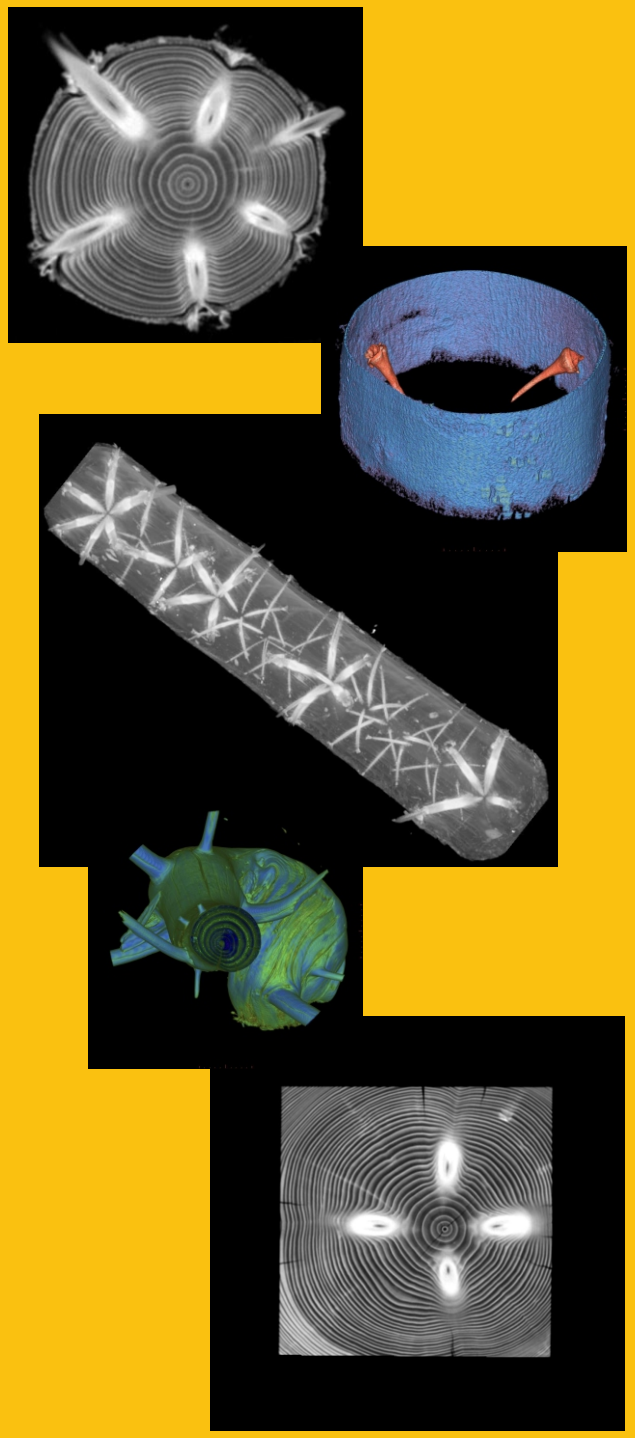

Informations,
application form:

INRAE

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54280 Champenoux - FRANCE
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Tel : +333 83 39 41 43

Characterize the internal structure of your study objects

Publications :

FREYBURGER C., LONGUETAUD F., MOTHE F., CONSTANT T., & LEBAN J-M., 2009, Measuring wood density by means of X-rays computer tomography, Annals of forest science.

COLIN F., MOTHE F., MORISSET J-B., FREYBURGER C., LEBAN J-M. & FONTAINE F., 2010, Tracking rameal traces with X-ray computing tomography : biological bases, preliminary results and perspectives, Trees.

LONGUETAUD F., MOTHE F., FOURNIER M., DLOUGA J., SANTENOISE P., & DELEUZE C., 2016, Within-stem maps of wood density and water content for characterization of species : a case study on three hardwood and two softwood species, Annals of Forest Science, 73, 601-614.

