

**Position: Institute Postdoctoral Fellow, Gangwal School of Medical Sciences and Technology, IIT Kanpur.**

Project:

Design and development of inhaler based on COPD patient CT/MR and inhalation data for assessment of drug deposition and airflow dynamics: Modelling, Simulation, and Evaluation

We are looking for dynamic and motivated candidates with strong interests and/or experience in patient-specific data modelling and simulation to work towards the development of inhalers based on COPD patient data. The work deal with the design and development of inhaler for optimal drug deposition in the desired cities in airways and also to trace the complex physics associated with the airflow dynamics whose understanding is likely to facilitate the goal.

**Essential qualifications:**

1. Ph.D. in science or engineering
2. Experience in conceptualization, design, and image processing, volume model generation, CFD studies, data analysis, interpretation, and presentation.
3. Research and/or product design and development experience of a minimum of four years (including Ph.D.) with a focus on one or more of the following areas: structural mechanics, fluid mechanics, fluid-structure interaction, CAD, numerical methods for PDEs, manufacturing, and material science.
4. Proficient in the use of analysis tools/software such as COMSOL, Ansys, Solidworks, SIMPLEMENT, MIMICS, etc.

**Desirable qualifications:**

1. Experience in large-scale CFD simulations based on patient data and/or image processing to generate patient-specific geometries and/or FSI with complex 3D structures.
2. Excellent oral and written communication skills and the ability to work as a part of a dynamic group.

Interested candidates can email their applications (CV and a cover letter) and/or queries to [bvrk@iitk.ac.in](mailto:bvrk@iitk.ac.in). Applications must reach us on or before **15th Sept 2023**.

Contact details:

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