Abhishek Dutta

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Education

2006 - 2011 **Doctor of Engineering (PhD) in Chemical Technology**, *Ghent University*, Belgium.
Thesis: **Modeling of Reaction, Attrition and Breakage in gas-solid multiphase flow systems using the Quadrature method approach.** Honor (Special Mention)

2002 - 2004 **Master of Technology in Biochemical Engineering**, *Jadavpur University*, India.

1998 - 2002 **Bachelor of Technology in Chemical Engineering**, *Madras University*, India.

Professional Experience

2020 - ongoing **Associate Professor**, *İzmir Institute of Technology*, Department of Chemical Engineering, Türkiye.

2020 - 2020 **Assistant Researcher**, *UCLouvain - Université catholique de Louvain*, Institute of Mechanics, Materials, and Civil Engineering, Belgium.

2013 - 2020 **Assistant Professor**, *KU Leuven*, Campus Groep T Leuven, Science Engineering and Technology Group Belgium.

2012 - 2013 **Docent**, *Internationale Hogeschool Groep T Leuven*, Belgium.

2010 - 2012 **Postdoctoral researcher**, *Ghent University*, BIOMATH, Belgium.

2004 - 2006 **Application Engineer**, *Lechler India*, (wholly owned subsidiary of Lechler GmbH), India.

Skills

Softwares **CFD OpenFOAM, Python, Octave, LaTeX**, (open source).
CFD ANSYS FLUENT, MATLAB, (commercial).

Experiment **Lab- & Pilot-scale design, installation and handling**, (scale-up).
Material characterisation, (SEM, HPLC and GC analysis).

Research Interests

Computational Fluid Dynamics (CFD) of reactor and process design.
Multiphasic hydrodynamics of waste-water treatment reactor.
Energy-efficiency in reactor design for process intensification.

Project grants

2023 **Haier Europe, Türkiye**. CFD analysis of conjugal heat and mass transfer in an oven cavity.

2022 **imec, Belgium**. CFD analysis of the microfluidics in a shallow channel.

2020 **Pall Life Sciences, Belgium**.CFD modeling of cell culture device comprising of a fixed porous bed.

2018 **TECO**. Development of an integrated Wastewater treatment system for improved resource recovery in East Kolkata Wetlands (EKW) (mobility grant to study microplastics contamination.)

2015 **Inspyro, Belgium**. CFD analysis for the improvement in the performance of QSL reactor.

Publications

#68, *peer-reviewed* (Web of Science Core Collection).

Book Chapters

#1, *published* in CRC Press (2020).

#1, *published* in Elsevier (2019).

Doctoral Thesis co-supervision

#2, *completed* (2018 - 2022; 2017 - 2023).

#1, *ongoing* (2021 - 2025).

Master Thesis direct supervision

#12 (#6 Thesis converted to *peer-reviewed* publications).

Courses taught

Advanced Reaction Engineering, (Izmir Institute of Technology).

Reactor Design, (Izmir Institute of Technology; KU Leuven).

Reactor and Process Technology, (KU Leuven).

Unit Operations, (KU Leuven).

Process control, (KU Leuven).

Languages

English: C2

Dutch: B1

Bengali: Native

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Place: Leuven, Belgium

Date: 22nd January, 2024