

# Guillaume Caron



## Profile

Address AIST Tsukuba Central 1, 1-1-1 Umezono, Tsukuba, Ibaraki 305-8568, JAPAN  
Contact links [guillaume.caron@cnrs.fr](mailto:guillaume.caron@cnrs.fr) | <https://unit.aist.go.jp/jrl-22022/en/members/member-carong.html>

## Career

Since Jan. 2022 Co-director of **CNRS-AIST Joint Robotics Laboratory**, IRL 3218, Tsukuba, Japan  
Since Sep. 2011 Associate Professor of **Université de Picardie Jules Verne (UPJV)**, France  
2015 - 2020 Head of the **Robotic Perception** group of the **Modeling, Information and Systems** lab of UPJV  
Oct. 2010 - Aug. 2011 **Inria** research engineer (postdoc) at IRISA (**Lagadic** group, now **Rainbow**), Rennes, France

## Main visitings

Since Sep. 2019 Senior researcher (CNRS delegation) at **IRL 3218 JRL, AIST**, Japan ([unit.aist.go.jp/jrl-2](http://unit.aist.go.jp/jrl-2))  
Since 2014 Short stays every year at the **OMI lab** of **NAIST**, Japan ([omilab.naist.jp](http://omilab.naist.jp))  
Apr.-May 2013 Invited researcher at the **University of Osaka**, Japan (Yagi lab: [www.am.sanken.osaka-u.ac.jp](http://www.am.sanken.osaka-u.ac.jp))

## PhD theses supervision

Since Oct. 2022 “Hybrid representation SLAM”, Eva Goichon & “Visual Servoing in non-linear scale spaces”, Meriem Naanami & “Event-based vision for humanoids”, Yufan Kang  
Alumni (8) 2015: N. Crombez (Assoc. Prof., UTBM), Z. Habibi (Eng., Safran); 2019: N. Mohtaram (Eng., Wass); 2020: E. Rodriguez (Assist. Prof., Univ. Tamaulipeca); 2021: Y. Ahmine (Postdoc, CNRS I3S), K. Chappellet (Postdoc, AIST); 2022: S. Guerbas (Assist. Prof.), J. Ducrocq (JSPS Postdoc, NAIST).

## Publications: 65 peer-reviewed publications

15 in international journals, 2 in domestic journals, 1 book chapter, 25 in international congresses proc., 14 in domestic congresses proc., 6 in international workshop proc. | full list: [cv.hal.science/guillaume-caron](http://cv.hal.science/guillaume-caron)

## Selection of 3 articles in journals and 2 in conference proceedings:

- “HDRomni: Optical extension of dynamic range for panoramic robot vision”, J. Ducrocq, G. Caron, E. Mouaddib, *IEEE Robotics and Autom. Letters*, vol. 6, n. 2, pp. 3561-3568, 2021 (IF=4.3)
- “PanoraMIS: An Ultra-wide Field of View Image Dataset for Vision-based Robot-Motion Estimation”, H. Benseddik, F. Morbidi, **G. Caron**, *The Int. J. of Robotics Research*, vol. 39, n. 9, pp. 1037-1051, 2020 (IF=6.887)
- “Visual Servoing with Photometric Gaussian Mixtures as Dense Feature”, N. Crombez, E. Mouaddib, **G. Caron**, F. Chaumette, *IEEE Transactions on Robotics*, vol. 35, no. 1, pp. 49-63, 2019 (IF=5.567)
- “Direct Alignment Of Narrow Field-Of-View Hyperspectral Data And Full-View RGB Image”, G. Caron, S. J. Kessy, Y. Mukaigawa, T. Funatomi, *IEEE Int. Conf. on Image Processing (ICIP)*, 2022, Bordeaux, France
- “Direct 3D Model-Based Tracking in Omnidirectional Images Robust to Large Inter-Frame Motion”, S. Guerbas, N. Crombez, **G. Caron**, E. Mouaddib, *IEEE Int. Conf. on Advanced Robotics (ICAR)*, Dec. 2021

## Education

December 2019 Habilitation degree of **Université de Picardie Jules Verne**, Amiens, France  
Title: “Direct robotic vision”  
November 2010 PhD degree of **Université de Picardie Jules Verne**, Amiens, France  
Title: “Robot pose estimation and servoing using omnidirectional vision”  
Supervisor: El Mustapha Mouaddib | Graduated with highest honors.  
July 2007 Master degree of **Université de Reims, Champagne-Ardennes**, Reims, France  
Master thesis: “Mobile robot localisation using vision pointed to the ceiling”  
Supervisors: El Mustapha Mouaddib and Ouiddad Labbani-Igbida | Graduated with highest honors.

## Scientific societies

Since Dec. 2022 Elected board member of **AFRIF** (French IAPR, [www.afrif.asso.fr](http://www.afrif.asso.fr))  
2018-2022 Chairman of **IAPR TC19** “Computer vision for cultural heritage applications” ([iapr.org/tc19](http://iapr.org/tc19))