

A decorative graphic on the left side of the slide features several vertical blue lines of varying widths. A large sphere with horizontal blue and white stripes is positioned on the left, with three smaller spheres of the same design to its right and slightly below. Below these spheres are two small solid blue circles and one small solid black circle, all aligned with the vertical lines.

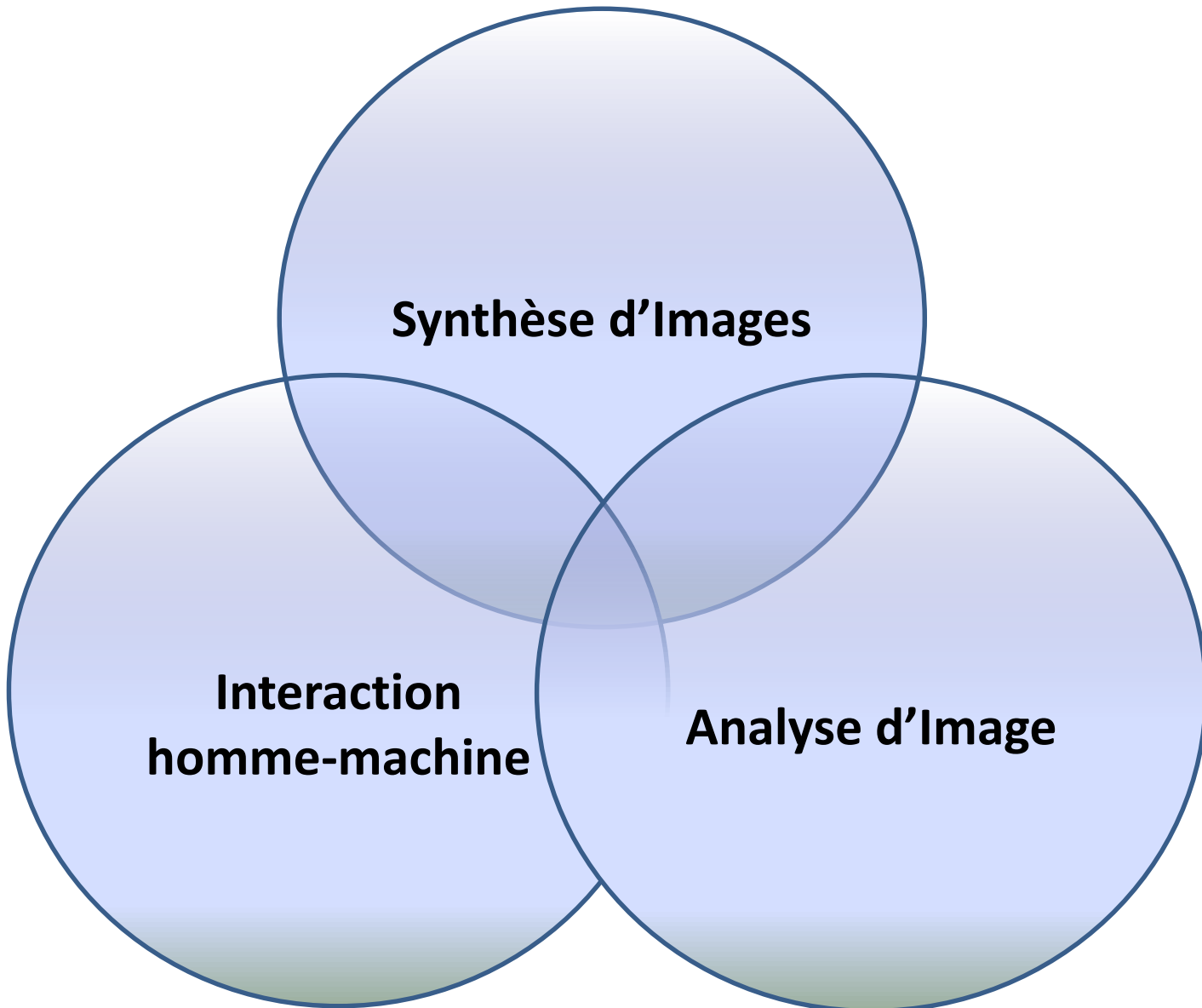
# VISUAL COMPUTING

Responsable:  
Stefan Bornhofen

*Présentation du 20/11/2019*

