



Stephane Bazeille, Ph. D.

Perception and artificial intelligence for robots

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Work experience

Assistant professor Oct. 2017 – now
IRIMAS, Université de Haute-Alsace, IUT GEII, France
Environment perception for industrial robots and autonomous vehicles. Monocular visual odometry, 3D reconstruction of the environment from Lidar, 3D from light-field camera.

Researcher Oct. 2015 – Sept. 2017
DAPI, Ecole des Mines de Nantes, France
Environment perception based on artificial electric sense for underwater robots. Localization and object recognition, reactive navigation (European project subCULTron EU-H2020).

Researcher Oct. 2011 – Sept 2015
DLS/ADVR, Istituto Italiano di Tecnologia, Genoa, Italy
Development of the perception system of the robot HyQ. State estimation (IMU, Lidar, Vision). Onboard 3D mapping. Active stabilization of a camera mounted on a pan-tilt unit.

Invited researcher June – Aug. 2012
ASL, ETH Zurich, Switzerland
State estimation by multi-sensor fusion

Researcher Jan. 2009 – Sept. 2011
UEI, ENSTA ParisTech, France
Visual localization and incremental topo-metric mapping (SLAM). Autonomous navigation based on vision and odometry (Project - Gostai SAS). Exploration and semantic mapping.

Ph. D. Student Oct. 2005 – Oct. 2008
E3I2, ENSTA Bretagne, Brest, France
Object detection and recognition from underwater images based on the shape and the color. Automated analysis of underwater videos (Project TOPVISION, TUS, GESMA). Development of underwater robots.

Education

Ph. D. 2008
Computer science, robotics and signal processing
Université de Bretagne Occidentale, Brest, France

Master of Science 2005
Computer science and applied mathematics
Université de La Rochelle, France

Maîtrise 2004
Computer science
IUP Génie Informatique de La Rochelle, France

Teaching

Robot perception : L3, M1, M2.

Industrial robotics : L2, M1.

Microcontroller programming : L2, M2.

Algorithmic : L1, L2, L3.

Object-oriented programming (OOP) : L3.

Image and signal processing : M1.

Operating systems UNIX : L2, M1.

Involvement

Supervision : Ph. D. students, Master thesis, internships M1 and L3, robotic competitions.

Project management : budget, deliverables and communication. European project (H2020 FET 2015-2018), industrial contract (THALES 2005-2008).

Fund seeking : writing proposal for European and national projects.

Scientific committees and reviewing : ICVS (2015), QCAV (2019) + reviewing RA-L, ISR, SPIE OE.

Promotion : Public workshops on robotics, university open house event, science day, reportage for TV (2015 and 2019).

Administration : member of administration council at IUT Mulhouse (2019).

Robotic competitions : SAUC-E challenge in (2007 & 2008), Defi CAROTTE (2010 & 2011), Coupe IUT GEII (2020).

Skills

Robots : ARTEMIPS, HyQ, Pioneer P3-DX, underwater robots, Staubli TX-TP, Nao, Aibo.

Cameras : light field, monocular, stereo, omnidirectional, Kinect, Asus Xtion.

Lasers : Hokuyo, Velodyne, Ibeo LUX.

Programming : C/C++ (ROS, OpenCV, PCL, OpenGL), python, UNIX, Java, Git.

Languages : French (mother tongue), English, Italian, Spanish.

Publications ([google scholar citations](#))

- 12 : articles in international journals.

- 37 : articles in international or national conferences.