Date of the CVA	04/02/2021

Section A. PERSONAL DATA

Name and Surname	Rubén Abbas Cámara		
DNI	51463741E	Age	35
Researcher's identification number	Researcher ID	I-1660-2015	
	Scopus Author ID	54382953400	
	ORCID	0000-0003-3948-3292	

* Obligatorio

A.1. Current professional situation

Institution	Universidad Politécnica de Madrid			
Dpt. / Centre	Departamento de Ingeniería Energética / Escuela Técnica Superior de Ingenieros Industriales			
Address	calle José Gutiérrez Abascal, 2, 28006, Madrid			
Phone	(+34) 665986111	Email	ruben.abbas@upm.es	
Professional category	Profesor Contratado Doctor		Start date	2019
Keywords	Mechanical aeronautics and naval engineering			

A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Programa Oficial de Doctorado en Ingeniería Ambiental	Universidad Politécnica de Madrid	2015
Master of Science in Sustainable Energy Futures	Imperial College London	2010
Diplôme d'Ingénieur de l'Ecole Central de Lyon	Ecole Centrale de Lyon	2009
Ingeniero Industrial	Universidad Politécnica de Madrid	2009

A.3. General quality indicators of scientific production

Total publications indexed in the Web of Science: 23 (21 Q1 JCR)

Total citations:

- Publons: 525 citations. h-index: 11(I-1660-2015)
- Scopus: 614 citations. h-index: 12 (54382953400)

- Google Scholar: 842 citations, h-index: 13

Orcid 0000-0003-3948-3292

Section B. SUMMARY OF THE CURRICULUM

Rubén Abbas is an Associate Professor at ETSI Industriales (Universidad Politécnica de Madrid), where he has been working since 2011. He has been very active during his career, although it is still short in time (he read his PhD. thesis in 2015).

He is Ingeniero Industrial (Universidad Politécnica Madrid) since 2009, when he also got the Diplôme d'Ingénieur (Ecole Centrale de Lyon). In 2010 he got a MSc. In Sustainable Energy Futures (Imperial College London), which included 44 ECTS (out of 90 ECTS) dedicated to a research master thesis. Back to Spain, he was granted with a FPU contract in 2011, but he renounced to it, as he was already an Assistant Teacher at UPM at that moment. In order to develop his doctoral research, he was granted with Fundación IBERDROLA founding "Ayudas a la Investigación en Energía y Medio Ambiente" with an amount of 20.000 €/year twice, 2011/12 and 2012/13 (the call admits two grants for the same candidate only in exceptional cases). Finally, he ended his PhD thesis in April 2015 at Universidad Politécnica de Madrid.

His field of expertise is within the following research lines: Linear Fresnel collector optical design, Concentrating solar power plants simulation, Experimentation with turbomachinery and Design of turbomachinery for non-conventional fluids.

He has participated in many research projects, including three Plan Estatal coordinated projects (MINECO), one FP7 project (European Commission), one coordinated project founded by Comunidad de Madrid, one project and one R&D transfer project granted by CDTI-EEA Grants and one H2020 project. At current time, he is the main researcher of UPM in a H2020 project (ASTEP, 704 k€) and a Plan Estatal (AdInCCSol, 54 k€). He has also been Main Researcher (IP) of a 15 k€ project granted by Universidad Politécnica de Madrid. He has also participated in a research contract with the Institute for Advanced Sustainability Studies, reporting results directly to Nobel Prize-winning Dr. Carlo Rubbia, who was the Institute Scientific Director during the contract. In addition, Universidad Politécnica de Madrid is in two consortiums that have applied respectively to a H2020 call (RIA action, topic LC-SC3-RES-7-201) and RFCS-PDP call (Topic: RFCS-02-2019). In both consortiums, Rubén Abbas is the Main Researcher for Universidad Politécnica de Madrid. The former has been recently granted with a budget of 563812,50 € for UPM, although the Grant Agreement has not been signed.

The research carried out within these projects has led to around 20 articles published JCR indexed papers with a notable impact (Q1), where Rubén Abbas is the first author in 8 of these publications. He has also participated in aproximately 30 articles published in international congresses, most of them with oral presentation. In addition, he is a co-inventor of 14 patents, where some of them were included in Futuro Solar project.

At current time he is the thesis director of Andrés Sebastián and Magdalena Barnetche. The former is in the frame of Plan Estatal projects and is related to analytical, CFD and experimental studies with micro turbo-compressors in order to analyze the effect of Reynolds number and pressure on the performance. The latter is related to the H2020 project, and includes the dynamic simulation of ASTEP system, its design, intallation and test.

