

CVA date	30/11/2020
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Part A. PERSONAL INFORMATION

Name and Surname	Gabriel OLIVER CODINA		
IDN	43004916E	Age	58
Researcher codes	ORCID	0000-0001-6910-1940	
	SCOPUS Author ID	7202065303	
	WoS Researcher ID	J-7749-2013	

A.1. Current position

Institution	Universitat de les Illes Balears		
Department	Mathematics and Computer Science Dept.		
Address and Country	Cra. Valldemossa km 7.5. 07122-Palma. SPAIN		
Phone number	971173201	E-mail	goliver@uib.eu
Current position	Full Professor	From	19/03/2019
Key words	Mobile robotics, Computer vision		

A.2. Education

PhD, Licensed, Graduate	University	Year
Bachelors degree in Physics	Universitat Autònoma de Barcelona	1985
PhD in Physics	Polytechnic University of Catalonia	1993

A.3. General indicators of quality of scientific production

	Base de referencia	WoS	SCOPUS	G_Scholar
Publications		99	100	>160
Citations		1085	1.786	>3.000
Citations per year (2015-2019)		130	201	325
h index		17	22	29
i10 index		26	35	58

Q1 + Q2 JCR indexed journals: 20

Six-year research periods (sexenios): 3 (Last recognized 2009-2014)

PhD thesis advised: 5

Master thesis advised: 9

Responsible of National + International funded research projects: 16 + 3

Researcher of National + International funded research projects: 8 + 3

Responsible of Research and Innovation contracts: 18

Part B. CV SUMMARY (*max. 3500 characters, including spaces*)

Gabriel Oliver received a degree in Physical Sciences from the Autonomous University of Barcelona in 1985. That same year he joined the Polytechnic University of Catalonia as a Teaching Fellow, first at the Terrassa School of Industrial Engineering and one year later at the Computer Science Faculty in Barcelona (FIB). At the FIB he began his research stage focused on Computer Vision and its applications in Mobile Robotics, obtaining the degree of Doctor in 1993. In 1991 he moved to the Department of Mathematics and Computer Science (DMI) of the University of the Balearic Islands, first as a Lecturer and later as Senior Lecturer. Since 2019 he is Full Professor of Computer Architecture and Technology at the same Department. During these years he completed a predoctoral stay at the *Laboratoire d'Analyse et d'Architecture des Systèmes*, (LAAS-FR) and a postdoctoral stay at the Center for Maritime Research & Experimentation, (CMRE-IT). He is a founding member of the research group Systems, Robotics and Vision (SRV), having been its Coordinator since its formation in 1995. His research in the group has focused on the fundamentals and applications of underwater robotics, localization, mapping and multi-robot systems (<http://srv.uib.es>). Gabriel Oliver has been Principal Investigator of about 30 research projects and contracts, has supervised 5 doctoral theses (plus 1 in progress) and 9 master's theses. In the last ten years (2010-2019) he has published over 100 scientific papers in

prestigious journals, book chapters, international peer reviewed conference proceedings and technical reports. The quality of his research has been acknowledged through external evaluations, being recognized by the CNEAI for 3 six-year periods (last evaluated: 2009-2014). He regularly acts as a reviewer for multiple indexed journals as detailed in another section of this document. He has been guest editor of MDPI-Sensors on two occasions, and he is currently member of the Editorial Board of this journal. He has participated in the organization of national and international conferences and workshops, forming part of scientific, review and organizational committees such as: ICRA, IROS, ETFA, IFAC-WC, CAMS, NGCUV, IAV, MCMC, IWANN, ACM-SAC and ICARSC among others. Since 2003, he has regularly participated as a reviewer of research projects or a member of selection commissions for different national and international agencies (details below). From 2007 to 2014 he was the National Chair of the IEEE Oceanic Engineering Society Spanish chapter. Since 2017 he is member of the Technical Committee on Marine Systems of the IFAC. In the academic management side, between 1994 and 2012 he held various positions, highlighting that of Director of the Higher Polytechnic School of the UIB between 2005 and 2012.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

