



Asit Kumar Mishra, *Innovative Solutions for Indoor Air Exposure: Agile, Lean, and Resilient (INSIDE-AIR)*

In recent years, the impact of climate change, emissions and air pollution, alongside the Covid-19 pandemic and the increasing time we have been spending indoors have led us to rethink the quality of the indoor air we are constantly exposed to. Envisioning a resilient and sustainable approach, Asit Kumar Mishra's project *Innovative Solutions for Indoor Air Exposure: Agile, Lean, and Resilient (INSIDE-AIR)* brings together public health experts and building engineers to focus on "indoor air sanitation". This calls for a paradigm shift in indoor air management systems.

The main aim of this DOROTHY fellowship is to design indoor-air management systems that are flexible enough to deal with the demands during threats such as a pandemic or a wildfire, and are able to provide healthy air quality during everyday operation. As a starting point, the project tackles the air quality in school classrooms by creating matrices of engineering solutions for optimizing indoor air management systems in different classroom archetypes. Combining field and simulation studies, the fellow aims to create a framework which will guide the design of future buildings and retrofits for healthier indoor air quality and resilience against future health threats. Throughout the lifetime of the project, the fellow will also initiate a move towards relevant policy changes and provide a starting point for other researchers working on indoor environment and health.

The research outcomes include two articles disseminated through RTE Brainstorm, [How to ease effects of heat](#) and [5 tips to save money on your heating this winter](#), whose main goal is to raise awareness on how the indoor climate impacts health and well-being, and the simple steps one can take to mitigate adverse consequences. Asit's research project was also promoted through [a podcast](#) and a [radio interview](#). Additionally, in 2023 the fellow wrote [an article](#) covering a recent [Code of Practice](#) from Health and Safety Authority of Ireland regarding Indoor Air Quality in work places with the intention of presenting his work to a wider audience.

Asit was awarded a UCC Green Campus Living Laboratory Seed Fund for a project titled "Home Measurements for Enhancing Air Quality (HOME-Air)". He was also selected as a finalist of the 2023 MSCA Science-Polity Pitch Competition.

More information on this research project can be found on the project website [INSIDE-AIR](#).