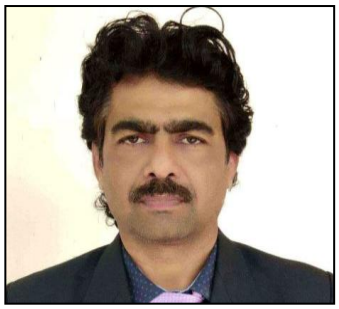
CURRICULUM VITAE



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Personal Profile

Date of birth:	21.06.1973
Marital status:	Married
Nationality:	Indian
Adhar no.:	2129-2824-2051
PAN no.:	BVSPS 5104F

Patent Grant:

1. **Dr. Deepak Kumar Samal,** Mr. Shakti Prasanna Khadanga, Dr. Gopendra Kishore Roy. Dr. Yashobanta Kumar Mohanty. "Laminar Pipe Flow Observation Apparatus (LPFOA)", Patent No. 494508 (application no. 201931049723), **Grant** date-04.01.2024, (SL No :033131489), from Intellectual Property India (GOV. of India).
2. **Dr. Deepak Kumar Samal,** Dr. Gopendra Kishore Roy. Mr. Shakti Prasanna Khadanga, "Pressure Swing Rotating Bubble Cap (PSRBC)", Patent No. 511825 (application no. 201931023024), **Grant** date-16.02.2024, (SL No: 033133228), From Intellectual Property India (GOV. of India).

Patents Published:

1. **TITLE: SELF-ROTATING LIQUID DISTRIBUTING STIRRER (SRLDS)**
   Application No.:202531049092, Date of Publication: 30/05/2025,
   (The Patent Office Journal No. 22/2025), STATUS: Awaiting for Examination
2. **TITLE: RATE OF STEAM CONDENSATION OBSERVATION APPARATUS (RSCOA),** Application No.:202031011148
   Date of Publication: 15/05/2020, (The Patent Office Journal No. 20/2020)
   STATUS: Reply to FER submitted
3. **TITLE: TRANSIENT HEAT TRANSFER OBSERVATION APPARATUS (THTOA)**, Application No.:202031008850
   Date of Publication: 15/05/2020, (The Patent Office Journal No. 20/2020)

STATUS: Reply to FER submitted

Publications:

1. Ankita Mazumder, Tanushree Ghosh, **Deepak Kumar Samal**, “Semi-fluidized bed reactor – a lab-scale comparative experimental investigation with liquid phase reaction”, *Int. J. Chem. React. Eng.,* (2026), https://doi.org/10.1515/ijcre-2025-0200
2. Lipika Das Samanta, Ankita Mazumder, **Deepak Kumar Samal**, “RTD study through self-rotating liquid distributing stirrer in a continuous stirred tank for a liquid-liquid system”, *Next Research,* 2(4) (2025), 100760, https://doi.org/10.1016/j.nexres.2025.100760
3. **Deepak Kumar Samal**, Ankita Mazumder, “Performance evaluation of self-rotating liquid distributing stirrer-an experimental approach”, *Chemical Engineering Science, 319 (2026) 122288*, https://doi.org/10.1016/j.ces.2025.122288
4. Nalini Kanta Panda, Srimant Kumar Mishra, **Deepak Kumar Samal,** Biranchi Narayan Padhi, "Analysis of COP Using Blended R134a and R600a in Refrigeration System as a Replacement to R134a", *J. Inst. Eng. India Ser. C*, DOI: https://doi.org/10.1007/s40032-024-01061-z
5. S P Khadanga, **D K Samal**, P K Patnaik, G K Roy, "Pressure-drop and mass transfer study in multi-stage PSRBC sparger bubble column-An experimental investigation", *International Communications in Heat and Mass Transfer*, DOI: https://doi.org/10.1016/j.icheatmasstransfer.2024.107347
6. S P Khadanga, **D K Samal**, P K Patnaik, G K Roy, Gas hold-up, pressure drop and flow regime study in semi-batch PSRBC bubble column”, *Indian Journal of Chemical Technology*, Vol. 30, March 2024, DOI: 10.56042/ijct.v31i2.9219
7. S P Khadanga, **D K Samal**, P K Patnaik, G K Roy, Hydrodynamic study of pressure swing rotating bubble cap column with gas-liquid systems, *Indian Chemical Engineer*, 1-16, DOI: doi.org/10.1080/00194506.2023.2205860
8. **Samal, D.K.**, Mohanty, Y.K., Roy, G.K., 2014. Prediction of bed pressure drop and top packed bed height in three phase Semi-fluidized Bed of regular homogeneous ternary mixtures. *Global Journal of Engineering Science and Researches*. 1(10): 7-11.
9. **Samal, D.K.**, Mohanty, Y.K., Roy, G.K., Kumar, M., Sekhar, M., Gandhi, R, 2016. Hydrodynamics of two-stage liquid-solid semi-fluidization. *International Journal of Engineering Sciences & Research Technology.* 5(8): 586-591.
10. **Samal, D.K.**, Mohanty, Y.K., Roy, G.K., 2013. Hydrodynamics of liquid-solid semi-fluidized bed with irregular homogeneous ternary mixture. *Powder Technology*, 235: 921-930.
11. **Samal, D.K.**, Mohanty, Y.K., Roy, G.K., 2013. Prediction of bed pressure drop and height of top packed bed formation in Gas-Liquid-Solid Semi-fluidized bed with Irregular Homogenous Binary Mixture. *Korean Journal of Chemical Engineering*, 30(6): 1326-1334.
12. **Samal, D.K.**, Mohanty, Y.K., Roy, G.K., 2014. Hydrodynamics of Liquid-Solid Semi-fluidized Bed with Regular Homogenous Ternary Mixture. *Journal of Bioprocessing and Biotechniques*, DOI: 10.4172/2155-9821.1000151
13. **Samal, D.K.**, Mohanty, Y.K., Roy, G.K., 2014. Prediction of bed pressure drop and top packed bed height formation in three phase semi-fluidized bed with regular homogenous

binary mixtures. *Journal of International Academic Research for Multidisciplinary*, 2(4): 202-210.

