D2C
DATAIA CLUB CONNECTION

MEDICAL IMAGING

DATAIA PARIS-SACLAY INSTITUTE

Located within the **Paris-Saclay University** (12th Shanghai ranking), it is the **first French ecosystem in Data Sciences, AI and their societal impacts.**

MISSION

To bring together **multidisciplinary expertise and boost the collective strength of its partners** in the Paris-Saclay cluster with the aim of combining big data and AI technologies with social sciences and humanities for an AI at the service of humans.

IN FIGURES

14
DATAIA members

47
laboratories partners

800
full-time researchers

10
IA chairs out of 40 national

30
IA theses

450
PhD students per year

PAI
Programme d'Affiliation Industrielle

The Industrial Affiliation Plan (PAI) aims to boost the collective strength of the Institute's academic ecosystem and its industrial members. The services offered in response to the respective needs expressed include:

- Joint actions to support research;
- Sharing of experiences and collective needs;
- Facilitated access to recruitment;
- Access to training, seminars, workshops, etc.;
- Implementation of dedicated events (hackathons, challenges, etc.);
- Access to working places to increase exchanges.

D2C
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The D2C system aims **upstream**, to present the priority research issues and to match them with the problems of industry. **Downstream**, to monitor contacts and opportunities for collaboration identified until they are set up and launched. It is part of the ambition to facilitate the establishment of several levels of collaboration and create a constructive dynamic:

1. Expertise / Student projects / Internships
2. Research collaborations / CIFRE theses
3. Joint laboratories / Joint teams
4. Multi-partner chairs

OBJECTIVES & PROGRAM

The main objectives of this D2C are focusing on :

- Solutions for processing, reconstructing and recalibrating medical images;
- Image analysis for diagnosis, segmentation, classification;
- Detection of anomalies and lesions;
- Construction of avatars for the rehabilitation of sick people.

2PM - 3PM   3' pitches by DATAIA researchers on prospective research topics followed by industrialists on related issues

3PM - 4PM   Individual appointments of 15', with a view to setting up new collaborations

DATAIA RESEARCHERS

EEG. Spectoscopy, Infrared Scanner, X-Ray, Statistical signal processing

Florent Bouchard (CentraleSupélec, L2S)
Robust learning in the framework of structured covariance matrices

Brain interfaces and time series

Sylvain Chevallier (UVSQ, LISV)
Learning and geometric approaches, teledetection

Segmentation (cardiovascular MRI; OCT of the eye; MRI of the prostate)

Désiré Sidibé (UEVE, IBISC)
Learning and image analysis, vision for robotics

Surgeon training - Organ reconstruction

Hedi Tabia (UEVE, IBISC)
Image analysis and segmentation, human-computer vision

Deep learning on imaging data in cancerology

Maria Vakalopoulou (CentraleSupélec, CVN)
Computer vision, machine learning, medical image analysis

DATAIA RESEARCHERS

Cardiovascular imaging: quantifying blood movement

Nora Ouzir (CentraleSupélec, CVN, Inria OPIS)
Image registration, topographic MRI modalities
ultrasound, doppler imaging

Imaging in oncology and neuroimaging: nuclear imaging, MRI, ultrasound, PET, multimodal tracers

Florent Besson (CEA, BioMaps, AP-HP)
PET-MRI, applied deep learning, medicine data

Claude Comtat (CEA, BioMaps)
PET-MRI, tomographic reconstruction

Sébastien Jan (CEA, BioMaps)
Radio therapy, nuclear physics

Florent Sureau (CEA, BioMaps)
PET reconstruction, deep learning

DATAIA CLUB PAI COMPANIES

GE Healthcare

Mammography Department
image quality, noise reduction
Interventional Imaging Department
image processing and quality, 3D reconstruction
Radiology and Clinical Research Department

Nicolas Gogin - Post-processing, CT/MRI
Vincent Jugnon - X-Ray Interventional Imaging
Thomas Benseghir - Senior Scientist

sanofi

Overview of imaging: supervision, segmentation, reinforcement learning

Elton Rexhepaj - Senior Data Scientist
Paolo Piro - Data Scientist

GUEST COMPANIES

Medexprim

Extraction of clinical radiology data from oncology patients

Romain Cazavan - CEO
Nicolas Dubost - CTO

CASIS
CArdiac Simulation & Imaging Software

Heart failure in cardiovascular imaging

Jean-Joseph Christophe - CEO
Ninon Mouillon - Sales

INSTITUTIONAL PARTNERS

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