

**IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.**

**CV date** 09/12/2022

## Part A. PERSONAL INFORMATION

First name	Angela María		
Family name	Coves Soler		
Gender (*)	Female	Birth date (dd/mm/yyyy)	20/05/1976
Social Security, Passport, ID number	33497781Y		
e-mail	angela.coves@umh.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-1917-8661	

(\*) Mandatory

### A.1. Current position

Position	Full Professor		
Initial date	13/11/2021		
Institution	Universidad Miguel Hernández de Elche		
Department/Center	Ing. Comun.	Instituto de Investigación en Ingeniería de Elche I3E	
Country	Spain	Teleph. number	+34 648 89 14 03
Key words	Microwaves, multipactor, antennas, filters		

### A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2017-2021	Associate Professor/ Universidad Miguel Hernández de Elche
2001-2017	Assistant Professor/ Universidad Miguel Hernández de Elche
1999-2001	PhD Researcher Assistant

### A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Physics	Universidad de Valencia	2004
Licenciada in Physics	Universidad de Valencia	1999

(Include all the necessary rows)

## Part B. CV SUMMARY (max. 5000 characters, including spaces)

Angela Coves received her 'Licenciado en Física' degree and the 'Doctor por la Universidad de Valencia' degree in 1999 and 2004 from the University of Valencia (UV), respectively. In 2001 she joined the Miguel Hernández University of Elche (UMH), where she currently holds a position as Full Professor since 2021. Previously, she held positions at UMH, as Associate Professor (21/11/2017-12/11/2021), and as different Assistant Professor positions. She was also granted a predoctoral fellowship by the University of Valencia (2000-2001).

The research work carried out by Dra. Coves was initially focused on the analysis and design of inhomogeneous waveguides and dielectric FSSs (related with her PhD thesis), although since she incorporated to the Radiofrequency Systems Group (GSR) at UMH in 2001, she has developed and lead the following two new research lines in this group: the analysis and automated design of passive components, including filters and periodic structures in rectangular waveguide and SIW technology, and the simulation and measurement of power effects in high-frequency devices and systems.

Regarding the number of publications, Dra. Coves has published a total of 32 papers in refereed international technical journals (12 in the Q1 quartile, 17 in the Q2 quartile, and 3 in the Q3 quartile), and over 120 papers in conference proceedings of recognized prestige (most of them in international conferences), all of them related to the analysis and design of

microwave devices, waveguides and dielectric FSSs, and RF breakdown high power effects, and she has participated as author or co-author in the publication of 6 books or book chapters in these fields.

On the other hand, in the framework of the research lines that Dra. Coves has developed, she has led four National R&D Projects and two regional projects, and she has also collaborated in a total of 12 R&D projects (1 with European funding, 5 with national funding, 7 with regional funding) and 4 research contracts. She has also supervised a PhD thesis (having 1 thesis in progress) and more than 30 graduated or master thesis projects.

The research lines in which Dra. Coves has worked have been enhanced by her active collaboration with different national research groups of international reference (from the Polytechnic University of Valencia -Dr. Vicente E. Boria-, from the Polytechnic University of Cartagena - Dr. José L. Gómez-, from the Institute of Materials Science of CSIC - Dra. Isabel Montero-, and from the University of Seville - Dr. Francisco Mesa Ledesma-) and also with different international research groups (from the University of Pavia -Dr. Maurizio Bozzi-, and from the University of Stockholm -KTH- - Dr. Óscar Quevedo Teruel-), in the framework of which she has done a postdoctoral stay at University of Pavia, and several supervised students of her have done predoctoral stays at University of Seville and at University of Stockholm -KTH-, respectively.

On the other hand, she serves as reviewer for the most important journals related to the electrical engineering, such as IEEE Transactions on Antennas and Propagation, IEEE Transactions on Microwave Theory and Techniques, IEEE Microwave and Wireless Components Letters, IET Electronic Letters, IEEE Transactions on Electron Devices, and Progress in Electromagnetics Research, among others (all indexed in JCR). In addition, Dra. Coves is Associate Editor of the AEU-International Journal of Electronics and Communications (indexed in JCR-2021 in Q2 quartile) since 2018. She is senior member of IEEE since 2019.

Regarding her scientific responsibilities, Dra. Coves has participated as an Expert Evaluator of the Spanish State Agency for Research (AEI) with a total of 22 evaluations, and she is currently a subarea manager in the AEI within the TIC area, TCO subarea.

With regard to her teaching activities, she teaches several courses related with transmission lines and waveguides, and with the design and applications of radio systems, which are closely related to her current research lines.

