

## Objectives

- Understand the principles of ultrasound images acquisition and processing
- Acquire ultrasound images autonomously
- Analyse US data autonomously
- Apply the concepts of US imaging to developmental biology, cardiology, hemodynamics, ...
- Get familiar with current technological evolutions

## Public

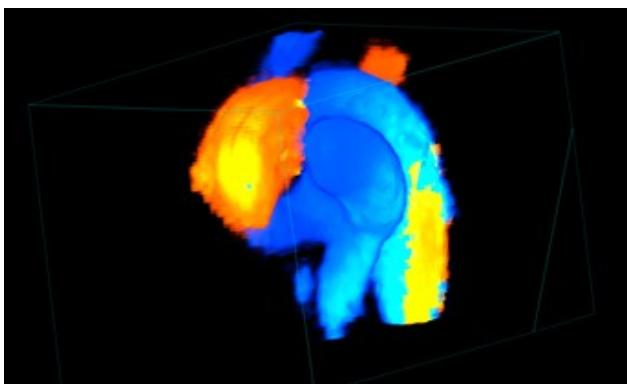
Biologists, from technician to researcher, in particular in the fields of cardiology, cancerology, developmental biology ; MDs and physicists.

*Max. 9 participants*

## Language

English or French depending on participants preference.

© PIV, Institut Cochin  
Mouse aortic arch (Doppler)



## Contents

- **Lectures**
  - Introduction to ultrasound imaging : parameters, fine-tuning
  - Echocardiography
  - Hemodynamics
  - Advanced ultrasound imaging (contrast, ultrasound elastography, ...)
- **Hands-on**
  - Gestation/embryo development
  - Echocardiography
  - Abdominal anatomy and tumors
  - Hemodynamics
  - Data analysis
- **Demonstrations**
  - Embryo micro-guided injection
  - Contrast ultrasound

## Method

- Lectures (7h – 25%)
- Practical work (21h – 75%)
- Teaching packages in small groups (max. 3p/group)

## Duration

4 days (28 hours)

## Dates

March 15 – 18, 2016

## Venue

Plateforme d'échographie du petit animal  
Hôpital Cochin - Bât. Hardy A, 1<sup>er</sup> étage  
27 rue du Faubourg Saint-Jacques  
75014 Paris

## Credit

Up to 2 ECTS could be given to the course participants by their home University

## Registration deadline

February 20th, 2016

## Registration fees

Student : 900€  
Academic : 1800€  
Industrial : 3000€

**Ref code : 14A**

## Scientific advisor / course leader

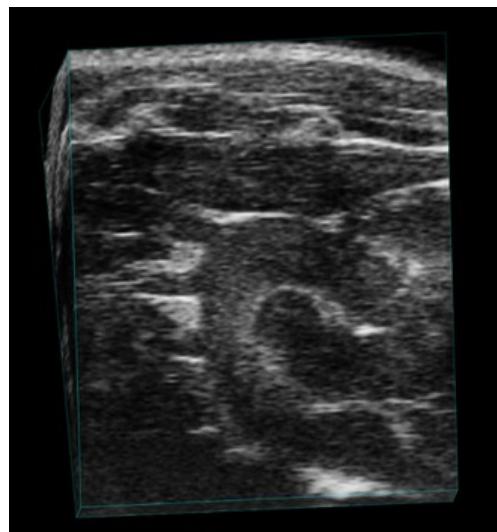
Gilles Renault (Université Paris Descartes)  
e-mail : gilles.renault@inserm.fr

## Training manager

Vivienne Fardeau (INSTN)  
Tél : +33 1 69 08 54 88  
e-mail : vivienne.fardeau@cea.fr

## Registration

Justine Norca (INSTN)  
CEA Saclay INSTN/SOLSS  
Bat. 399 - PC 35  
91191 Gif-sur-Yvette  
Tél. : +33 1 69 08 36 38  
e-mail : justine.norca@cea.fr



© PIV, Institut Cochin  
Mouse aortic arch (3D)



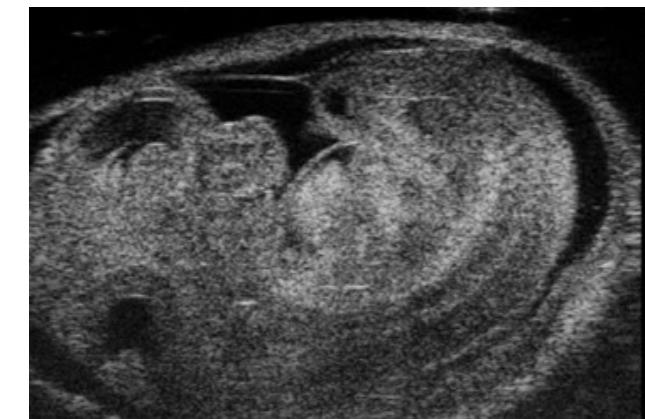
## More training courses and workshops with France Life Imaging

- 1<sup>er</sup> Congrès National d'Imagerie du Vivant  
Paris, February 10-12, 2016  
<http://cniv2016.com/>
- Atelier « Biomarqueurs et agents  
d'imagerie en infectiologie et  
inflammation », Paris, May 3-4, 2016
- « NMR sequence programming with the  
Bruker Paravision environment »  
Villeurbanne, fall 2016



# High-resolution small animal ultrasound imaging

Practical training to become an  
independent user



© PIV, Institut Cochin  
12 days mouse embryo

More information on our website  
<http://www.francelifeimaging.fr>

Contact the FLI Education Work Package  
[vivienne.fardeau@cea.fr](mailto:vivienne.fardeau@cea.fr)  
[lauranne.duquenne@inserm.fr](mailto:lauranne.duquenne@inserm.fr)

March 15-18, 2016  
Paris, France



[www-instn.cea.fr](http://www-instn.cea.fr)

