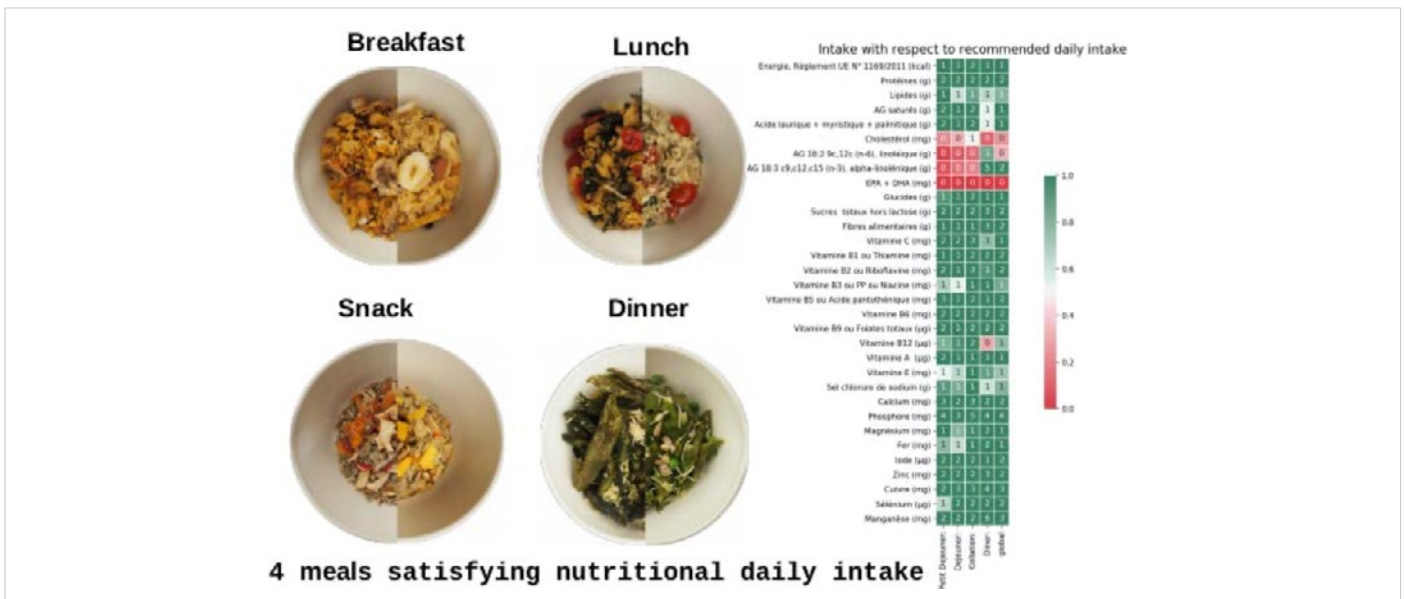


SS\_031\_2021

# WUJI&CO

HOX, mathematics for smart meals.  
Creation of healthy individualized meals.



## PROBLEM DESCRIPTION

WUJI AND CO aims to conceive and produce (nutrient preserving) dehydrated tasty prepared meals. Set of meals should be formulated to satisfy individual specific needs.

## CHALLENGES AND GOALS

- ✓ Maximize the satisfaction of heterogeneous nutritional targets during many days.
- ✓ While satisfying meals composition's rules; diversity; taste constraints; minimizing ingredients used.

## MATHEMATICAL AND COMPUTATIONAL METHODS

The challenge is a multi-objective optimisation task with many nutritional constraints, as well as taste and sustainability of the production as additional constraints. Data are analysed and integrated. Several solutions for each specific nutritional profile are expected.

COMPANY

WUJI&CO

RESEARCH CENTRE

LMA, UMR 7348, Poitiers

PRODUCTIVE SECTOR

Food

[More info](#)

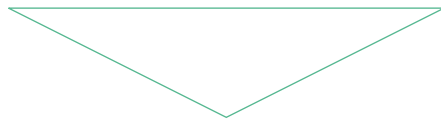
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## RESULTS AND BENEFITS

A modelling and technical framework based on stochastic algorithms was conceived and implemented as a prototype code able to design the expected recipes. Nutritional data were analysed and food-pairing networks were constituted. This work was jointly done with B. Coupier (post-doc) and E. Behar (intern, EFREI/d.school) supervised by P.-Y. Louis (LMA Poitiers).



Personalized healthy recipes.

**Innovative framework and software for smart recipes formulation thanks to artificial intelligence methods and mathematical modelling.**