## **Part C. RELEVANT MERITS** (*sorted by typology*)

### **C.1. Publications** (*see instructions*)

1. J. J. Vague, I. Asensio, Á. Coves, Á. A. San Blas, M. Reglero, A. Vidal, D. Raboso, M. Baquero, and V. E. Boria "Study of the Multipactor Effect in Groove Gap Waveguide Technology", IEEE Transactions on Microwave Theory and Techniques, vol. 70, no. 5, pp. 2566-2578, May 2022.
2. A. Coves, H. Maestre, R. Archilés, M. V. Andrés and B. Gimeno, "Surface-Impedance Formulation for Hollow-Core Waveguides Based on Subwavelength Gratings," IEEE Access, vol. 10, pp. 18843-18854, 2022.
3. A. Coves, A. A. San Blas, E. Bronchalo, "Analysis of the dispersion characteristics in periodic Substrate Integrated Waveguides", Int. J. Electron. Commun. (AEÜ), vol. 139, p. 153914, 2021.
4. A. A. San-Blas, A. Coves, A. Vidal, V. E. Boria, "Efficient design of compact H-plane rectangular waveguide band-pass filters with integrated coaxial excitation", Int. J. Electron. Commun. (AEÜ), vol. 135, p. 153744, 2021.

5. Á. A. San-Blas, M. Guglielmi, J. C. Melgarejo, Á. Coves and V. E. Boria, "Design Procedure for Bandpass Filters Based on Integrated Coaxial and Rectangular Waveguide Resonators," *IEEE Transactions on Microwave Theory and Techniques*, vol. 68, no. 10, pp. 4390-4404, Oct. 2020.
6. Javier Martínez, Ángela Coves, Francisco Mesa, and Óscar Quevedo-Teruel, "Passband broadening of sub-wavelength resonator-based glide-symmetric SIW filters", *Int. J. Electron. Commun. (AEÜ)*, vol. 125, p. 153362, 2020.
7. J. Martínez, A. Coves, E. Bronchalo, A. A. S. Blas, and M. Bozzi, "Band-pass filters based on periodic structures in SIW technology," *Int. J. Electron. Commun. (AEÜ)*, vol. 112, p. 152942, 2019.
8. A. Berenguer, A. Coves, F. Mesa, E. Bronchalo, and B. Gimeno, "Analysis of multipactor effect in a partially dielectric-loaded rectangular waveguide", *IEEE Trans. Plas. Sci.*, vol. 47, no. 1, 259–265, Jan. 2019.
9. A. Berenguer, Á. Coves, B. Gimeno, E. Bronchalo and V. E. Boria, "Experimental Study of the Multipactor Effect in a Partially Dielectric-Loaded Rectangular Waveguide", *IEEE Microwave and Wireless Components Letters*, vol. 29, no. 9, pp. 595-597, Sept. 2019.
10. Lorenzo Silvestri, Enrico Massoni, Cristiano Tomassoni, Angela Coves, Maurizio Bozzi, and Luca Perregrini, "Substrate Integrated Waveguide Filters Based on a Dielectric Layer With Periodic Perforations", *IEEE Trans. Microw. Theory Tech.*, vol. 65, no. 8, pp. 2687 - 2696, Aug. 2017.

## C.2. Congress

1. J. Martínez, A. Coves, A. A. San Blas, E. Bronchalo, M. Bozzi, "Modified CSRRs in SIW Technology for Passband Improvement" (oral presentation), 16 European Conference on Antennas and Propagation (EuCAP 2022), Madrid, Spain, 27 March 2022.
2. A. Berenguer, A. Coves, F. Mesa, E. Bronchalo, B. Gimeno, "A New Multipactor Effect Model for Dielectric-Loaded Rectangular Waveguides" (oral presentation), 2019 IEEE MTT-S Int. Conf. on Num. Elec. and Multiphysics Mod. and Opt. for RF, microwave, and terahertz applications (NEMO2019), Cambridge, United States, 29 May 2019.
3. David López, Ángela Coves, Enrique Bronchalo, Germán Torregrosa, and Maurizio Bozzi, Practical Design of a Band-Pass Filter Using EBG SIW technology (oral presentation), 48th European Microwave Conference, Madrid, Spain, 25-27 Sept. 2018, pp. 77-80.
4. A. Berenguer, A. Coves and E. Bronchalo, Comparative Study of Multipactor Effect in Rectangular and Parallel-plate Waveguides Partially Loaded with Dielectric (oral presentation), The 41st photonics & electromagnetics research symposium, (PIERS 2019), Rome, Italy, 17-20 June, 2019.
5. Ángela Coves, Germán Torregrosa, Gaspar Vicent, Enrique Bronchalo, Ángel A. San Blas, and Maurizio Bozzi, Analysis of a perforated SIW structure with a rectangular air box and its application to the design of a step-impedance microwave filter (oral presentation), XXXIInd URSI GASS, Montreal, Canadá, 19-26 Aug. 2017, pp. 1-4.
6. Angela Coves, Germán Torregrosa-Penalva, Gaspar Vicent, Enrique Bronchalo, Angel-Antonio San-Blas and Maurizio Bozzi, Modeling of Perforated SIW Structures and Their Application to the Design of Step-Impedance Microwave Filters, 2017 IEEE MTT-S

