

Part A. Personal Information

DATE	07/09/2023
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Surname	Ver Hoeye	
Forename	Samuel	
Social Security, Passport, ID number (NIE)	X2651301E	
Sex	Male	
Age	49	
Researcher codes	SCOPUS Author ID(*)	6506776917
	Open Researcher and Contributor ID (ORCID)	0000-0002-4592-7921

A.1. Current position

Post/ Professional Category	Associate Professor	
UNESCO Code	220210	
Key Words	Microwave, millimetre and submillimetre wave, Terahertz, mid-infrared technology	
Name of the University/Institution	University of Oviedo	
	Department/Centre	Dept. Electrical Engineering
	Full Address	Edif. Polivalente, Campus de Gijón, despacho 1.8.08, 33204 Gijón, Spain
	Email Address	versamuel@uniovi.es
	Phone Number	985 18 26 16
Start date	09/08/2010	

A.2. Education (title, institution, date)

Year	University	Degree	Title
1996	West-Flanders University (Belgium)	Bachelor (4 years)	Industrial Engineer, Speciality Electricity, Option Electronics
1999	Gent University (Belgium)	Master of Science	Master of Science in Electronics and ICT Engineering Technology
2002	Ministry of Education, Culture and Sports	Master	Homologation to Telecommunications Engineering
2002	University of Cantabria	PhD	Doctor from the University of Cantabria

A.3. Indicators of Quality in Scientific Production (See the instructions)

a) Total number of citations: 686
b) Total number of publications in the first quartile (Q1): 41 and first decile (D1): 12
c) h-index: 15
d) PhD Thesis supervised: 8
e) Recognised research 6-year periods: 4

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

Prof. Samuel Ver Hoeye, received the MSc. Degree from the University of Ghent in 1999 and the Ph.D. degree from the University of Cantabria in 2003. Dr. Ver Hoeye has worked since the beginning of his research career in the design, analysis and optimization of radiofrequency circuits and sub-systems, operating in frequency bands from microwave to terahertz bands. In a first stage, started in 1998, his research has been devoted to the development of techniques for the analysis and optimization of multifunctional circuits based on oscillators. In a second stage, started in 2008, the research has been dedicated to the development of terahertz technology. During the last years of this stage, the research has been focused on the study

and design of nonlinear devices based on graphene and its derivatives, for application in terahertz sub-systems. His most recent research has been dedicated to the integration of microwave antennas and circuits in fully woven structures.

In his research he has directed and participated in 12 European projects, 38 National or regional R&D projects, and 17 contracts with private companies. He is author of 54 contributions in indexed international scientific journals, and has an h-index of 15. He has over 85 contributions in conferences, among which 4 invited papers. He has directed 8 doctoral thesis, among them 3 have received an award.

He has been a principal researcher in the European Projects: INSIDDE (ICT-600849), ON-TARGET (subcontracted, REF.: E! 7357), FITEX-ID (subcontracted, REF.: E!11802), SALEIE (527877-LLP-1-2012-1-UK-ERASMUS-ENW), PRAXIS (518811-LLP-1-2011-1-PT-ENW), ELLEIEC (142814-LLP-1-2008-1-FR-ENW), EIE-Surveyor (225997-CP-1-2005-1-FR-TNPP), the National Projects TECNIGRAF (IPT-2011-0951-390000), TERAGRAPH (TEC2015-72110-EXP), G-MILLITECH (TEC2016-80815-P), (EQC2019-005768-P), and regional projects Equip08-06, MATID (PEST08-02), CAMSILOC (IB09-081), FLEXANT (PC10-06), SV-PA-15-RIS-3, IDI/2016/000372, IDI/2017/000083, IDI/2020/000220, IDI/2021/00097/001. The total financing managed by Samuel Ver Hoeye as principal investigator of projects amounts over 2,3 M€.