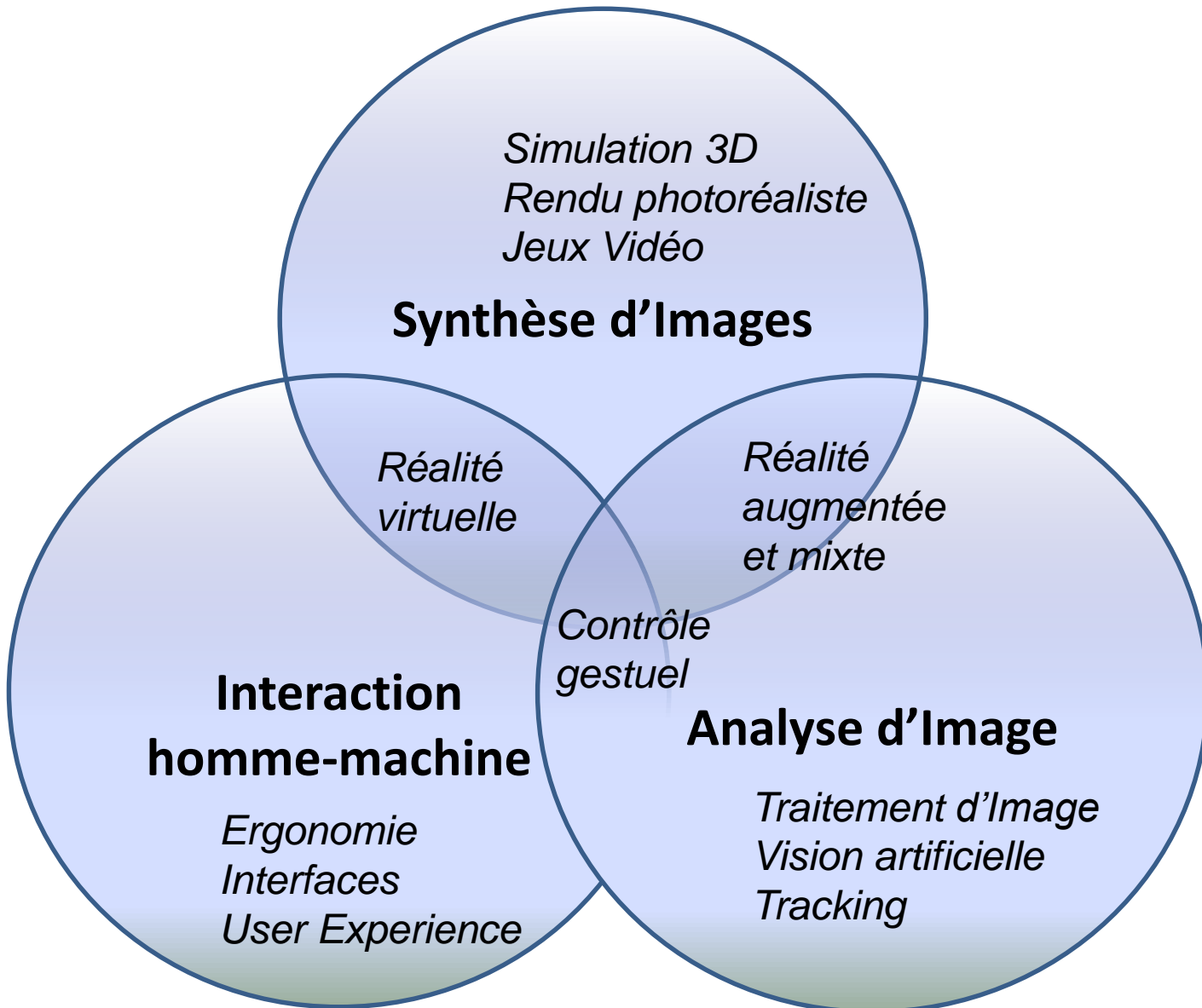
# TROIS THÉMATIQUES

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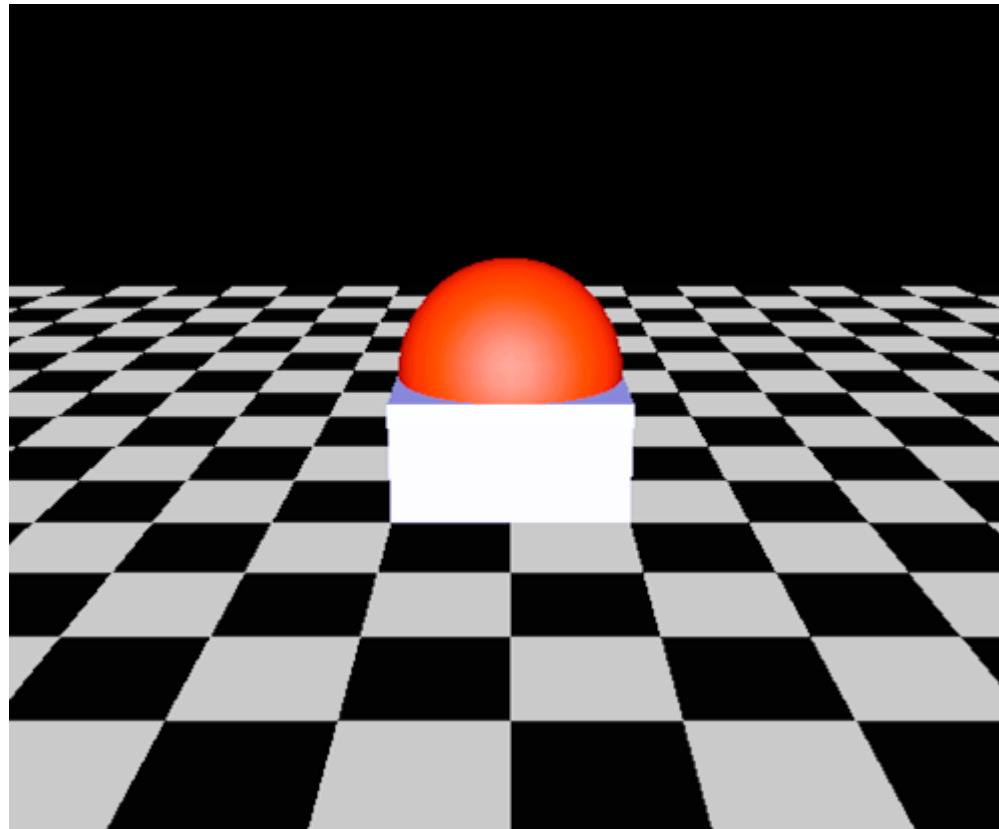
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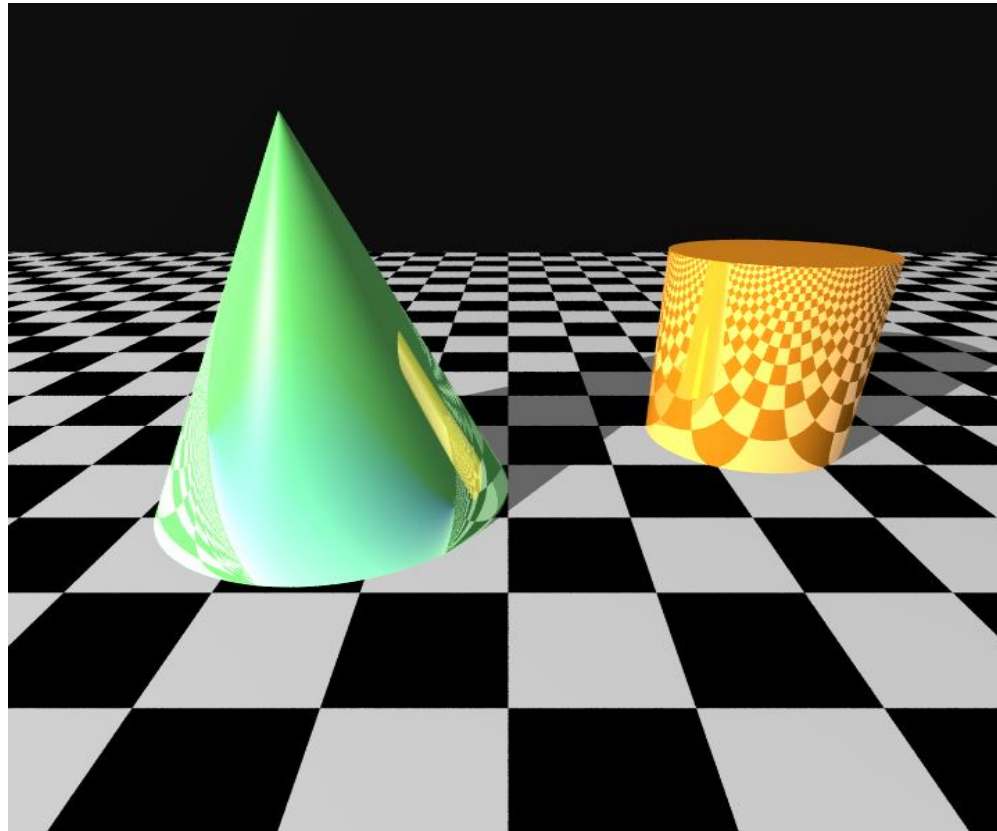
# 1. SYNTHÈSE D'IMAGES

