**ViSP Library Overview**

### Visual tracking core
- Blob trackers, moving edges, model-based trackers, keypoint trackers.

### Visual servoing core
- IBVS, PBVS, 2D ½ and many other control laws for eye-in-hand and eye-to-hand systems.

### AR core
- Provides a wrapper over Ogre 3D engine for augmented reality applications.

### Computer vision
- Pose and homography estimation.

### Hardware abstraction
- Provides generic interfaces over robot drivers, framegrabbers and display devices.

### Simulation
- Includes wireframe and robot viewers, planar textures generator.

### Bridges
- Bridges with ROS, OpenCV and YARP, ROS nodes for camera calibration and tracking.

### Cross platform
- Support multi OS (Fedora, Ubuntu, Debian, Linux Mint, OSX, Windows), but also compilers (g++, MinGW, msvc…) and IDE.
Image manipulation

Mathematics core

\[ \mathbf{v} = -\lambda \mathbf{L}^+(\mathbf{s} - \mathbf{s}^*) \]

Operations on vectors, matrices, homogeneous transformations, pseudo-inverse or SVD computation.

Real-time data plotter

Display in real-time and record time-graphs, x/y-graphs or 3D curves.

Many more features

Movie reader and recorder, XML I/O, data transmission over the network, Kalman filter, exhaustive documentation.

End user tools

Camera calibration, hand-eye calibration.

Powerful API

C/C++, 280 000 lines, more than 220 classes fully documented, 150 examples and 200 sample codes.

Forge

Hosted on GForge, under Subversion control. Mailing lists, forum, bug tackers.

Open source license

Released under the terms of the open source GPLv2 license. Also available as a professional edition.

http://team.inria.fr/lagadic/visp