

**COMPANY**

Lify Air

**RESEARCH CENTRE**

Institut de recherche mathématique  
de Rennes

**PRODUCTIVE SECTOR**

Biomedicine and Health Care

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SS\_041\_2023

# LIFY AIR

Change the lives of pollen allergy sufferers.

## PROBLEM DESCRIPTION

30% of the French population is concerned by pollen allergy, against only 3% in 1970, and the allergic population is predicted to pass the 50% mark in 2050. Taking treatment in advance significantly reduces allergic reactions. It is therefore crucial to provide pollen risk forecasts as early as possible.

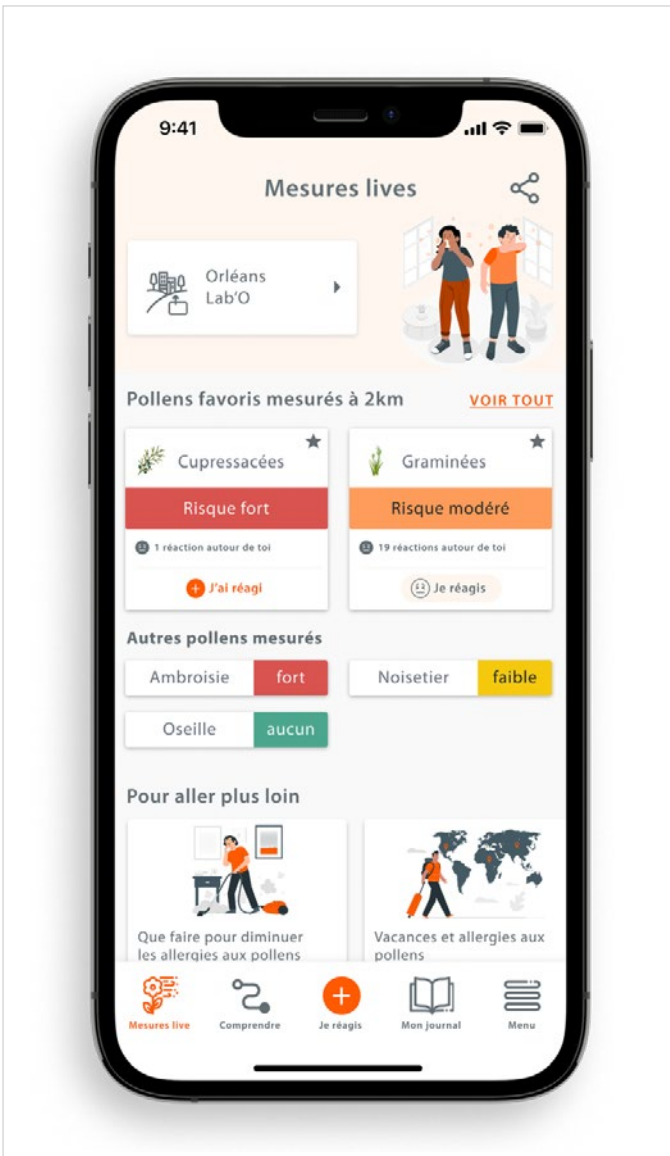
## CHALLENGES AND GOALS

- ✓ Pollenic risk forecasting.
- ✓ Multi-sources data fusion.

## MATHEMATICAL AND COMPUTATIONAL METHODS

Lify Air designs and deploys optical sensors to measure the concentration of pollen in the air.

The objective is to provide forecasts for allergy sufferers. Lify Air, Irisa and IRMAR collaboration has led to the development of statistical models for multivariate time series to combine meteorological information and optic signals for forecasting the pollen risks of about 20 species.



The Lify Air interface for pollen allergy prevention for more than 20 different pollens in France and Belgium.

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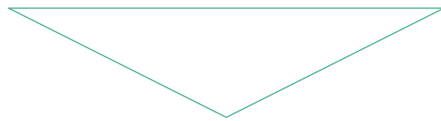
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# LIFY AIR

Change the lives of pollen allergy sufferers.

## RESULTS AND BENEFITS

Statistical models have been developed to combine historical pollen data, meteorology information and low level optic signals from the Lify Air sensors. Thanks to the models, Lify Air currently provide real time risk and will soon provide forecasted risk. 3 days in advance, for about 20 pollens. Risk indices are delivered via a personalized interface.



Space time statistical models for  
real time pollenic risk forecast.

**Specific pollenic risk forecast  
at your location allows the  
reduction of allergic symptoms  
and side costs.**