UMR Silva — Silva TECH — INRAE

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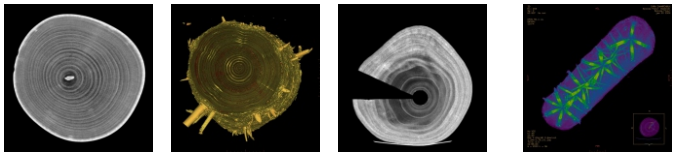
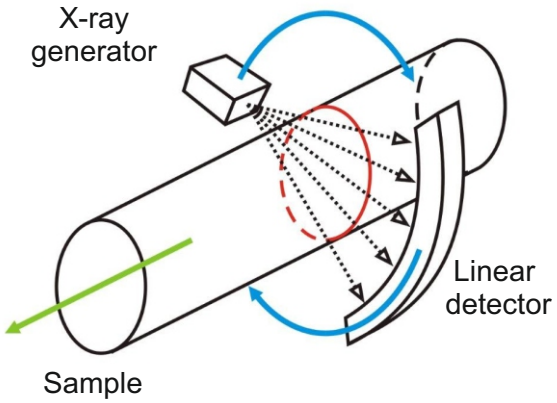
UNIVERSITÉ DE LORRAINE

Template : C. Mola, P. Gelhaye - February 2019

X ray Scanner



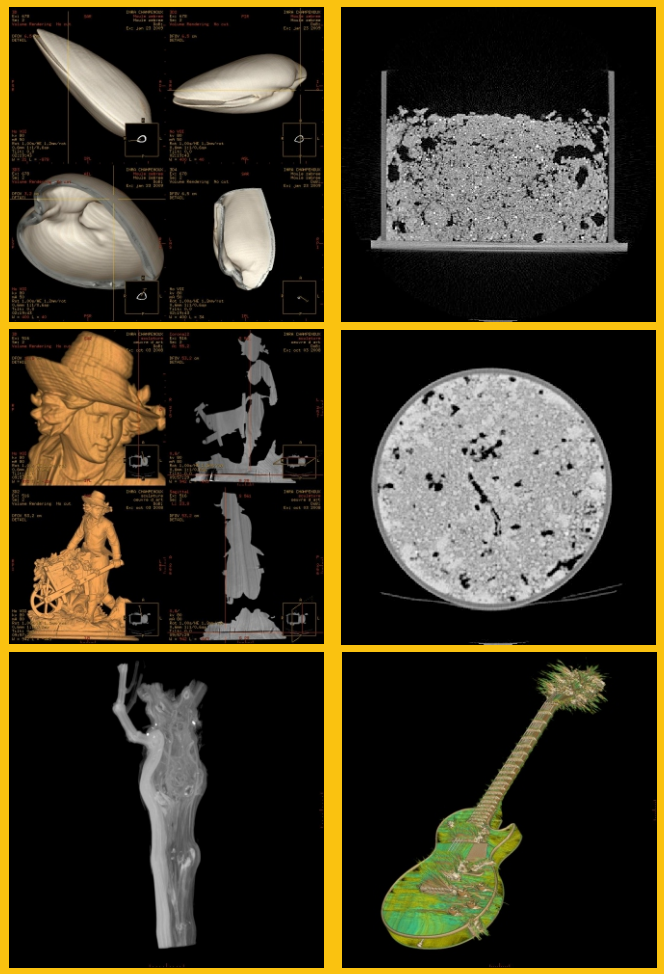
The medical X-ray scanner allows to obtain series of images showing density variations in 3D volumes without any damage to the object.



This technology applied to wood material allows multiple applications: study of tree growth, internal density mapping, distribution of water content, knotiness measurement ...

X ray Scanner

This method of investigation applies to a large variety of materials. It has been used in particular in soil studies (liquid flow, porosity, preferred vermicomposting paths), mussel shells (asymmetry) shells by a parasite), or for the study of archaeological objects.



Technical characteristics :

General Electric Scanner
Brightspeed Excel
4 slices

Maximal sizes of the object :
Weight : 180 kg
Diameter : 50 cm

Maximum acquisition speed :
150 slices / minute

Resolution :
transverse : 0.2 à 1 mm / pixel
longitudinal : 0.625 à 10 mm