MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

CURRICULUM VITAE (maximum 4 pages)

Part A. PERSONAL INFORMATION

CV date	18/09/2023

First and Family name	Antonio Consoli Barone		
Social Security, Passport, ID number		Age	
Researcher numbers	Researcher ID	ABG-7376-2020	
	Orcid code	0000-0002-0653-878X	

A.1. Current position

Name of University/Institution	UNIVERSIDAD REY JUAN CARLOS		
Department	Departamento de Teoría de la Señal y las Comunicaciones y Sistemas Telemáticos y Computación		
Address and Country	Calle Tulipan s/n 28933 Mostoles		
Phone number		E-mail	antonio.consoli@urjc.es
Current position	Profesor Titular (Associate Professor)	From	[redacted]
Espec. cód. UNESCO			
Palabras clave			

A.2. Education

PhD	University	Year
Telecommunication Engineering	Universidad Politecnica de Madrid	[redacted]

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

15 JCR articles, 283 citas, h index = 11 (Scopus database)

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

Antonio Rosario Consoli Barone is an Electronic Engineer with specialization in Optoelectronics. He obtained his Laurea degree from Universitá degli Studi di Pavia, Pavia, Italy, in 2004. In 2007 he started his PhD on semiconductor lasers and the generation and measurement of optical pulse with short duration (picoseconds and femtoseconds) with application to optical communications. In 2011 he received his PhD in Telecommunication Engineering from Universidad Politecnica de Madrid (UPM), Madrid, Spain. He continued working at UPM during the next two years in the framework of the European Projet Britespace, on the realization of a space borne lidar instrument for atmospheric measurements based on pulsed semiconductor lasers. In 2014, he joined the Instituto de Ciencia de Materiales de Madrid del Consejo Superior de Investigaciones Científicas (ICMM-CSIC). His main topic was the experimental and theoretical study of scattering and amplification in random lasers. As a result, a novel architecture for random lasers has been proposed, which links these device to conventional lasers, improving the current understanding of their principle of operation. Since 2017, he is an Assistant Professor of Analog and Digital Electronics at Universidad Rey Juan Carlos de Madrid, Madrid, Spain. His current research interests are in the field of optoelectronic devices based on disordered materials.

Part C. RELEVANT MERITS

C.1. Publications (including books)

1. A. Consoli, N. Caselli, and C. López “Networks of random lasers: current perspective and future challenges” Optical Materials Express 13, 4, Optical Materials Express
2. A. Consoli, N. Caselli, and C. López “Electrically driven random lasing from a modified Fabry-Perot laser diode” Nat. Photon. 16, 219 - 225 (2022).