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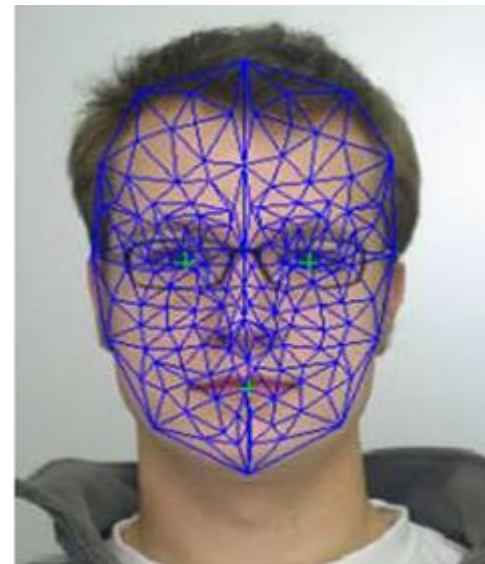
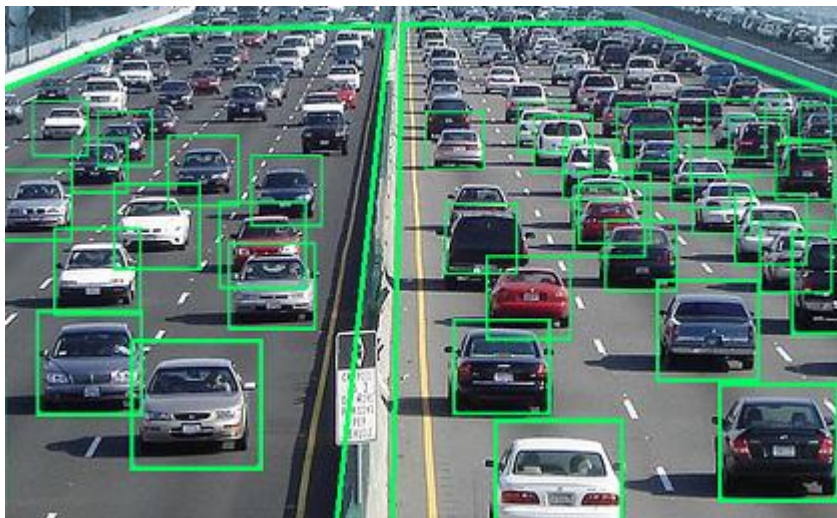
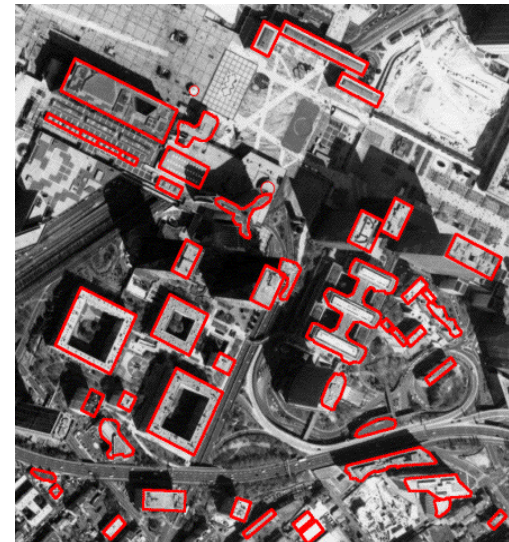
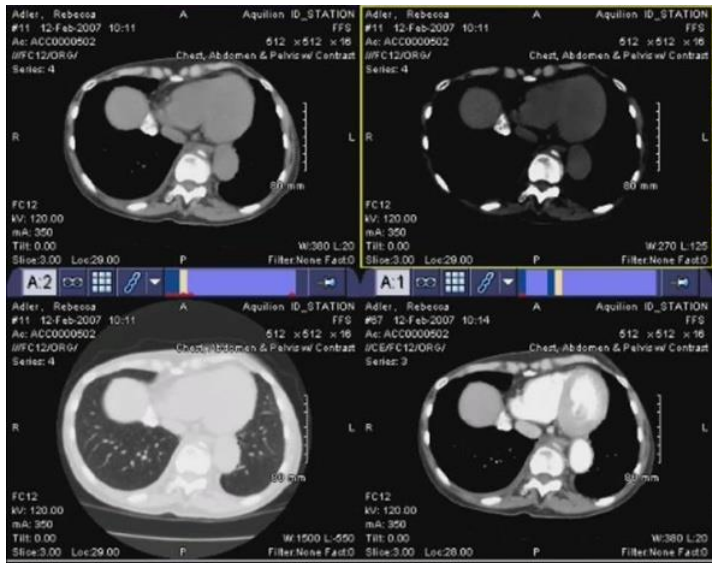


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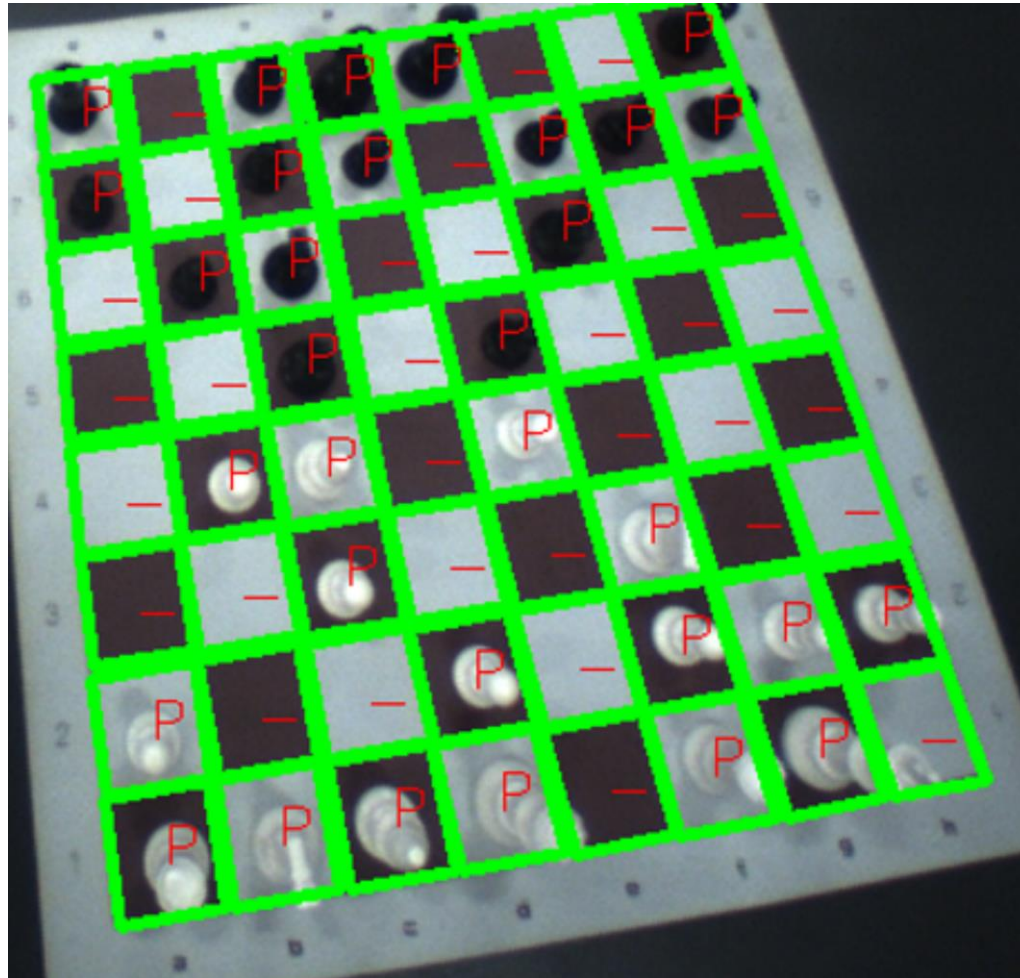


