

### Overview

A Hands-on Intensive Workshop on agent development using JADE framework, organized by the Gerstner Laboratory.

JADE (Java Agent DEvelopment framework) is runtime environment for development of FIPA compliant interoperable agents. Currently in version 3.0, JADE is the most widely used agent development framework. JADE is open source, distributed under Lesser General Public License.

The course is intended for people familiar with Java programming language and the basic concepts of multi-agent systems, who want to start developing agents using JADE. No prior experience with agent programming is needed.

Each course participant receives a CD with JADE installation, documentation and course material (slides and example source codes). The course takes place in computer classroom with every participant having own computer (option to use personal laptop provided). We recommend pair programming.

Every topic is covered by sample source codes, encouraging the participants to exercise the knowledge by immediately playing around with the concepts.

Participants receive a certificate of participation.

### Gerstner Laboratory

Gerstner Laboratory (GL) is research unit of Department of Cybernetics of the Czech Technical University. The department is part of European Union Centre of Excellence MIRACLE project.

The Agent Technology Group of GL has over three-year experience with using JADE for both MAS development and teaching.

### Intended Audience

People wishing to quickly get familiar with JADE:

- Researchers
- Java developers
- Ph.D. students

### Prerequisites

- Java programming (orientation in basic object oriented programming concepts, Java syntax and some knowledge of standard Java libraries).
- Familiarity with concepts of agents and multi-agent systems.

### Skills Gained

- Administration of JADE using GUI
- Usage of standard JADE agents
- Creation of agents using JADE
- FIPA abstract architecture in JADE
- Usage of JADE behaviors and ontology support
- FIPA interaction protocols and their usage in JADE

### Tutorial Program

9:00 - 9:30	Opening
9:30 - 10:30	Module 1
10:30 - 10:45	Coffee break
10:45 - 12:15	Module 2
12:15 - 13:00	Lunch
13:00 - 14:30	Module 3
14:30 - 15:00	Coffee break
15:00 - 16:30	Module 4

#### Module 1

Introduction to FIPA: abstract architecture, communication languages, message structure, and interaction protocols. Introduction to JADE - user view: starting platform, starting agents, platform components, using built-in agents. Introduction to JADE - developer's view. Hallo World agent.

#### Module 2

Starting and stopping agent, agent identifier, sending and receiving plain-text message. User interface synchronization. Registering and deregistering with Directory Facilitator. Searching Directory Facilitator.

#### Module 3

Using behaviors to handle conversations. Using ontologies to pass objects through messages.

#### Module 4

Using multiple Message Transport Protocols, interfacing JADE with other systems, security - JADE security package, X-Security. Discussion.

### Registration

The Tutorial is administratively associated to the HoloMAS 2003 conference. For the registration instructions, forms and hotel information please see the page <http://gerstner.felk.cvut.cz/HoloMAS/2003>. The course capacity is limited. Participation in HoloMAS 2003 is NOT required to participate in the Tutorial. If you have any questions, please do not hesitate to email us at [holomas@labe.felk.cvut.cz](mailto:holomas@labe.felk.cvut.cz).

### Event Summary

**Date:** September 5<sup>th</sup> 2003

**Place:** Czech Technical University  
Department of Cybernetics, Building E  
Karlovo namesti 13, Prague, Czech Republic

**Info:** <http://gerstner.felk.cvut.cz/HoloMAS/2003/>  
[holomas@labe.felk.cvut.cz](mailto:holomas@labe.felk.cvut.cz)

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