Ingénierie simultanée 2017

Christophe Salzmann
Laboratoire d’automatique
Design the *next* babyfoot

- Fix coupling motors – rods + control
- Evaluate telescopic rods
- Add new linear motors
- “Transportable”
Current vision system is extremely sensitive to lighting

- Illuminate the ball (IR)
- Touch table
- Linear camera

Nbr etudiants: 2-4
Responsables: -

Christophe Salzmann
Baby hovercraft

Basic position via camera + basic control

- Improve the design
- Design a better controller
- Path following

Nbr etudiants: 4
Responsables: -

Christophe Salzmann
New IGM building "control"

- Use the new IGM building as a battery
- Model (3d + thermal), simulate and analyze the building
- Compare the results with the information provided by the installed sensors

Nbr etudiants: 2-4
Responsables: -
Christophe Salzmann
LabVIEW embedded

- LabVIEW can be deployed on Raspberry Pi or Beagle Board Black
- Adapt and deploy a existing controller to Raspberry Pi or Beagle Board Black
- Assess the performances regarding real-time process, i.e. control.

Nbr étudiants: 2
Responsables: -
Christophe Salzmann
IREC fusée

- Design the next IREC

Nbr étudiants: -
Responsables: Joel Cugnoni
Christophe Salzmann
Segway control

- Improve the current Segway controller
- Add a display to see what is going on

Nbr étudiants: 2
Responsables: -
   Christophe Salzmann
Safe quadcopter

- Stable fly for the quadcopter (internal controller)
- Quadcopter position control (external controller)

Nbr etudiants: 2
Responsables: -
    Christophe Salzmann
New IGM building blinds measurements

- The new IGM building has moving blinds ...
- ... but no sensors to measure the blinds position!!
- Design a mechanism (image analysis) to measure the position of each blind

Nbr etudiants: 2-4
Responsables: -

Christophe Salzmann