## 2. ANALYSE D'IMAGE

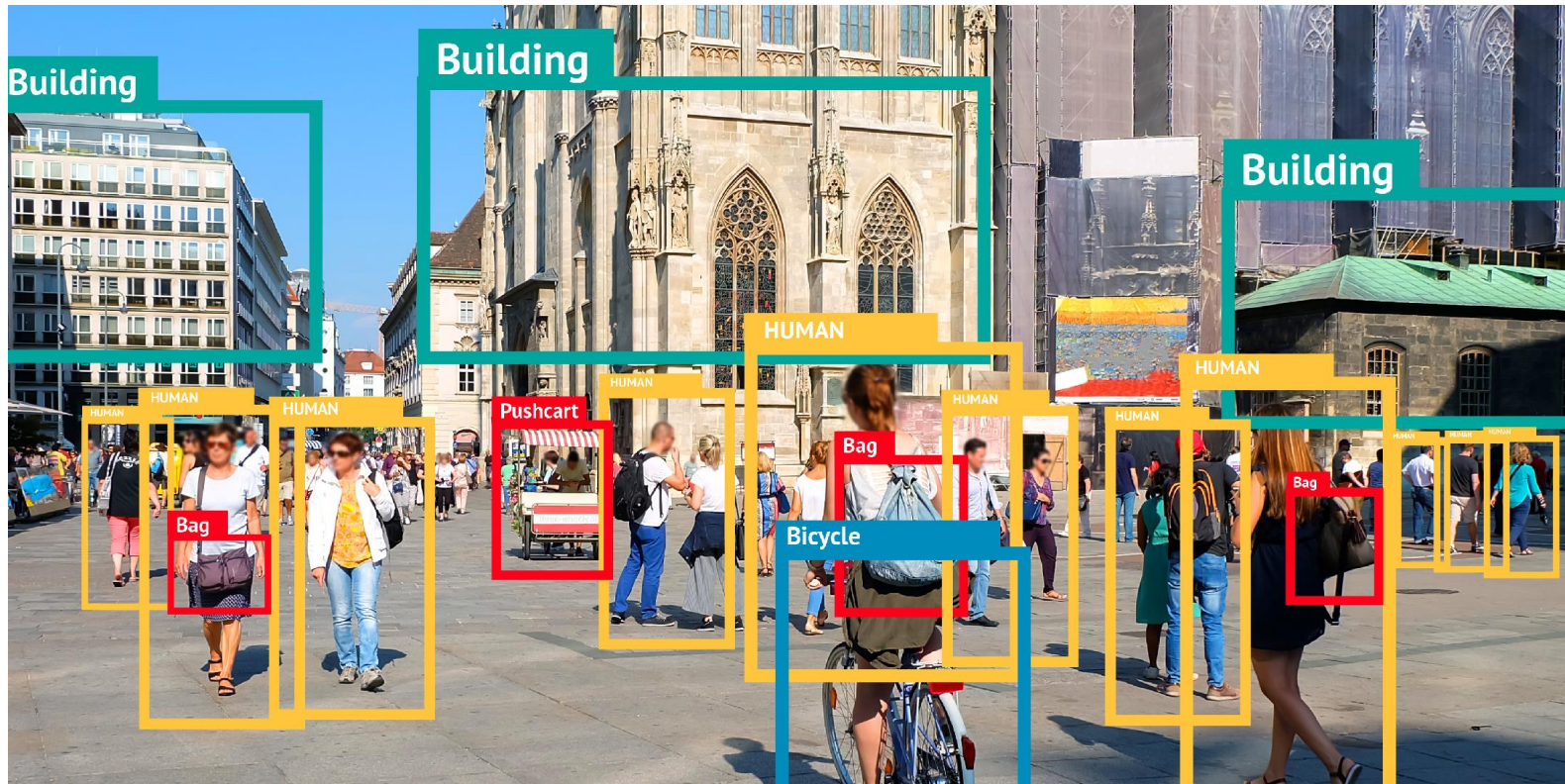


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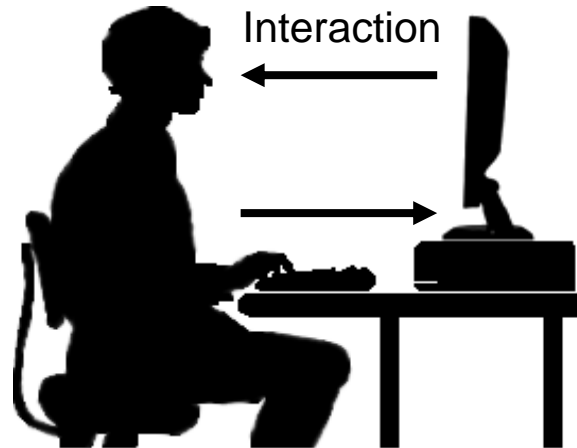


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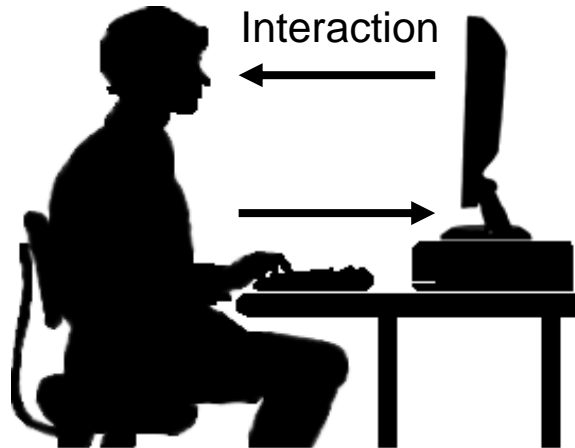