3. N. Caselli, A. Consoli, A. M. Mateos and C. López “Networks of mutually coupled random lasers” Optica, 8 ,2 (2021).
4. A. Consoli, E. Soria, N. Caselli, and C. López “Random lasing emission tailored by femtosecond and picosecond pulsed polymer ablation” Opt. Lett. 44 (3) 518-521 (2019).
5. C. del Río Campos, A. Consoli, J. M. del Río Campos, P. R. Horche “Impact on the chirp effect of the shaped electrical-driven current of the directly-modulated 1.55 μm VCSEL in an optical fiber link”, vol. 435, 326-333, Optics Communications (2019).
6. A. Consoli and C. López “Lasing optical cavities based on macroscopic scattering elements” Scientific Reports 6, 40141 (2017).
7. A. Consoli and C. López “Emission regimes of random lasers with spatially localized feedback” Opt. Express 24 (10) 10912-10920 (2016).
8. A. Consoli and C. López “Decoupling gain and feedback in coherent random lasers: experiments and simulations” Scientific Reports 5, 16848 (2015).
9. A. Consoli, D. Mariano da Silva, N.U. Wetter and C. López “Large area resonant feedback random lasers based on dye-doped biopolymer films” Opt. Express 23 (23) 29954-29963 (2015).
10. P. Pérez, A Quirce, A Valle, A. Consoli, I. Noriega, L. Pesquera, and I Esquivias “Photonic generation of microwave signals using a single-mode VCSEL subject to dual-beam orthogonal optical injection”, IEEE Photonics Journal, 7 (1) 1-14 (2015).
11. A. Consoli and I. Esquivias, “Temporally flat top pulse generation from gain switched semiconductor lasers based on a polarization interferometer with variable transfer function”, Optics Communications, 329, pp 214–220 (2014).
12. P. Adamiec, A. Consoli, J. M. G. Tijero, S. Aguilera, I. Esquivias, S. Schwertfeger, A. Klehr, H. Wenzel, B. Sumpf and G. Erbert, "High Data Rate Modulation of High Power 1060-nm DBR Tapered Lasers With Separate Contacts", IEEE Photonics Technology Letters, 25 (22) 2171-2173 (2013).
13. A. Consoli and I. Esquivias, “Pulse shortening of gain switched single mode semiconductor lasers using a variable delay interferometer”, Optics Express 20 (20) 22481-22489 (2012).
14. P. Adamiec, B. Bonilla, A. Consoli, J. M. G. Tijero, S. Aguilera, and I. Esquivias, “High-peak-power pulse generation from a monolithic master oscillator power amplifier at 1.5 μm”, Applied Optics, 51 (30) 7160-7164 (2012)
15. A. Consoli, B. Bonilla, J. M. G. Tijero, and I. Esquivias “Self-validating technique for the measurement of the linewidth enhancement factor in semiconductor lasers” Optics Express, 20 (5) 4979-4987 (2012).
16. T. C. Wong, J. Ratner, V. Chauhan, J. Cohen, P. Vaughan, L. Xu, A. Consoli, and R. Trebino, “Simultaneously measuring two ultrashort laser pulses on a single shot using double blind Frequency-Resolved Optical Gating” Journal of the Optical Society of America B, 29 (6) 1237-1244 (2012).
17. A. Consoli, J. M. Garcia Tijero and I. Esquivias, “Time resolved chirp measurements of gain switched semiconductor laser using a polarization based optical differentiator”, Optics Express, 19 (11) 10805-10812 (2011).
18. A. Consoli, I. Esquivias, F. J. López Hernández, J. Mulet and S. Balle, “Characterization of Gain-Switched Pulses from 1.55 μm VCSEL”, IEEE Photonics Technology Letters, 22 (11) 772-774 (2010).

C.2. Research projects and grants

- Materiales híbridos y 2d para aplicaciones de detección y de energía. From 01/01/2020 to 31/12/2020, granted by Universidad Rey Juan Carlos (ref. M2142).
- Pasivación de los defectos superficiales de la perovskita 3D con láminas 2D mejorando su eficiencia y estabilidad ambiental en dispositivos fotovoltaicos. From 01/01/2020 to 31/12/2020, granted by Comunidad de Madrid (ref. F660).

