

# illustrate

Understand the complex  
Create mental images Spatial reasoning

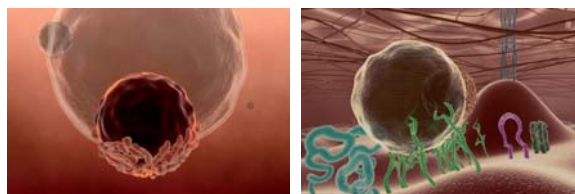
## Teaching in 3D

Since 2005, the University Lyon 1 has multiplied 3D resources on its educational platform, Spiral, and on the site "Anatomie 3D Lyon 1," thus providing students with a fun way to learn.

### 3D Animations

Illustrate and understand the complex

3D objects are animated by an instructor-defined scenario. The video illustrates mechanisms which are sometimes difficult to explain with pictures. Thus the images substitute words and promotes the creation of mental images to help the structuralization of space<sup>1-2</sup>



### 3D PDF

Create a mental image and structure space

3D features offered by the Adobe PDF format enable a single 3D model to be integrated into a file, thus permitting objects to be moved in space, enlarged, displayed or hidden, labelled, sectioned. It is even possible to turn around moving objects.



### Interactive applications

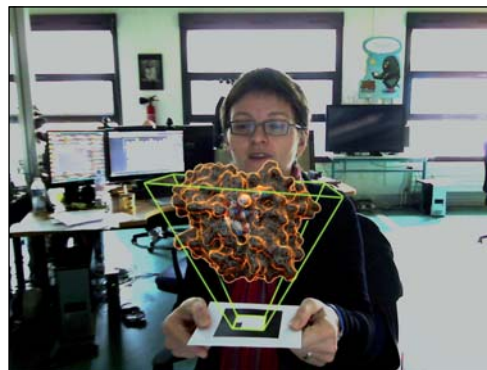
At the heart of the action

Real-time 3D is a method of three-dimensional data representation for which each image composing the animation is rendered in the instant before it is posted. The 3D real-time allows a high degree of interactivity (immersion opportunities, animation control,...) and makes the student a constructor of his learning.

### Augmented Reality

Complete our perception of reality

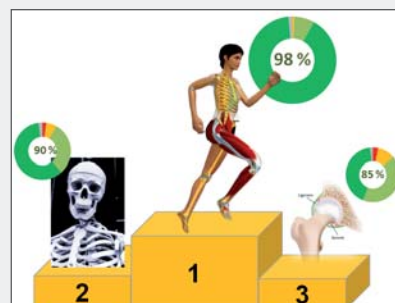
Augmented reality refers to the various methods by which virtual objects to be projected in the real world.



### 3D a hit with students

Appreciation for the use of 3D in the teaching of anatomy in STAPS, occupational therapy and psychomotricity is unanimous. The assessment surveys conducted since 2008 show that :

- During the first class, 94% of students would like 3D be used in teaching,
- At the end of the course, 98% of students believe that 3D resources are the best course material, with black and white transparencies in last place (49%)



1. EI HOYEK, COLLET, FARGIER, THIRIET, GUILLOT. Enhancement of Mental Rotation Abilities and its effect on Anatomy Learning. Teaching and Learning in Medicine. 2009 Jul;21(3):201-6
2. GUILLOT, CHAMPELY, BATIER, THIRIET, COLLET. Relationship Between Spatial Abilities, Mental Rotation and Functional Anatomy Learning. Adv Health Sci Educ Theory Pract. 2007 Nov;12(4):491-507

<http://anatomie3D.univ-lyon1.fr>  
<http://spiral.univ-lyon1.fr>  
<http://icap.univ-lyon1.fr>

Department iCAP  
Université Claude Bernard Lyon 1  
Domaine Scientifique de la Doua  
Le Quai 43  
43 Bd du 11 Novembre 1918  
69622 VILLEURBANNE CEDEX

<http://icap.univ-lyon1.fr>  
<http://spiral.univ-lyon1.fr>  
<http://evaluation.univ-lyon1.fr>