

Embedded systems: project ideas

Thomas Braipson

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Contact

- ▶ My role: tutorials, labs, and projects.
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- ▶ Office: R83a (setting up an appointment by email is always safer)
- ▶ Web page (everything will be there):
`https://people.montefiore.uliege.be/braipson/`

Planning (INFO0064)

- ▶ Tutorials: typically once a week, on Fridays after the theoretical lecture (10:45-12:15).
- ▶ Labs: three or four sessions during the quadrimester. Without fixed time slots, schedule made according to everyone's constraints (many MS forms will come).

Planning (INFO2055 + APRI0007)

- ▶ Friday 2 October 2026: project suggestions. As a group, prepare a 5-minute presentation explaining the topic that you chose and how you plan to solve the problem. Do not be shy! If we see that your project looks too ambitious, we will tell you (and we will also tell you if it looks too easy but I am sure that we will not have to do so). This activity will take place during the usual tutorial slot.
- ▶ Friday 4 December: component list. Format and technical details to be announced.
- ▶ During the first week of March, precise date to be decided according to the constraints of everyone: technical project status reporting. Prepare a short demo showing that you can individually use each critical component of your project.
- ▶ Friday 14 May: final report.
- ▶ Friday 25 June: final demo.

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8. This is a great opportunity to build something that works, while having fun!

A few examples/ideas

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- ▶ Making music with noisy devices

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 - ▶ Persistance of vision display. <https://www.youtube.com/shorts/RmlJm2MNTV0>

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 - ▶ Remote controlled car with wireless steerwheel.
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- ▶ Your own ideas! The following aspects are appreciated:
 - ▶ Exotic sensors/actuators.
 - ▶ Reverse engineering existing devices.
 - ▶ Recycling/reusing appliances/parts.
 - ▶ Useful stuff e.g., for disabled people.

A few examples of things that can be done

- ▶ Driving a 220 V load
- ▶ Measuring the time of flight of sound (echolocation)
- ▶ Handling a USB connection with a laptop
- ▶ Soldering/making a PCB
- ▶ Joining the ROBOCUP team
(<https://www.youtube.com/watch?v=3Gyx-zT4gog>)

A few examples of things that are out of reach/scope

- ▶ Video processing / Computer vision
- ▶ Advanced signal processing
- ▶ Web sites
- ▶ Radars

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- ▶ HAVE FUN!