- Guerrero, E., Bonin F., Martín, M., González, Y. Oliver, G. *Sparse Gaussian process for online seagrass semantic mapping*. **Expert Systems With Applications**. Accepted 2020 (IF=5.452, Q1)
- Bonin, F., Lalucat, J., Oliver, G., Massot, M., Guerrero, E., Negre, J. *Evaluating the Impact of Sewage Discharges on the Marine Environment with a Lightweight AUV*. **Marine Pollution Bulletin**, 135:714-722, 2018 (IF=3.241, Q1)
- Guerrero, J., Oliver, G. Valero, O. *Multi-Robot Coalitions Formation with Deadlines: Complexity Analysis and Solutions*. **PLoS One**, 12(1):1-26, 2017 (IF-2016=2.806, Q1)
- Burguera, A., Oliver, G. *High-Resolution Underwater Mapping Using Side-Scan Sonar*. **PLoS One**, 11(1):1-41, 2016 (IF=2.806, Q1)
- Negre, P.L., Bonin, F., Oliver, G. *Global Image Signature for Visual Loop-Closure Detection*, **Autonomous Robots**, 40:1403-1417, 2016 (IF=2.722, Q2)
- Bonin-Font, F., Oliver, G., Wirth, S., Massot, M., Negre, P. L., Beltran, J. P. *Visual Sensing for Autonomous Underwater Exploration and Intervention Tasks*. **Ocean Engineering**, 93(1): 25-44, 2015 (IF=1.488, Q1)
- Burguera, A., Bonin-Font, F., Oliver, G. *Trajectory-Based Visual Localization in Underwater Surveying Missions*. **Sensors**, 15(1):1708-1735, 2015 (IF=2.033, Q1)
- Ridao, P., Carreras, M., Ribas, D., Sanz, P.J., Oliver, G. *Intervention AUVs: The Next Challenge*. **Annual Reviews in Control**, 40:227-241, 2015 (IF=2.042, Q2)
- Massot, M., Oliver, G. *Optical Sensors and Methods for Underwater 3D Reconstruction*. **Sensors**. 15(12):31525-31557, 2015 (IF=2.033, Q1)
- Guerrero, J., & Oliver, G. *Multi-Robot coalition formation in real-time scenarios*. **Robotics and Autonomous Systems**, 60:1295-1307, 2012 (IF=1.156 Q2)
- Ortiz, A., & Oliver, G. *Analysis of Colour Channel Coupling from a Physics-based Viewpoint: Applic. to Colour Edge Detection*. **Pattern Recognition**, 43(7), 2507–2520. 2010. (IF=2.682 Q1)

C.2. Research projects

- *GRASSMAP: Scalable seagrass mapping using deep learning*. Ref: EFP-SEA02-014, IP-UIB: G. Oliver, Coord: M. Massot-Campos, Southampton Univ. Eurofleets+, EC. 2021
- *INVHALI: Invasibilidad, detección y erradicación del alga Halimeda Incrassata*. IP: Fiona Tomás. Ministerio para la transición ecológica, Fundación Biodiversidad. 2020-2022.

- *TWINBOT: Métodos sensoriales para la manipulación submarina multi-robot*, Ref: ES-DPI2017-86372-C3-3-R, IP: G. Oliver, MINECO-Spain (68.970€), Jan 2018-Dec 2020.
- *In Situ-Bio-Chemometrics: Adaptive Robotics at Barkley Canyon & Hydrate Ridge*. Ref: FK180731, IP-UIB: G. Oliver, Schmidt Ocean Institute. 2018.
- *eUReady4OS: Expanded Underwater Robotics Ready for Oil Spill*. Ref: CE-ECHO GA-2016/740129, IP: G. Oliver, European Commission (36.000€), Coord: Javier Gilabert, UPCT, Jan 2017-Dec 2018.
- *MERBOTS: Robots Cooperativos Marinos Multifuncionales para Dominios de Intervención*, Ref: ES-DPI2014-57746-C03-2-R, IP: G. Oliver, MINECO-Spain (135.700 €), Jan 2015-Dec 2017.
- *TRITON: Nuevos avances en visión para la intervención submarina mediante vehículos autónomos*, Ref: ES-DPI2011-27977-C03-03, IP: G. Oliver, MINECO-Spain (174.240 €), Jan 2012-Dec 2014.
- *TRIDENT: Marine Robots and Dexterous Manipulation for Enabling Autonomous Underwater Multipurpose Intervention Missions*, Ref: CE-FP7-ICT GA-248497, IP: G. Oliver, European Commission (471.160 €), Coord: Pedro J. Sanz, UJI, Mar 2010-Feb 2013.
- *RAUVI: Visión para la intervención submarina mediante vehículos autónomos*, Ref: ES-DPI2008-06548-C03-02, IP: G. Oliver, MICINN (121.000 €), Jan 2009-Dec 2011.

