Part A. PERSONAL INFORMATION

CV date	11/09/2019

First and Family name	Ramón Pujol Nadal		
Social Security, Passport, ID number	43105786Z	Age	41
Researcher codes	WoS Researcher ID *(*)*	E-9625-2013	
	SCOPUS Author ID*(*)*	55312180300	
	Open Researcher and Contributor ID (ORCID) **	0000-0003-0523-6904	

(*) At least one of these is mandatory
(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad de les Illes Balears			
Department	Departamento de Física			
Address and Country	Cra. VAlldemossa km 7,5, 07122, Palma de Mallorca			
Phone number	971259542	E-mail	ramon.pujol@uib.es	
Current position	Senior Lecturer		From	16/04/2019
Key words	solar energy, solar optics, energy conversión, ray-tracing, medium temperature			

A.2. Education

Degree	University	Year
Physics	Universidad de las Islas Baleares	2003
Master in Physics	Universidad de las Islas Baleares	2007
PhD in Physics	Universidad de las Islas Baleares	2012

A.3. JCR articles, h Index, thesis supervised…

15 JCR articles of which 95% fall within the scope Energy & Fuels.
1st quartile (Q1): 9
2nd quartile (Q2): 4
3th quartile (Q3): 2

Assessment of research activity: 1 periods of 6 years (sexenios) with positive assessment: 2009-2014. Next assessment at beginning of 2021 (period 2015-2020).

h-index: 8 (Web of Science) - 9 (Scopus) - 10 (Google Scholar).

Total number of citations: 158 (Web of Science) - 177 (Scopus) - 267 (Google Scholar).

Average number of citations during last 5 years (2014-2018): 28 (Web of Science) - 30 (Scopus) - 44 (Google Scholar).

Supervisor of 3 PhD thesis. Finished 1 in Universidad Pública de Navarra (2015). Finished 1 in Universidad de las Islas Baleares (2019). Currently 1 in Universidad de les Islas Baleares.

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

Degree, MSc and Doctor in Phsysics from the University of Balearic Islands. I taugh at the UIB from 2008. Associate Professor in the area of Mechanical Engineering since april 2019. I teach in the Degree in Automation and Industrial Electronic Engineering and Master in Industrial Engineering. My research focuses on solar optics for thermal and PV technologies. I published more than 25 papers, and more than 40 conference participations. My research currently focuses on the study of applications of solar optics, in special for energy conversion models in solar technologies. I am a regular reviewer in 12 international journals indexed in JCR, publons.com/a/1275949/.

I have collaborated with different companies and institutions from the Balearic Islands, in terms of technology transfer. I participated as national expert for the Task 57 “Solar Standards and Certification” of the IEA Solar Heating and Cooling Programme.

Inventor of two international patents related to the CCStaR solar concentrator, an innovative solar concentrator with a stationary reflector and a medium temperature mobile focus. I am a developer of research software, in open acces, for optical simlations of solar technologies.

I have participated in research projects continuously since 2004, highlighting 2 projects funded by European Commission, 3 projects of the National Plan and 3 projects funded by the Government of the Balearic Islands. In the last project of the National Plan I have participated (2016-19) I have been Principal Investigator (PI). In the last 2 projects funded by the Government of the Balearic Islands (2010-11, 2018) I have been Principal Investigator (PI).

Supervisor of the thesis “Characterization of optical losses due to tracking systems on a linear solar thermal concentrator”, by Dra. Fabienne Sallaberry at the Public University of Navarra (UPNA) in 2015. During the thesis 4 research paper in JCR were published (3 in Q1).

Supervisor of the thesis “Study on the general applicability of the collector efficiency model to solar process heat collectors”, by Dr. Julian David Hertel at the University of Balearic Islands (UIB) in 2019. During the thesis 3 research paper in JCR were published (2 in Q1).

Currently I am supervisor of one thesis more, PhD scholarship funded by the Government of the Balearic Islands (2018-2022), whose PhD is Francesc Bonnín Ripoll and the thesis is entitled “Optoelectronic Characterization of Solar PV Cells with Ray Tracing Techniques”.

Recently, in the context of the Task 57 of the Energy International Agency, we submitted a research paper to Applied Energy (that is under review from 7th September 2019) with the aim to provide a solution to a well-known gap in current standard testing procedures for solar thermal concentrator with complex geometries. The manuscript, entitled “On-site optical characterization of large-scale solar collectors through ray-tracing optimization” was realized by Julian D. Hertel, Vivenç Canals Guinand and Ramon Pujol Nadal.