The researcher has participated in several Scientific and Technical Committees of International Conferences (European Conference on Antenna and Propagation, International Conference on Communications, Electromagnetics and Medical Applications), and has been a member of the editorial board of the international journals Recent Advances in Communications and Networking Technology (Bentham Science), and Chinese Journal of Engineering (Hindawi). He has served as reviewer for the journals Progress In Electromagnetics Research, Journal of Electromagnetic Waves and Applications, IEEE Microwave and Wireless Components Letters, IEEE Access, IEEE Electrical Electronics Engineers, IEEE Transactions on Antennas and Propagation, IEEE Electrical Electronics Engineers, IEEE Transactions on Circuits and Systems I, Control Engineering Practice - Elsevier, Microelectronics Journal - Elsevier, Electronics Letters, International Journal of Circuit Theory and Applications, IEEE Latin America Transactions, as well as the international congresses European Conference on Antennas and Propagation, IEEE Symposium on Wireless Technology & Applications, IEEE Asia-Pacific Conference on Applied Electromagnetics". He has also served during several years as Expert-Reviewer for the European Commission and for the Executive Agency for Higher Education, Research, Development and Financing of Innovation in Romania (UEFISCDI).

Part C. Relevant accomplishments

C.1. Publications

- [1] L. Alonso-González, S. Ver-Hoeye, C. Vázquez-Antuña, M. Fernández-García, F. Las-Heras Andrés, "On the techniques to develop millimeter-wave textile integrated waveguides using rigid warp threads", IEEE Transactions on Microwave Theory and Techniques, Vol. 66, pp. 751-761, 2018.
- [2] R. Cambor, S. Ver Hoeye, M. Fernández, C. Vázquez, F. Las Heras, "Full 2-D submillimeter-wave frequency scanning array", IEEE Transactions on Antennas and Propagation, Vol. 65, pp. 4486-4494, 2017.
- [3] R. Cambor, S. Ver Hoeye, M. Fernández, C. Vázquez, F. Las Heras, "Submillimeter wavelenght 2-D frequency scanning antenna based on slotted waveguides fed through a phase shiting network", IEEE Transactions on Antennas and Propagation, Vol. 65, pp. 3501-3509, 2017.
- [4] C. Vázquez, A. Hadarig, S. Ver Hoeye, M. Fernández, R. Cambor, G. Hotopan, F. Las Heras, "High-order subharmonic millimeter-wave mixer based on few-layer graphene", IEEE Transactions on Microwave Theory and Techniques, Vol. 63, pp. 1361-1369, 2015.
- [5] A. Hadarig, C. Vázquez, M. Fernández, S. Ver Hoeye, G. Hotopan, R. Cambor, F. Las Heras, "Experimental analysis of the high-order harmonic components generation in few-layer graphene", Applied Physics A, Vol. 118, pp. 83-89, 2014.

- [6] J. Laviada, Y. Álvarez-López, R. Cambor-Díaz, C. García-González, C. Vázquez-Antuña, A. Arbolea-Arbolea, M. Fernández-García, G. Hotopan, S. Ver Hoeye, Fernando Las-Heras, "Phase retrieval technique for the submillimetre-wave frequency scanning-based radar", IET Microwaves, Antennas & Propagation, Vol. 8, pp. 1170-1178, 2014.
- [7] M. Fernández, S. Ver Hoeye, C. Vázquez, G. R. Hotopan, R. Cambor, F. Las Heras, "Optimization setup based on multi-tone harmonic balance for the direct and accurate control of the locking range of rationally synchronized oscillators", Journal of Electromagnetic Waves and Applications, Vol. 28, pp. 1142-1153, 2014.
- [8] Álvarez, R. Cambor, C. García, J. Laviada, C. Vázquez, S. Ver Hoeye, G. Hotopan, M. Fernández, A. Hadarig, A. Arbolea, F. Las Heras, "Submillimeter-wave frequency scanning system for imaging applications", IEEE Transactions on Antennas and Propagation, Vol. 61, pp. 5689-5696, 2013.
- [9] M. Fernández, S. Ver Hoeye, C. Vázquez, G. Hotopan, R. Cambor, F. Las Heras, "Analysis of the locking range of rationally synchronized oscillators with high reference signal power", IEEE Transactions on Microwave Theory and Techniques, Vol. 60, pp. 2494-2504, 2012.
- [10] M. Fernández-García, S. Ver-Hoeye, C. Vázquez-Antuña, G. R. Hotopan, R. Cambor-Díaz, F. Las-Heras, "Design and analysis of a multi-carrier Tx-Rx system based on rationally synchronized oscillators for localization applications", Progress In Electromagnetics Research, Vol. 120, pp. 1-16, 2011.