C.3. Contracts, technological or transfer merits

- *Desarrollo e implantación de un software de alerta en zonas potencialmente críticas por la presencia de praderas de Posidonia en la zona II de los puertos de la APB*. Autoridad Portuaria de Baleares. (72.900 €), IP: G. Oliver, UIB 2018
- *Evaluación de la mejora de instalaciones eléctricas de Red Eléctrica de España en las Islas Baleares*. Red Eléctrica de España (24.775 €), IP: G. Oliver, UIB 2012
- *Sistema Inalámbrico de visión submarina*, Contractor: Albatros MT, S.L., Plan Avanza I+D, Ministerio de Industria, (28.979 €) IP: G. Oliver, UIB Abr 2010-Mar 2011

C.4. PhD Thesis direction (3 more recent out of 5)

- Miquel Massot Campos. *New insights on laser-based structured light for underwater 3D reconstruction*, 2019
- Francisco J. Bonin-Font. *An Inverse-Perspective-based Approach to Monocular Mobile Robot Navigation*. Co-director: Alberto Ortiz, 2012
- José Guerrero. *New Methodologies for Workload Distribution in Multi-robot Systems*, 2011

C.5 Master thesis direction (4 more recent out of 9)

- Antoni Martorell. *Design and control of an Autonomous Surface Vehicle to improve Link Connections*, 2018.
- Daniel Moreno. *SLAM with Side Scan Sonar Images*. Co-director: Antoni Burguera, 2014.
- Miquel Massot. *Texture Analysis of Seabed Images to Quantify the Presence of Posidonia Oceanica Using Logistic Model Trees*, 2013
- Francisco Bonin-Font. *A Reactive Visual Navigation Task Based on Inverse Perspective Transformation*, Co-supervisor: Alberto Ortiz, 2010

C.6 Member of research agencies evaluation board

- Agencia Nacional de Evaluación y Prospectiva (ANEP): since 2006
- MINECO: Selection panel of the DPI national program: 2012 and 2015
- MINECO: Selection panel of the VEM national program: 2003
- International agencies: *Deutsche Forschungsgemeinschaft* (Germany), 2013. *Science Foundation Ireland* (Ireland), 2013. *Estonian Science Foundation* (Estonia), 2011 y 2013. *Fonds de la Recherche Scientifique* (Belgium): 2015. *Agence Nationale de la Recherche* (France): 2015 y 2016. *Ministry of Science, Technology and Space* (Israel): 2015. *Foundation for Science and Technology* (Portugal): 2016
- Regional agencies: Cataluña, since 2006. Andalucía, 2008 y 2011. Illes Balears, since 2013. Madrid, since 2015.

C.7 Indexed journals evaluator

Annual Reviews in Control; Eng. App. of Artificial Intelligence; European Journal of Control; Expert Systems with Applications; Intl. J. of Advanced Robotic Systems; J. of Eng. for the Maritime Environment; J. of Oceanic Engineering; Optics and Lasers in Engineering; Rev. Ib. de Automática e Informática Industrial; Robotics and Autonomous Systems (Excellence in Reviewing Award 2013); **Sensors-MDPI (Member of the Editorial Board 2021-2022)**; Tr. on Mechatronics; Tr. on Robotics; Tr. on Systems, Man and Cybernetics (part A).

C.8 International Committees

- *Technical Committee on Marine Systems*, IFAC. Member: Since 2017
- *Oceanic Engineering Society* OES-IEEE. Spanish Chapter Chair: 2007-2014
- *Computer Applications and Technology* TC5-IFIP. National Delegate: 2005-2008