Conference proceeding:

1. S. P. Khadanga, **D. K. Samal,** P. K. Patnaik, G. K. Roy, "Study of Gas Hold-up, RPM and Heat Transfer Coefficient in Air and Water Pressure Swing Rotating Bubble Cap Sparger Column", *ICMECH-REC 2023, National Institute of Technology, Warangal*
2. **Samal, D.K.**, Mohanty, Y.K., Roy, G.K., 2015. Hydrodynamic study of Regular Homogenous Binary Mixture in Liquid-Solid Semi-fluidized Bed. *31st National Convention of Chemical Engineers & National Seminar on Technological Advancement in Chemical Engineering and Mineral Processing, The Institution of Engineers (India) Odisha State Centre, Bhubaneswar*.

Guiding Ph D Scholars:

Ph D: 02 (Continuing)

1. Name of Student: Mr. Shakti Prasanna Khadanga.
Title: Dynamics of Pressure swing rotating bubble cap.
Institute for Registration: GIET University Gunupur, Rayagada, Odisha-765022.
Status: Ongoing
2. Name of Student: Mr. Nalini Kanta Panda.
Title: Performance analysis of alternate refrigerants in refrigerating system
Institute for Registration: GIET University Gunupur, Rayagada, Odisha-765022.
Status: Ongoing

Conference and FDP Conducted

As Convener:
One-Week Faculty Development Program on NEP 2020: POTENTIAL AND OPPORTUNITIES IN ENGINEERING EDUCATION (NEP2020: POEE)-2025, 24th to 28th March, 2025, Organized by Department of Chemical Engineering (NBA Accredited), Haldia Institute of Technology, Haldia, West Bengal

As Co-convener:
National Conference on Advancement in Green Energy Production, Environmental Hazard Reduction and its Sustainability (AGEPAHRS)-2022, 10th-11th June,2022, Organized by Department of Chemical Engineering, School of Engineering& Technology, GIET University Gunupur, Odisha

Academic

Biju Patnaik University of Technology, Rourkela
Ph.D in Chemical Engineering (February 2019)
Indian Institute of Technology Madras, India
Master in Chemical Engineering (January 2002)
CGPA: 8.25/10
Institution of Engineers (India)
Bachelor of Engineering in Chemical Engineering (September 1997)
Percentage: 62.5%

Kendrapara College, Kendrapara, Orissa, India
Council of Higher Secondary Education, Orissa, (March 1990)
Percentage: 49%

Salipur High School, Cuttack, Orissa, India
Board of Secondary Education, Orissa, (March 1988)
Percentage: 74%

Course Work

Reaction Engineering	Transport Phenomena
Mass transfer operation	Heat Transfer Operation
Chemical Engg. Thermodynamics	Polymer Technology
Chemical Process Flow sheeting	
Chemical Engg. Equipment Design	

Ph D Topic

Dynamic of three phase multi-component semi-fluidization

Projects

M TECH Project

Title: *Free volume study on Polymer and Polymer-Polymer Systems*
Conducted at Indian Institute of Technology Madras
Duration: May 2001 to January 2002

BE Project

Title: *Design of Chemical Process Equipments*
Conducted at CHEMECH Engineering Pvt. Ltd. Chennai, India
Duration: October 1994 to December 1995

Short-Term Project

Title: *Recycling of Waste Plastic*
Conducted at Indian Institute of Technology Madras
Duration: January 2001 to April 2002

Title: *Development of a suitable Technology for preparation of Electrolytic Iron Powder from pre-reduced Red mud*
Conducted at Gandhi Institute of Engineering and Technology (GIET), Gunupur, Rayagada, Orissa
Duration: July 2006 to April 2009

Work Experience

Name of the Institute: Indira Gandhi Institute of Technology (IGIT), Sarang, Dhenkalnal, Odisha, India, PIN-
Position: Associate Professor
Duration: May 2026 to **Till Date**
Job description: Academic Activities

i) Taking classes of UG students in Chemical and Metallurgical Engineering

Name of the Institute: **Haldia Institute of Technology, ICARE Complex, Haldia, Purba Medinipur, West Bengal, India, PIN-721657**
Position: Associate Professor
Duration: August 2023 to May 2026
Job description: Academic as well as non-Academic Activates
i) Taking classes of UG students in Chemical and Biotech Engineering
ii) Departmental NSS coordinator and Institutional Internship Coordinator

Name of the Institute: **GIET UNIVERSITY, Gunupur, Rayagada, Orissa, India**
Position: Associate Professor
Duration: July 2006 to August 2023
Job description: Academic as well as non-Academic Activates
i) Taking classes of UG and PG students in Chemical and UG students of Biotech Engineering
ii) Prof I/C, GIET University Gunupur Corporate office, Bhubaneswar (April 2007 to Feb 2022)

Name of the Company: Skol Breweries Limited, Paradeep, Orissa, India
Position: Production Engineer
Duration: June 2002 to August 2005
Job description: Handling equipments like reactor (for fermentation), malt mill, plate heat exchangers filters and conditioner and storage tanks

Name of the company: National Oxygen Limited, Pondichery, India
Position: Plant Engineer
Duration: November 1997 to December 1999
Job description: i) Handling equipments like multi stage compressor, condensers, heat exchangers evaporators and storage tanks.
ii) Check up in control room (DCS)
iii) Trouble shooting plant problems

Date:
Place: **Dr. DEEPAK KUMAR SAMAL**