

Application Form / Workshop Description



Session Title:

Going hands-on with the MORSE simulator

Organiser(s):

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- Severin Lemaignan, LAAS, slemaign@laas.fr
- Arnaud Degroote, LAAS, adegroote@laas.fr
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Motivation and objective:

The MORSE simulator is an open source software tool based on Blender that aims at simplifying the definition and development of integrated robotics experiments (<http://morse.openrobots.org>).

The objective of this workshop is to provide a hands-on tutorial on the use of MORSE, by giving users some experience on setting up a full simulation environment and running some tutorial examples.

Approach:

We will guide a group of users through the steps necessary to create a simulation scene, configure it to plug within a robotics development framework (ROS will certainly be chosen as the example middleware), and run some test examples. Time permitting, we will show how to extend the functionalities of MORSE by creating new simulated robot components or middleware bindings.

Agenda of the workshop:

- Introduction to MORSE: objectives, design principles, user view
- Installation of required software
- Explanation of the latest developments in MORSE
- Guided tutorial for some basic simulation cases
- Development of more complex simulation scenarios with the input of the audience
- (- time permitting: creating a MORSE simulated component, binding it to your preferred middleware)
- Wrapping up / questions

Speakers:

Gilberto Echeverria, LAAS, post-doc

Severin Lemaignan, LAAS, PhD student

Arnaud Degroote, LAAS, PhD student

(list to be confirmed -- other non-confirmed speakers can show up)

How can participants contribute to, and prepare for, the workshop?

Participants should have a look at the project website (<http://morse.openrobots.org>) to get a feeling of what MORSE can do.

MORSE requires a computer with a recent graphics card, in order to display the high quality graphics used in the simulation. We recommend computers with a recent nVidia graphics card. ATI cards can work too, but Intel graphics cards are generally not supported. MORSE runs on Linux. Another requirement is having Blender 2.61 and Python 3.2 installed (see all requirements in the website -- we might provide users with a USB key with all the required softwares, to be confirmed)

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Further information:

Visiting the website <http://morse.openrobots.org>

Planned follow-up:

MORSE is under constant development as an open source collaborative project. The development community is primarily centered on Laas and Onera in Toulouse, but numerous people from various universities and labs also contribute to MORSE. User-oriented and developer-oriented mailing lists are very active, and the community organizes (on an irregular basis) "hackathon" events where interested developers are invited to participate to the quick development of specific targets.

This hands-on tutorial will be an opportunity to widen the MORSE user community, and to motivate people to participate in the collaborative project.