international conference on numerical electromagnetic and multiphysics modeling and optimization for RF, microwave, and terahertz applications (NEMO2017), Sevilla, Spain, 17-19 May 2017.

### **C.3. Research projects**

Title of the Project: “Soluciones avanzadas en tecnología de guías integradas en sustrato y con estructuras periódicas para enlaces de conectividad digital con pequeños satélites”. IP: Ángela Coves Soler, Miguel Ángel Sánchez Soriano, Universidad Miguel Hernández de Elche. (1/12/2022-30/11/2024). Proyectos de transición ecológica y digital 2021. Ministerio de Ciencia e Innovación. TED2021-129196B-C43. 91.425 €.

Title of the Project: “Diseño eficiente de filtros de microondas en tecnología guiada y estudio de efectos de potencia -multipactor y corona- en dispositivos pasivos de microondas -filtros y antenas-“. IP: Ángela Coves Soler (1/1/2022-31/12/2024). Conselleria d'Innovació, Universitats, Ciència i Societat Digital, CIAICO/2021/055. 90.000 €.

Title of the Project: “Modelado avanzado y caracterización de nuevos componentes de alta frecuencia en guía de onda y tecnología planar para las aplicaciones espaciales emergentes”. IP: Stephan Marini, Miguel Á. Sánchez Soriano, Univ. de Alicante. (1/6/2020-31/5/2023). Ministerio de Ciencia e Innovación. PID2019-103982RB-C43. 79.860 €.

Title of the Project: “Técnicas Disruptivas de Diseño y Fabricación de Circuitos de Microondas mediante Impresión Aditiva 3D”. IP: Germán Torregrosa Penalva, Universidad Miguel Hernández de Elche. (01/01/2020 - 31/12/2021). Conselleria d'educació, universitats, ciència i societat digital. AICO/2020/218. 40.000 €.

Title of the Project: “Diseño y Evaluación de Prestaciones de Dispositivos de Microondas en Tecnologías Planar y Guiada con Materiales Dieléctricos”. IP: Ángela Coves Soler, Universidad Miguel Hernández de Elche. (30/12/2016 - 29/12/2019). Ministerio de Economía y Competitividad. TEC2016-75934-C4-2-R. 87.120 €.

Title of the Project: “Análisis del efecto multipactor y diseño de nuevos dispositivos de alta potencia basados en tecnología guiada con materiales dieléctricos y magnéticos”. IP: Ángela Coves Soler, Universidad Miguel Hernández de Eche. (01/01/2014 - 31/12/2016). Ministerio de Economía y Competitividad. TEC2013-47037-C5-4-R. 83.248 €.

Title of the Project: “Desarrollos Compactos de Subsistemas Pasivos Espaciales Empleando Tecnología Coaxial y Materiales Periódicos Selectivos en Frecuencia”. IP: Ángela Coves Soler, Universidad Miguel Hernández de Elche. (01/01/2011 - 31/12/2013). Ministerio de Ciencia e Innovación. TEC2010-21520-C04-02. 53.966 €.

### **C.4. Contracts, technological or transfer merits**

Título del contrato: “Adenda al protocolo general en el marco del Laboratorio Europeo de Alta Potencia en Radiofrecuencia para espacio. IP: Enrique Bronchalo Bronchalo. CONSORCIO ESPACIAL VALENCIANO, ESA. 28/11/2016-27/11/2020.

Título del contrato: “Protocolo general en el marco del Laboratorio Europeo de Alta Potencia en Radiofrecuencia para espacio. IP: Enrique Bronchalo Bronchalo. CONSORCIO ESPACIAL VALENCIANO, ESA. 28/11/2012 -27/11/2016.