# 3. INTERACTION HOMME-MACHINE

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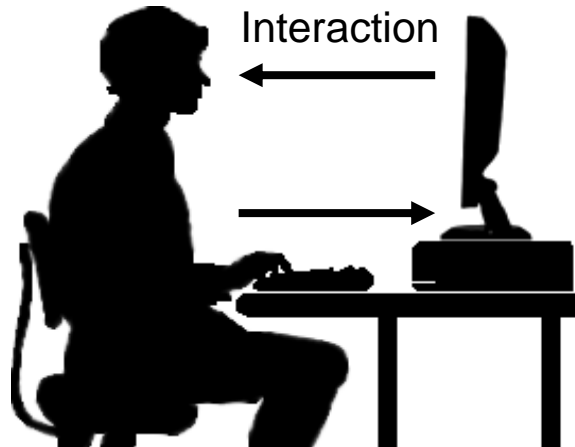


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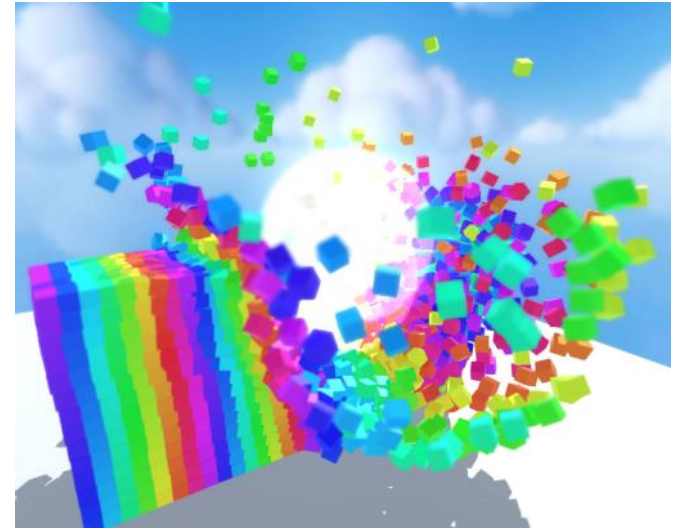
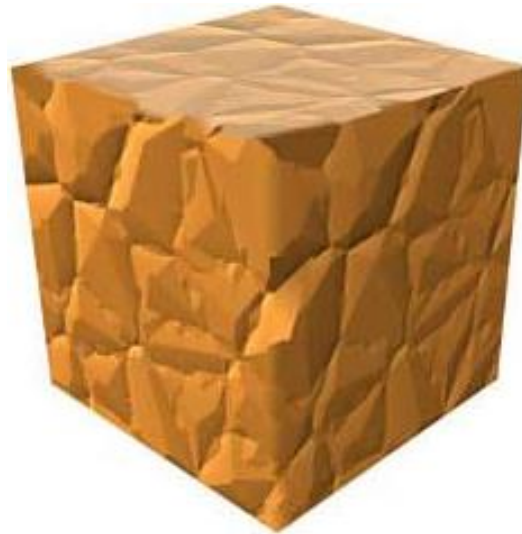
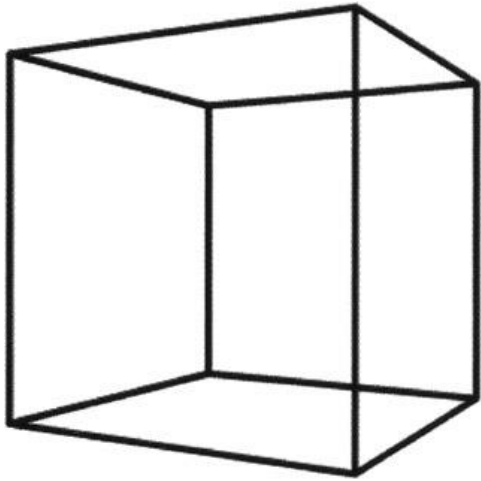