- Structured materials for photonic, optomechanical and thermal applications-(SMOOTH). Duration: 01/01/2019-30/09/2022, granted by: Ministerio de Ciencia Investigacion y Universidades (ref. RTI2018-093921-B-C41).
- PHOTONIC ADVANCED MATERIALS (PHAMA 2.0), ref. S2009/MIT-2740, sponsored by Comunidad Autónoma de Madrid from 01/09/2017 to 31/12/2018, at Organic Optoelectronic Group, Universidad Rey Juan Carlos de Madrid.
- PHOTONIC ADVANCED MATERIALS (PHAMA 2.0), ref. S2009/MIT-2740, , sponsored by Comunidad Autónoma de Madrid from 07/04/2014 to 31/08/2017, with the Photonics Cristal Group of the Instituto de Ciencia de Materiales de Madrid - Consejo Superior de Investigaciones Científicas.
- SISTEMAS FOTONICOS PARA EFICIENCIA ENERGETICA, ref. MAT2015-68075-R sponsored by Ministerio de Economia y Competitividad from 01/01/2015 to 31/08/2017.
- Network of Excellence Nanophotonics for Energy Efficiency, grant agreement number 248855, sponsored by the European Union 01/07/2014 - el 31/03/2017
- SELFASSEMBLED MATERIALS WITH APPLICATIONS IN PHOTONICS (SAMAP), ref. MAT2012-31659, sponsored by Ministerio de Economía y Competividad (MINECO) 07/04/2014 – 31/12/2014.
- HIGH BRIGHTNESS SEMICONDUCTOR LASER SOURCES FOR SPACE APPLICATIONS IN EARTH OBSERVATION (BRITESPACE), ref. 313200, sponsored by the European Union 01/12/2012 – 31/03/2014
- FOTONICA APLICADA A LA CREACIÓN DE TECNOLOGIAS OPTICAS Y SU TRANSFERENCIA A EMPRESAS MADRILEÑAS II (FACTOTEM 2) ref. S2009/ESP- 1781, sponsored by Comunidad de Madrid 01/09/2011 – 31/12/2013
- SISTEMA DE ACCESIBILIDAD AL CINE Y OTROS EVENTOS CULTURALES PARA PERSONAS SORDAS (SACEC), ref. TSI-02011101-2009-363, sponsored by Ministerio de Industria, Turismo y Comercio 01/09/2011 – 31/03/2012
- LASERES DE SEMICONDUCTOR AVANZADOS PARA PROCESADO DE SEÑAL TODO-OPTICO Y GENERACION DE PULSOS CORTOS (ALAS), ref. TEC2009-15481-C02-01, sponsored by Ministerio de Ciencia e innovación (MICINN) 01/11/2010 – 31/12/2012.
- WORLD WIDE WELFARE: HIGH BRIGHTNESS SEMICONDUCTOR LASER FOR GENERIC USE (WWW.BRIGHTER.EU), ref. 035266, sposnsored by the European Union 01/09/2007 – 09/09/2009
- AYUDA COMPLEMENTARIA AL PROYECTO LÁSERES DE ALTO BRILLO PARA USO GENÉRICO, ref. TEC2007-29619-E sponsored by Ministerio de Educación y Ciencia (MEC) 01/09/2007 – 30/09/2009
- CONTRATO FPI, REF. UPM CONTRATO FPI, sponsored by el Ministerio de Educación y Ciencia (MEC), 01/09/2009 – 31/08/2011.
- DESARROLLO DE TECNICAS DE BANDA-ULTRA-ANCHA MEDIANTE PULSOS GENERADOS POR DIODOS LASER: APLICACIONES A LAS COMUNICACIONES OPTICAS INALAMBRICAS (BLANCO), ref. TEC2006-13887-C05-03, sponsored by Ministerio de Educación y Ciencia (MEC) 01/09/2007 – 31/2/2009

C.3. Contracts

- February 2022- today. Associate Professor (Profesor Titular) at Universidad Rey Juan Carlos de Madrid.
- September 2017 – January 2022. Assistant Professor at Universidad Rey Juan Carlos de Madrid.
- Abril 2014 – September 2017. Post doctoral Researcher at Instituto de Ciencia de Materiales de Madrid, Consejo Superior de Investigaciones Científicas.

- September 2011 – March 2014. Post doctoral Researcher at Departamento de Tecnología Fotónica, Escuela Técnica Superior de Ingenieros de Telecomunicación, Universidad Politécnica de Madrid.
- September 2007 – August 2011. PhD Student with Formacion Personal Investigador (FPI) grantship at Escuela Técnica Superior de Ingenieros (ETSI) de Telecomunicación, Universidad Politécnica de Madrid, Madrid.

C.4. Patents

2 European patents

- "Random lasers" #EP3148017A1, published on 29/03/2017
- 'Networks of coupled random lasers with spatially localised feedback', presented on 19/06/2020.