

# Simulation and Numerical Computing Platform

Center for Biomedical and Healthcare Engineering  
I4S Lab

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## Resources

### Expertise

Mathematic modeling/Optimisation, Simulation,  
Stochastic process, Data Mining, Management Science  
> 26 publications in international revues between 2011-2015

### Tools and Applications

ARENA, ARIS, AnyLogic, Cplex...

### Equipments

High Performance Computer and application server

## Combinatorial optimisation

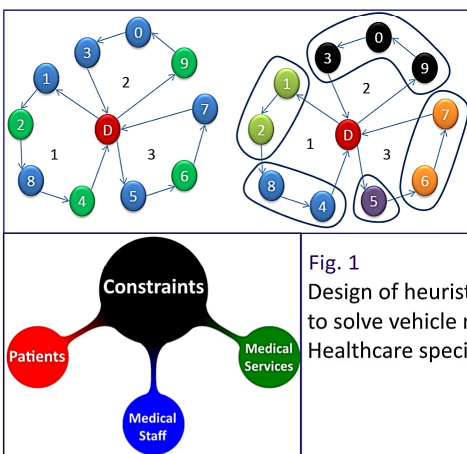


Fig. 1 Design of heuristics and metaheuristics to solve vehicle routing problems with Healthcare specific constraints.

## Data analysis

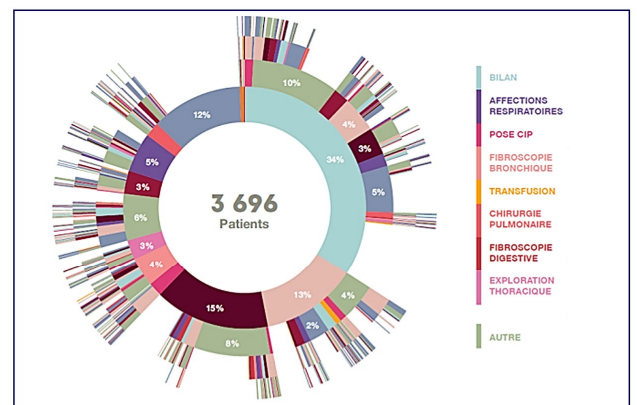


Fig. 2 A thorough analysis of large data mass from 3696 patients.

## Discrete event simulation

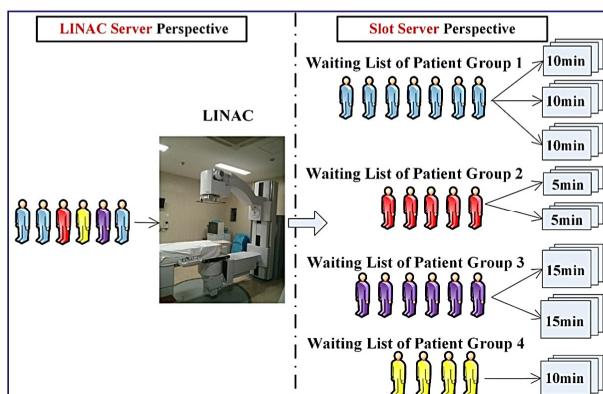


Fig. 3 Modeling, simulation and optimisation of the use of medical equipment.

## Process modeling

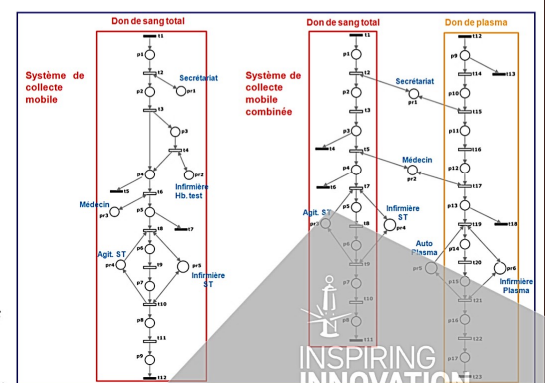


Fig. 4 Petri modeling of a mobile blood collection system.