



# LORIA Computer Science and health related activities

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► **To cite this version:**

Jean-Pierre Thomesse. LORIA Computer Science and health related activities. Journée d'études Promotech, 2002, Villers-lès-Nancy/France, 2002. <inria-00107597>

**HAL Id: inria-00107597**

**<https://hal.inria.fr/inria-00107597>**

Submitted on 19 Oct 2006

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# LORIA

## Computer Science and Health activities

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# LORIA

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- 1 laboratory in computer science and applications
- 1 INPL, UHP, Nancy2, INRIA, CNRS
- 1 ~400 researchers
- 1 25 teams
- 1 common actions based on applications as :
  - health
  - transport

# action Quant Ó

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## 1 Computer Aided Diagnosis - Telemedicine

- based on health status modelling
- periodic data acquisition
- alarm generation
- self learning systems

## 1 Image analysis and synthesis - virtual reality

- 3D images reconstitution
- surgeon training
- neurology, cardiology, urology, É

# action Quant Ó

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## 1 Telemedicine - CAD - applications

- kidney disease
- heart failure patients
- high blood pressure patients
- diabetes
- anaesthesia follow-up
- elderly people

# DI ATELIC: a new generation telemedicine system

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- 1 interaction between the users
  - patient (CAPD)
  - physician
  - nephrologist
- 1 data acquisition and transmission
- 1 data analysis - health status model
  - diagnosis establishment
  - alarms detection and transmission
  - patient feedback
  - physician information



# results

## 1 medical results

- half of hospitalisation days
- less consumption of drugs
- best weight
- best blood pressure

## 1 economical results

- economy of 10 000 euro/patient/year
- economy of time for physicians

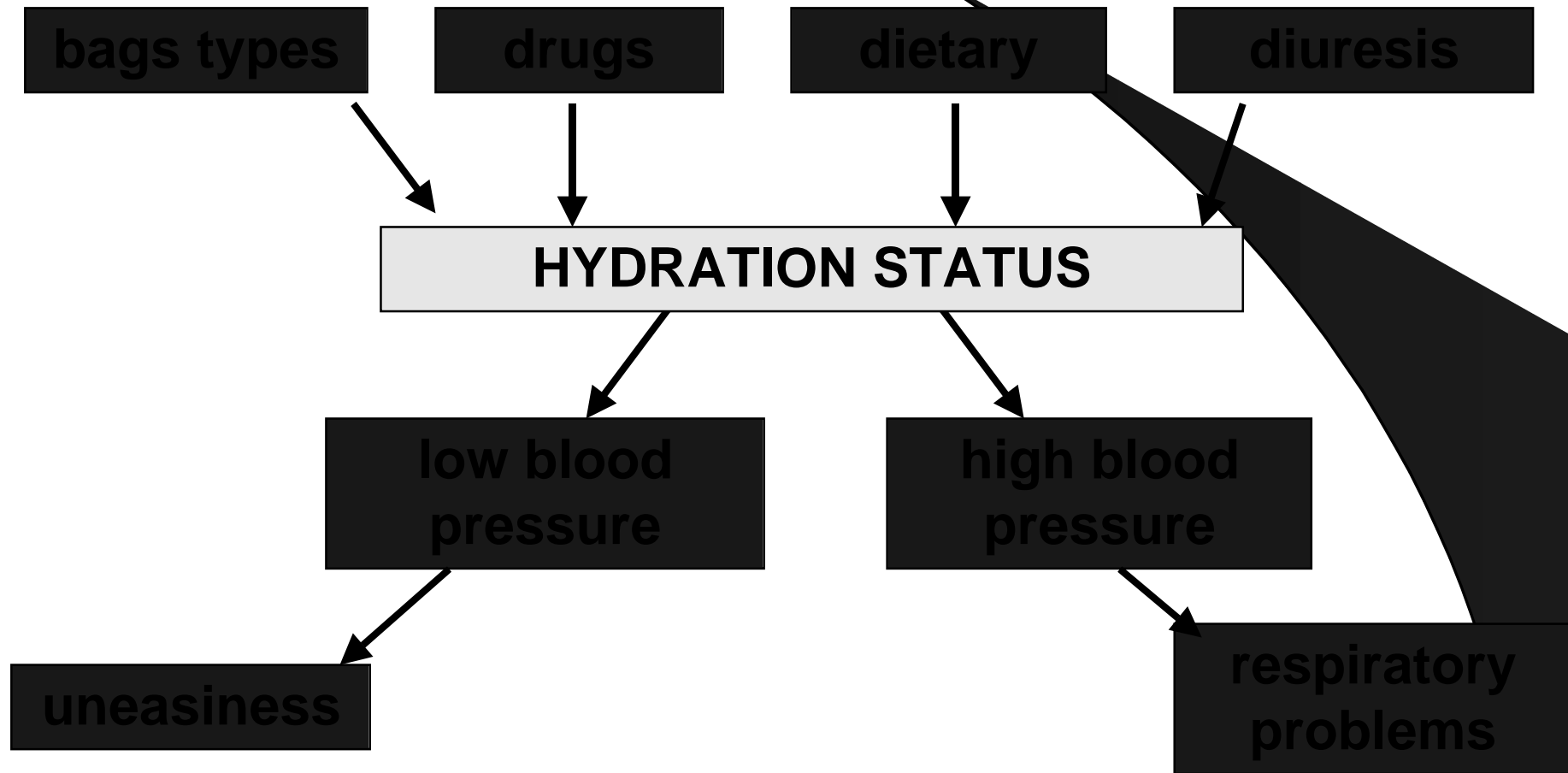
# methodology

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- 1 co-operation with physicians
- 1 modelling stage, development and test
- 1 medical experiment, validation
- 1 patents
- 1 start-up, **DIATELIC SAÓ**
- 1 equipment of 150 patients in Lorraine in 2002



# usual problems



# Pathological State Space