At medium and long-term, my objectives will be focused on the applications of solar optics, especially on the development of energy conversion models, in turn, considering the path photon trajectories in order to find novel configurations for solar energy uses. It is noteworthy to mention that recently, in collaboration with international researchers (of Russian nationality), we have developed a model for the energy conversion in perovskite solar cells by ray tracing results.

Part C. RELEVANT MERITS

C.1. Publications (including books)

1. **Scientific paper.** Pujol Nadal, R.; Martínez Moll, V. (2/1). 2012. Optical analysis of the Fixed Mirror Solar Concentrator by forward ray-tracing procedure Journal of Solar Energy Engineering-Transactions of the Asme. 134(3), pp. 0310091-14. ISSN 0199-6231.
2. **Scientific paper.** Pujol-Nadal, R.; Martínez-Moll, V.; Moià-Pol, A. (3/1). 2013. Parametric Analysis of the Fixed Mirror Solar Concentrator for Medium Temperature Applications Journal of Solar Energy Engineering-Transactions of the Asme. 136-1. ISSN 0199-6231.
3. **Scientific paper.** Sallaberry, F.; Pujol-Nadal, R.; Martínez-Moll, V.; Torres, J-L. (4/2). 2014. Optical and thermal characterization procedure for a variable geometry concentrator: A standard approach. Renewable Energy. 68, pp.842-852. ISSN 0960-1481.
4. **Scientific paper.** Sallaberry, F., García de Jaloón, A.; Torres, J-L.; Pujol-Nadal, R. (4/4). 2015. Optical losses due to tracking error estimation for a low concentrating solar collector Energy Conversion and Management. 92, pp.194-206. ISSN 0196-8904.

5 **Scientific paper.** Pujol-Nadal, R.; Martínez-Moll, V.; Sallaberry, F.; Moià-Pol, A. (4/1). 2015. Optical and thermal characterization of a variable geometry concentrator using ray-tracing tools and experimental data Applied Energy. Elsevier. 155, pp.100-110. ISSN 0306-2619.

6 **Scientific paper.** Sallaberry, F.; Pujol-Nadal, R.; Larcher, M.; Rittmann-Frank, M. H. (4/2). 2015. Direct tracking error characterization on a single-axis solar tracker Energy Conversion and Management. 105, pp.1281-1290. ISSN 0196-8904.

7 **Scientific paper.** Hertel, J. D.; Martinez-Moll, V.; Pujol-Nadal, R.(3/3). 2015. Estimation of the influence of different incidence angle modifier models on the biaxial factorization approach Energy Conversion and Management. 106, pp.249-259. ISSN 0196-8904.

8 **Scientific paper.** Hertel, J. D.; Martinez-Moll, V.; Pujol-Nadal, R.(3/3). 2016. Influence of thermal losses on the incidence angle modifier factorization approach. Solar Energy. 135, pp.50-58. ISSN 0038-092X.

9 **Scientific paper.** Hertel, J D,; Bonnín-Ripoll, F.; Martínez-Moll, V.; Pujol-Nadal, R. (4/4). 2018. Incidence-Angle- and Wavelength-Resolved Ray-Tracing Simulations of a Linear Fresnel Collector Using the In-House Software OTSun. Journal of Solar Energy Engineering-Transactions of the Asme. 140-3. ISSN 0199-6231.

10 **Scientific paper.** Bonnin-Ripoll, F.; Martynov, Y. B.; Cardona, G.; Nazmitdinov, R. G.; Pujol-Nadal, R. (5/5). 2019. Synergy of the ray tracing+carrier transport approach: On efficiency of perovskite solar cells with a back reflector. Solar Energy Materials and Solar Cells. 200, pp. 110050-60. ISSN 0927-0248.

C.2. Research projects and grants

1 PROGECIB - 43 A, Improvement of the environmental sustainability of hotel buildings through the analysis of their life cycle. Govern de les Illes Balears. PI: Victor Martínez Moll. (Universidad de las Islas Baleares). 01/04/2007-31/03/2009. 28.000,00 €. Team member.

2 DEX-590000-2008-33, Industrialization, improvement and new integrated development of solar collector concentrator with stationary reflector. Ministerio de Industria Turismo y Comercio. PI: Victor Martínez Moll. (Universidad de las Islas Baleares). 01/07/2008-31/05/2009. 32.299,00 €. Team member.

