

Vienna, January 2022

PhD Position – Biomimetic Respiration

The interfaculty Biofluidslab at TU Wien (biofluidslab.tuwien.ac.at) offers a PhD Position in the research project 'Biomimetic Membranes for Respiratory Support – BioMembrOS'. Aim of the project is to develop an innovative membrane unit for artificial respiration based on biomimetic principles. The PhD project will focus on numerical investigations (CFD) of the blood flow within membrane structures with respect to mass transfer and hemocompatibility (blood damage) and experimental investigations using particle image velocimetry on macro (3D PIV) and micro (μ PIV) scale and mock circulations.

Requirements: Candidates should possess a Master's degree in Mechanical or Chemical or Biomedical Engineering or similar and knowledge of fluid dynamics, ideally experience with CFD (OpenFoam, Ansys/Fluent) and/or laser-based flow measurements.

The PhD thesis will be co-supervised by Prof. Michael Harasek, Research Unit of Thermal Process Engineering & Simulation and Prof. Margit Gföhler, Research Unit of Biomechanics and Rehabilitation Engineering. The position will be filled as soon as possible and is currently limited to 2 years, 30h/week. An extension is planned but can't be guaranteed. Salary in accordance with the collective agreement for university employees, group B1, currently € 2.294,00 gross/month.

If interested, please send your application including a complete CV and an accompanying letter detailing motivation, previous experience, and relevant skills, by email to: michael.harasek@tuwien.ac.at and margit.gfoehler@tuwien.ac.at.

Ao. Univ.Prof. DI Dr. Michael Harasek
Head of Research Division
Technische Universität Wien
Institute of Chemical, Environmental &
Bioscience Engineering
Thermal Process Engineering - Computational
Fluid Dynamics
Getreidemarkt 9/166
A-1060 Vienna, Austria
T: +43-1-58801-166202
michael.harasek@tuwien.ac.at
www.vt.tuwien.ac.at
biofluidslab.tuwien.ac.at

Univ. Prof. Dr. Margit Gföhler
Head of Research Unit of Biomechanics and
Rehabilitation Engineering
Institute of Engineering Design and Product
Development
TU Wien
Lehargasse 6 (BD)
A-1060 Vienna, Austria
T: +43 1 58801 30615
margit.gfoehler@tuwien.ac.at
www.ikp.tuwien.ac.at/biomech
biofluidslab.tuwien.ac.at