1. Personal Information

- Name: **Dr. Anand Panditrao Chavan**
- Position: **Assistant Professor**
- Department: **Chemical Engineering, Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIE&T) Nanded. (Govt. Aided Autonomous Institute)**
- Contact Information:

  Mobile: **+91 8600267704**, Email: **apchavan@sggs.ac.in**

2. Educational Background

- Degrees:

1. **Ph.D. (Tech.) Chemical Engineering, Institute of Chemical Technology, (Formerly UDCT) Mumbai. (2016-2020)**
2. **Master of Chemical Engineering (M. Chem. Engg.), Institute of Chemical Technology, (Formerly UDCT) Mumbai. (2011-2013)**
3. **Bachelor of Technology (B. Tech.) Chemical Engineering, College of Engineering and Technology, Akola (SGB Amravati University, Amravati) (2007-2011)**

- Postdoctoral Experience:

1. **Institute of Chemical Technology-Indian Oil Odisha Campus, Bhubaneswar (2021–2022)**

3. Research Interests

- Areas of Expertise:

1. **Computational Fluid Dynamics**
2. **Process Engineering**
3. **Reactor Design**
4. **High Temperature High Pressure Batch and Pilot Plants**

- Ongoing Projects:

1. **Distillation column and Heat exchanger design for 30 and 10 KLD for piperazine-water mixture**
2. **Study and Efficient use of existing solid waste management system in campus and augmentation in future demand**

3. **Design and Development of a Scalable Curcumin Extraction Plant**
4. **CFD Modeling and Experimental Verification of Pressure drop in Pipe Flow: A Study of the Hagen Poiseuille Equation**

4. Teaching Experience

- Courses Taught:

1. **Transport Phenomena**
2. **Mass Transfer**
3. **Heat Transfer**
4. **Process Equipment Design and Drawing**
5. **Chemical Process Industries**

- Course Development:

1. **Computational Fluid Dynamics**
2. **Process Engineering**

5. Publications and Presentations

- Journal Articles:

1. **A. P. Chavan, P. R. Gogate, Ultrasound assisted synthesis of epoxidized sunflower oil and application as plasticizer, Journal of Industrial and Engineering Chemistry, Volume 21, 2015, Pages 842-850, https://doi.org/10.1016/j.jiec.2014.04.021**
2. **A. P. Chavan, V. Vitankar, A. Mujumdar, B. Thorat, Natural convection and direct type (NCDT) solar dryers: A Review, Drying Technology, Volume 39 (13), 2021, Pages 1969-1990, https://doi.org/10.1080/07373937.2020.1753065.**
3. **A. P. Chavan, B. Thorat, Mathematical analysis of solar conduction dryer using reaction engineering approach, International Journal of Chemical Reactor Engineering, Volume 18 (5-6), 2020, Pages -, https://doi.org/10.1515/ijcre-2019-0220.**
4. **A. P. Chavan, V. Vitankar, B. Thorat, CFD modeling and experimental study of solar conduction dryer, Drying Technology, Volume 39 (8), 2021, Pages 1087-1100, https://doi.org/10.1080/07373937.2020.1846051**
5. **A. P. Chavan, V. Vitankar, N. Shinde, B. Thorat, CFD simulation of solar grain dryer, Drying Technology, Volume 39 (8), 2021, Pages 1101-1113, https://doi.org/10.1080/07373937.2020.1863422**
6. **A. P. Chavan, B. Thorat, Techno-economic comparison of selected solar dryers-a case study. Drying Technology, Volume -, 2021, Pages -,**

https://doi.org/10.1080/07373937.2021.1919141

7. **D. P. Ghumra, O. Rathi, T. A. Mule, V. S. Khadye, A. P. Chavan, F. C. Barba, S. Main, A. Odaneth, B. Thorat, Technologies for Valorisation of Municipal Solid Wastes. Biofuels, Bioproducts and Biorefining, Volume -, 2022, Pages -, https://doi.org/10.1002/bbb.2340**
8. **A. P. Chavan, A. Sikarwar, V. Tidke, B. Thorat, Augmenting natural convection and conduction based solar dryer. IDS 2018, 21st International Drying Symposium Proceedings, Pages 1357-1364, https://doi.org/10.4995/IDS2018.2018.7813**

- Conference Papers:

1. **A. P. Chavan, V. Vitankar, B. Thorat, "CFD modeling and experimental study of solar conduction dryer," presented at 9th Asia-Pacific Drying Conference (ADC), September 24 - 26, 2017, Wuxi (China)**
2. **A. P. Chavan, A. Sikarwar, V. Tidke, B. Thorat, "Augmenting natural convection and conduction based solar dryer," presented at 21st International Drying Symposium (IDS), September 11 – 14, 2018, Valencia (Spain)**
3. **A. P. Chavan, B. Thorat, "Mathematical analysis of solar conduction dryer using reaction engineering approach," presented at 3rd Nordic Baltic Drying Conference (NBDC), June 12 – 14, 2019, Saint-Petersburg (Russia)**
4. **K. Pai, A. P. Chavan, B. Thorat, "New theories discerning drying kinetics," presented at 3rd Nordic Baltic Drying Conference (NBDC), June 12 – 14, 2019, Saint-Petersburg (Russia)**

6. Awards and Honors

- Grants:

Research Grant of 2.95 Lakhs under RGSTC-MSME Scheme.

- Fellowships:

1. **Lodz University of Technology, Poland (International Scholarship Exchange Program)**
2. **Department of Chemistry, Tezpur University, Assam, India (Winter Internship).**

7. Professional Experience

- Administrative Roles:

1. **Departmental coordinator of Training and Placement at SGGSIE&T, Nanded**
2. **Event Coordinator of Institute Innovation Council at SGGSIE&T, Nanded**
3. **Member of First Year B. Tech., M. Tech and DSY admission committee at SGGSIE&T, Nanded**

4. **Departmental coordinator of Virtual lab at SGGSIE&T, Nanded**

- Industry:

1. **Research Associate, Hindustan Petroleum Green R&D Centre (HPGRDC), Bengaluru**
2. **Asst. Manager, Adya Enterprise, Govandi (E), Mumbai.**

- Consulting Work:

1. **CHEMEPT Solutions, Mumbai.**
2. **Renaissance Ferto Chem Pvt. Ltd., Mumbai**
3. **Shivkhandi Farmer Producer Company, Nanded**

8. Miscellaneous

- Languages:

  English, Hindi, Marathi, Sanskrit.

- Skills:

1. **Pre-processing/mesh generation Tools: SpaceClaim, Design Modeler, ANSYS Meshing, Fluent Meshing.**
2. **Solver Tool: ANSYS Fluent.**
3. **Post-processing Tool: ANSYS CFD-Post.**
4. **Process Simulation Tool: Aspen Plus.**
5. **LT and HT-SIMDIST (Low Temperature and High Temperature Simulated Distillation), DHA (Detailed Hydrocarbon Analyzer), RGA (Refinery Gas Analyzer)**