3 BA-2010-CALT-0010-PY, Construction, testing and prototype intellectual protection of CCStaR V2. Tecnologia Solar Concentradora S.L. PI: Ramon Pujol Nadal. (Universidad de las Islas Baleares). 01/07/2010-31/10/2011. 151.602,46 €.

4 03_2011_LH03_Industry E E, Processes and living lab for industry energy efficiency European Institute of Innovation and Technology. PI: Antoni Julià Sirvent. Tecnologia Solar Concentradora S.L. 31/05/2011-31/12/2012. 29.000 € (partner part). Local leader.

5 PITN-GA-2012-317085, Solar Heat Integration Network (SHINE) European Commission. Marie Curie Initial Training Networks 2012 (ITN). Victor Martínez Moll. (Universidad de las Islas Baleares). 01/10/2013-30/04/2018. 266.281,62 € (partner part). Team member.

6 AAEE065/2017, Acquisition of a spectrophotometer of the UV-VIS series with high photometric precision and a wide range of accessories to develop measurement tasks in optical characterization of solid materials. Conselleria d'Innovació, Reserca i Turisme del Govern de les Illes Balears. PI: Ramon Pujol Nadal. (Universidad de las Islas Baleares). 01/02/2018-31/10/2018. 24.980,16 €.

7 ENE2015-68339-R “Development of a computational tool for the high-resolution optical analysis of solar collectors”. ACronym: OTSun Ministerio de Economía y Competitividad (MINECO). PI: Ramon Pujol Nadal. (Universidad de las Islas Baleares). 01/01/2016-31/12/2019. 45.980,00 €.

C.3. Contracts

1 Collaboration agreement between the entity Tecnología Solar Concentradora, SL, and the University of the Balearic Islands (UIB). Solar Technology Concentradora S.L . PI: Víctor Martínez Moll. (University of the Balearic Islands). 2008-2012. € 105,530.

C.4. Patents

1. Martínez Moll, Víctor; Pujol Nadal, Ramón; Paz Bernales, Huáscar; Riba Romeva, Carles; Martínez Verd. ES2326353B1. Dispositivo concentrador-captador de energía solar España. 2007. Tecnologia Solar Concentradora S.L. Extensión a patente internacional. En explotación durante 8 años por la empresa Tecnologia Solar Concentradora S.L.
2. Martínez Moll, Víctor; Pujol Nadal, Ramón; Montesino Semper, Jaime; Moià Pol, Andreu; Paz Bernales,. ES2322837B1. Unidad reflectora-concentradora, procedimiento de fabricación de la misma, y dispositivo captador solar comprendiendo dicha unidad reflectora-concentradora España. 2007. Tecnologia Solar Concentradora S.L. Extensión a patente internacional. En explotación durante 8 años por la empresa Tecnologia Solar Concentradora S.L.

C.5. Research software developped

1. Cardona, G.; Pujol-Nadal, R. OTSunWebApp. Web application for optical simulations of solar collectors with OTSun. http://otsun.uib.es/otsunwebapp/node/start. 2018.
2. Cardona, G.; Pujol-Nadal, R. OTSun. https://github.com/bielcardona/OTSun. Distributable under MIT license. 2017.

C.6. Participation in international delegations

1. Task 57 / Energy International Agency. "Solar Standard Certificacions" Solar Heating and Cooling Programme.

C.7. Teaching activities

1. Participation in 12 different regulated subjects of the Degree in Industrial and Automatic Electrical Engineering, Master in Industrial Engineering, Technical Architecture, and Degree in Building (1292 hours/10 years).
2. Supervisor of 18 projects (TFG, PFC, TFM).
3. Average score of the evaluation surveys for undergraduate students (2008-2019): 8.63 out of 10. Average in Master subjects (2017-2019): 8.90 out of 10.
4. Two recognized teaching periods (five-year periods): 2008/12 and 2013/18.
5. Participation in 3 teaching innovation projects.
6. Member of the evaluation board on 55 times for Final Degree Projects.

C.8. Other relevant merits

1. Member of the organizing committee of the international congress EuroSun 2016, held in Palma, year 2016.
2. Guest Editor in Solar Energy Journal. Special Issue 11th ISES EuroSun Conference.
3. More than 50 research articles in peer-reviewed journals, all indexed in JCR.