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores

1. **Scientific paper**. Luis Gonzalez-Portillo; Rubén Abbas; Kevin Albrecht; Clifford Ho. 2021. Analysis of optical properties in particle curtains Solar Energy. Pergamon. 213, pp.211-224. ISSN 0038-092X.
2. **Scientific paper**. Andrés Sebastián; Rubén Abbas; Manuel Valdés; Antonio Rovira. 2021. Modular micro-trigeneration system for a novel rotatory solar Fresnel collector: A design space analysis Energy Conversion and Management. Pergamon. 227, pp.113599. ISSN 0196-8904.
3. **Scientific paper**. Rovira A.; Abbas R.; Sánchez C.; Muñoz M.2020. Proposal and analysis of an integrated solar combined cycle with partial recuperation Energy. Pergamon. 198-4, pp.117379. ISSN 0360-5442.
4. **Scientific paper**. Sebastián A.; Abbas R.; Valdés M.; Casanova J.2018. Innovative thermal storage strategies for Fresnel-based concentrating solar plants with East-West orientation Applied Energy. 230, pp.983-995. ISSN 0306-2619.
5. **Scientific paper**. Ruben Abbas; Andrés Sebastián; María José Montes; Manuel Valdés. 2018. Optical features of linear Fresnel collectors with different secondary reflector technologies Applied Energy. Elsevier. 232, pp.386-397. ISSN 0306-2619.
6. **Scientific paper**. Manuel Valdés; Andrés Sebastián; Rubén Abbas. 2018. Reynolds-number-dependent efficiency characterization of a micro-scale centrifugal compressor using non-conventional working fluids Energy Conversion and Management. Pergamon. 177, pp.224-232. ISSN 0196-8904.
7. **Scientific paper**. Abbas R.; Martínez-Val J.2017. A comprehensive optical characterization of linear Fresnel collectors by means of an analytic study Applied Energy. 185, pp.1136-1151. ISSN 03062619.

8 **Scientific paper**. Abbas R.; Valdés M.; Montes M.; Martínez-Val J.2017. Design of an innovative linear Fresnel collector by means of optical performance optimization: A comparison with parabolic trough collectors for different latitudes Solar Energy. 153, pp.459-470. ISSN 0038-092X.

C.2. Participation in R&D and Innovation projects

1 AdInCCSol: Turbomáquinas para ciclos de potencia avanzados Ministerio de Ciencia e Innovación. Ruben Abbas. (Universidad Politécnica de Madrid). 01/07/2020-30/06/2024. 54.450 €.
2 Application of Solar Thermal Energy to Processes (ASTEP) Rubén Abbas Cámara. (Universidad Politécnica de Madrid). 01/05/2020-30/04/2024. 704.312,5 €.
3 P2018/EMT-4319, Energía solar térmica de concentración en el sector del transporte y en la producción de calor y de electricidad, ACES2030 Fondo Social Europeo y Fondo Europeo de Desarrollo Regional. José María Martínez-Val Peñalosa. (Universidad Politécnica de Madrid). 01/01/2019-31/12/2022. 65.163,15 €.
4 Diseño de turbocompresores y turbinas para ciclos híbridos Rankine-Brayton Programa Propio Planes de Investigación. Rubén Abbas Cámara. (Universidad Politécnica de Madrid). 01/01/2018-31/12/2019. 15.000 €.
5 ENE2015-70515-C2-2-R, Diseño Y Evaluación De Equipos De Ciclos Combinados Solares Avanzados PROGRAMA ESTATAL DE INVESTIGACIÓN, DESARROLLO E INNOVACIÓN ORIENTADA A LOS RETOS DE LA SOCIEDAD. Manuel Valdés Del Fresno. (Universidad Politécnica de Madrid). 01/01/2016-31/01/2019. 27.830 €. Team member.
6 612748, Beyond state-of-the-art technologies for re-powering AC corridors and multi-terminal HVDC systems, Best Paths FP7 EU Project. José María Martínez-Val Peñalosa. (Universidad Politécnica de Madrid). 01/10/2014-30/09/2018. 112.400 €. Team member.
7 ES02-0095, Development Of A High Performance Solar System Based On Fresnel Concentrators And Multitube Receptors, Futuro Solar EEA Grants. José María Martínez-Val Peñalosa. (Universidad Politécnica de Madrid). 01/08/2014-31/12/2015. 150.000 €. Team member.

C.3. Participation in R&D and Innovation contracts

Advanced concepts of concentrating solar energy systems CENTRO DE ACUSTICA APLICADA Y EVALUACION NO DESTRUCTIVA; INSTITUTE FOR ADVANCED SUSTAINABILITY STUDIES eV - POTSDAM (IASS). José María Martínez-Val Peñalosa. 02/02/2012-02/02/2013. 255.000 €.

C.4. Patents

1 José María Martínez-Val Peñalosa; Javier Muñoz Antón; Rubén Abbas Cámara; Mireia Piera; Antonio Rovira; María José Montes Pita. ES 2 596 294 B2. Dispositivo para combar placas planas y procedimiento de uso Spain. 05/09/2017. Universidad Politécnica de Madrid.
2 José María Martínez-Val Peñalosa; Javier Muñoz Antón; Rubén Abbas Cámara; Mireia Piera; Antonio Rovira; María José Montes Pita. ES 2 578 804 B2. Dispositivo rotatorio horizontal de concentración de la radiación solar Spain. 05/09/2017. Universidad Politécnica de Madrid.
3 Rubén Abbas Cámara; José María Martínez-Val Peñalosa; Rubén Amengual; Manuel Valdés Del Fresno. ES 2 434 665 B2. Central termosolar de concentración con dos fluidos en el receptor y en el almacenamiento Spain. 22/04/2014. Universidad Politécnica de Madrid.