-19	AKS University, Satna	1 June 2020
7	National level Awareness on Mathematics Covid-19	AKS University, Satna	3 June 2020
8	Food Safety Quiz	AKS University, Satna	7 June 2020
9	National Webinar on Research Innovations and Extension: Criterion 3 of NAAC Assessment Under Revised Accreditation framework	Government Science College, Jabalpur	24-25 June 2020
10	National Webinar on Impact of Technology	ITM University, Raipur	26 June 2020
11	International Webinar on New Research Trends in Functional Physics	AKS University, Satna	1-4 July 2020
12	National Webinar on Importance of software in civil engineering industry	AKS University, Satna	9 July 2020
13	Webinar on How to start career in Data science	AKS University, Satna	11 July 2020
14	Webinar on Raw material Security of SAIL & Mining Trend	AKS University, Satna	13 July 2020

15	Webinar on Career in Robotics & its application and winning the world with wireless	AKS University, Satna	27 July 2020
16	Webinar on Way of Life	AKS University, Satna	28 July 2020
17	Advance Manufacturing Process of Portland Cement	AKS University, Satna	15 September 2020
18	National Quiz on World Ozone Day 2020	AKS University, Satna	16 September 2020
19	NEP Quiz Competition	Vidya Bharti	17 September 2020
20	Global Linux Quiz Competition	AKS University, Satna	15 October 2020
21	Smart Construction Practices for Durable Concrete in Aggressive Environment	AKS University, Satna	23 October 2020
22	NEP: New Dimensions, Technological Usage and It's Integration in Higher Education	Rewa Engineering college, Rewa	24-25 February 2021
23	Online Quiz Competition	AKS University, Satna	15 September 2021
24	National Awareness Online Quiz	Government P. G. College Morena (M.P.)	16 September 2021

Personal Details

Date of Birth : 3rd May 1988
Marital Status : Married
Nationality : Indian
Sex : Male
Language Known : English, Hindi.
Permanent Address : S/O Shri Rakesh Kumar Gupta,
737/A, Maithlisharan Gupt Marag, Ramleela Maidan,
Bharwa Sumerpur, Hamirpur (U.P.) – 210502

Declaration

I hereby declare that above mentioned details are correct and complete to the best of my knowledge.

Date:

Place:

Dr. RAHUL OMAR