



ROSCon FR

Paris



22 et 23 Juin 2026

| ATELIERS

24 et 25 Juin 2026

| CONFÉRENCE

ATELIERS

Nom de l'atelier

From Zero to Autonomous Physical AI Agent : A Hands-On Workshop with EMOS (Embodied Operating System)

Description

What if your robot could see, reason, remember, plan, and self heal, all from a single Python script? EMOS (The Embodied Operating System) is the open-source orchestration layer for Physical AI. It transforms any ROS2 robot (wheeled, quadruped, or humanoid) into an intelligent agent that perceives through vision language models, navigates with GPU-accelerated control, builds spatio-temporal memories of its environment, and autonomously plans and executes multi-step tasks.

In this follow-along workshop, you will build a cognitive agent with LLMs, VLMs and semantic routing, add autonomous navigation with event-driven behaviors (e.g., photograph every person encountered on patrol), and culminate with Cortex: an LLM powered task planner that introspects its own capabilities and executes multi-step missions using embodied spatial memory. Bring a laptop, leave with a robot brain.

Nom des formateurs

Maria Kabtoul / Haroon Rasheed (Automatika Robotics, Inria)

Nombre de participants

30

Langue

English

Durée de l'atelier

4h

Matériel

- A laptop running Linux (Ubuntu 22.04+ recommended; any distro works) with at least 16 GB RAM and 20 GB free disk space
- A webcam (built-in or USB) for the vision module (optional, simulated camera fallback provided)
- Advance preparation (required): Participants will receive an email 2 weeks before the workshop with instructions to:
 1. Install pixi (~1 min): `curl -fsSL https://pixi.sh/install.sh | bash`
 2. Clone the workshop repo and run `pixi install`
 3. Run `pixi run setup` to build the workspace
 4. Install Ollama and pull the `qwen2.5vl:latest` model

Niveau attendu des participants

Beginners