# ENSEIGNEMENT

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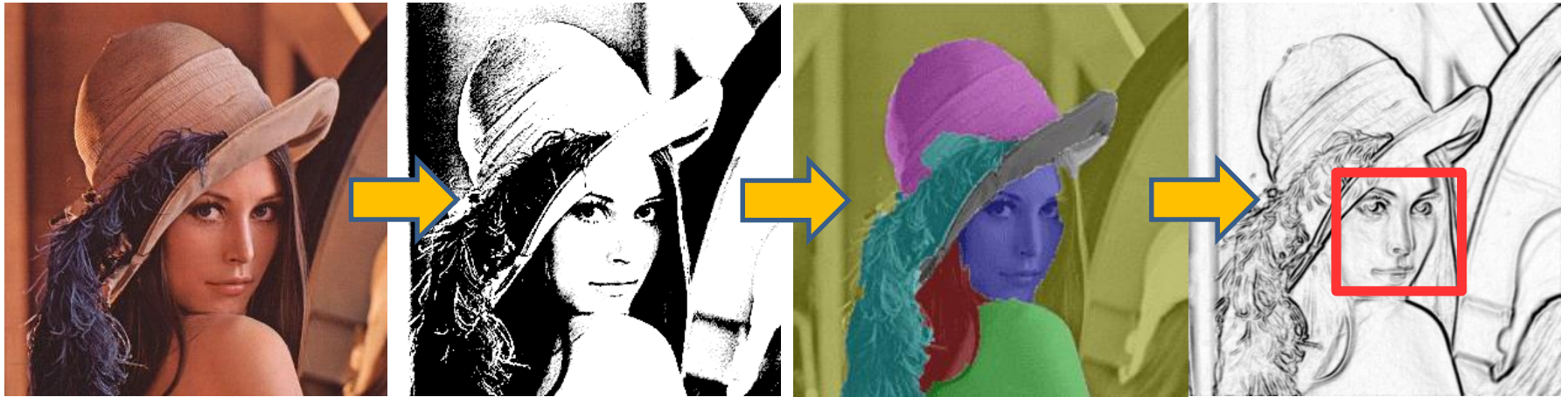
## SYNTHESE D'IMAGE

Moteurs graphiques  
et physiques

OpenGL et CUDA

Algorithmes  
géométriques

# ENSEIGNEMENT



## SYNTHESE D'IMAGE

Moteurs graphiques  
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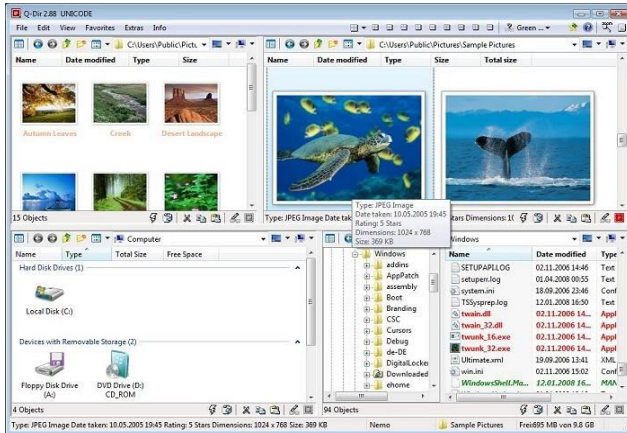
## TRAITEMENT DU SIGNAL

Reconnaissance  
de Formes

Analyse d'Image

Traitement d'Image

# ENSEIGNEMENT



## SYNTHESE D'IMAGE

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## TRAITEMENT DU SIGNAL

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## IHM - INTERFACES

Réalité virtuelle  
et augmentée

Android

Interaction  
homme-machine

# PROJETS



Race Builder (EISTI)



Château virtuel (La Roche-Guyon)



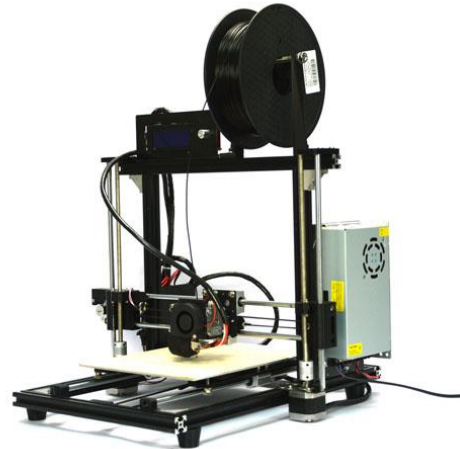
Ping pong tracking (BearingPoint, SAP)



Splotch (EISTI)

# EQUIPEMENT

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# DOUBLE CURSUS ING3 - MASTER2

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Cette formation conduit à un double diplôme.

Elle ouvre vers les métiers R&D et donne accès à une thèse de doctorat.



## **M2 "IISC" (parcours IAR ou MADOCs)**

- Traitement du signal et des images
- Intelligence artificielle, Data Science
- Sciences cognitives, Robotique



## **M2 "Interaction"**

- Interfaces Homme-Machine
- Réalité virtuelle et augmentée
- Visualisation de données



## **M2 „Imagerie du Vivant"**

- Imagerie biologique
- Traitement d'images médicales

# CONTRAT DE PROFESSIONNALISATION

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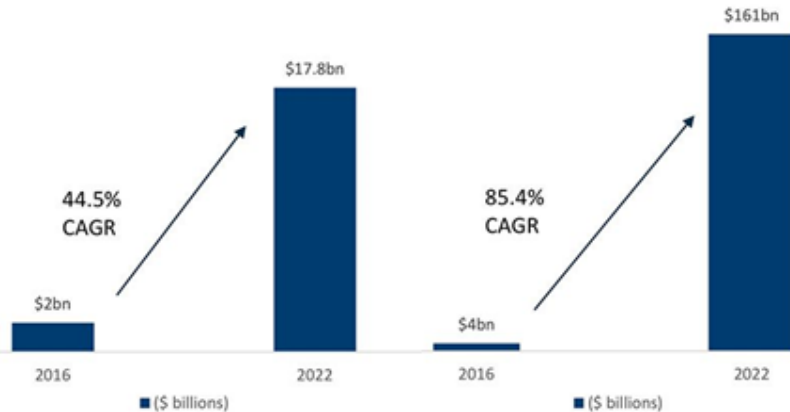
Cette formation suit un rythme d'alternance: 2 jours sur 5 en entreprise.  
Elle met un pied ferme dans le monde professionnel et permet de gagner un salaire.



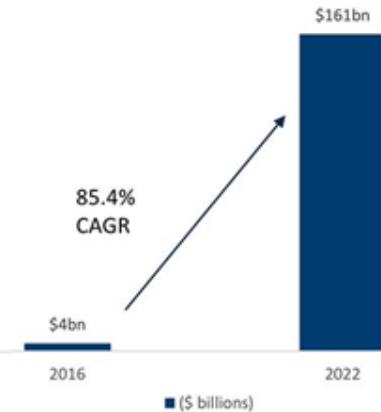
# POURQUOI VISUAL COMPUTING



VR global market size



AR global market size

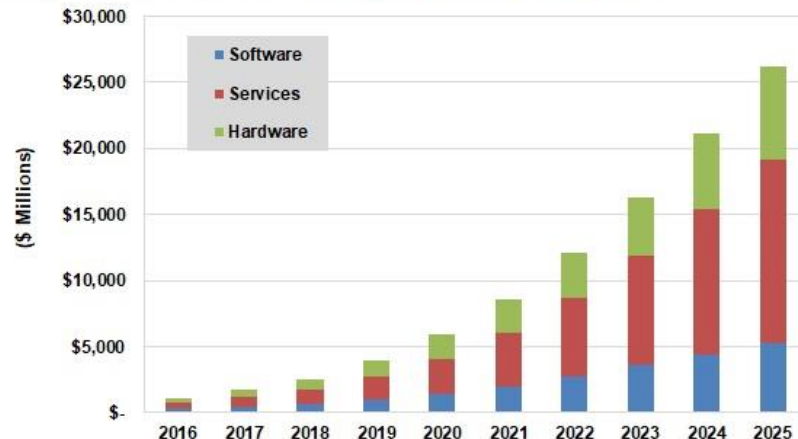


*“The growth is not only fuelled by entertainment, however, as uptake of the visualisation tools takes off in a major way in the health, manufacturing and retail segments in particular. [...] The reality is that many businesses now need to have a full AR/VR strategy to ensure they are not left behind.”*

Consultancy.uk, juillet 2018



Computer Vision Total Revenue by Segment, World Markets: 2016-2025



Source: Tractica

*“The computer vision market will include a mix of consumer-facing applications like augmented reality and virtual reality, robots, drones, and self-driving cars, along with business applications like medical image analysis, video surveillance, real estate development optimization, ad insertions, and converting paperwork into digital data.”*

Tractica, mars 2018



# POURQUOI VISUAL COMPUTING

- Design industriel - CAO
- Imagerie satellite, aérienne
- Développement mobile
- Réalité virtuelle
- Simulation
- Imagerie médicale
- Développement Web
- Jeu Vidéo
- Cartographie, SIG
- Vision artificielle
- Réalité augmentée
- Développement GPU



# ELLES VOUS RECRUTENT

@ evolucARE

SONY



MBDA



art Graphique  
& PATRIMOINE

ALLEN



GE Healthcare



UBISOFT®

THALES



vectuel



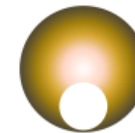
GAMELOFT



esri



LIGHT & SHADOWS  
THINK BEYOND REALITY



OPTIS



SILKAN

ASOBO  
STUDIO

MIKROS



# EN ROUTE POUR VISUAL 2K21!

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