C.2. Research Projects and Grants

1. Proyecto Reference: TEC2015-72110-EXP
Título: Terahertz signal generator based on graphene (teragraph)
Principal Investigador: Samuel Ver Hoeye, University of Oviedo
Funding Body: Ministerio de Economía, Industria y Competitividad
Duration: 01/05/2017 – 30/04/2019
Amount: 45.000 Euro
2. Proyecto Reference: TEC2016-80815-P
Título: Graphene based millimeter wave technology (G-MILLITECH)
Principal Investigador: Samuel Ver Hoeye, University of Oviedo
Funding Body: Ministerio de Economía, Industria y Competitividad
Duration: 30/12/2016 – 29/12/2019
Amount: 70.785 Euro
3. Proyecto Reference: IDI/2021/00097/001
Título: Terahertz technology integrated in chip.
Principal Investigador: Samuel Ver Hoeye, University of Oviedo
Funding Body: Gobierno del Principado de Asturias
Duration: 01/01/2021 – 31/12/2021
Amount: 29.335,20 Euro
4. Proyecto Reference: IDI/2020/000220
Título: Technology for the integration and characterization of novel radiofrequency identification and localization components.
Principal Investigador: Samuel Ver Hoeye, University of Oviedo
Funding Body: Gobierno del Principado de Asturias
Duration: 01/01/2020 – 31/12/2020
Amount: 29.340,00 Euro
5. Proyecto Reference: IDI/2017/000083
Título: Manufacturing technology and implementation of novel components for RFID
Principal Investigador: Samuel Ver Hoeye, University of Oviedo
Funding Body: Gobierno del Principado de Asturias
Duration: 01/01/2017 – 31/12/2017
Amount: 29.983,44 Euro

6. Proyecto Reference: (IDI/2016/000372)

Título: Manufacturing technology and characterization of terahertz components

Principal Investigador: Samuel Ver Hoeye, University of Oviedo

Funding Body: Gobierno del Principado de Asturias

Duration: 01/01/2016-31/12/2016

Amount: 29.863,00 Euro

7. Proyecto Reference: EC Grant Agreement 600849

Título: INtegration of technological Solutions for Imaging, Detection, and Digitisation of hidden Elements in artworks (INSIDDE).

Principal Investigador: Samuel Ver Hoeye, University of Oviedo (responsible for the participation of the University of Oviedo in the Project and technical manager of the consortium).

Funding Body: European Commission, Call FP7-ICT-2011-9, Activity code: ICT-2011.8.2: ICT for access to cultural resources.

Duration: 01/01/2013 - 31/12/2015.

Amount: TOTAL: 2.849.131,00 Euro, University of Oviedo: 489.596,00 Euro.

8. Proyecto Reference: IPT-2011-0951-390000

Título: Graphene based submillimetre wave / terahertz imaging technology for security systems (TECNIGRAF)

Principal Investigador: Samuel Ver Hoeye, University of Oviedo (responsible for the participation of the University of Oviedo in the project and Technical Manager of the Consortium)

Funding Body: Ministerio de Ciencia e Innovación, Subprograma INNPACTO enmarcada en el Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica 2008-2011.

Duration: 01/10/2011-31/12/2014

Amount: 143.208,00 Euro

C.3. Contracts

1. Title: Fully integrated textile electronic tags for the next generation RFID uses in the fashion sector – FITex-ID. REF.: FUO-149-18

Company: Wearable Technologies S.L. (subcontract in EUROSTARS project)

Principal Investigator and affiliation: Samuel Ver Hoeye, University of Oviedo

Duration: 01/07/2018 – 30/06/2020 **Amount:** 100.000 Euros

2. Title: Optimization of frequency converter based on grafene operating in the terahertz band, using additive manufacturing techniques. REF.: SV-PA-15-RIS3-3

Company: ArcelorMittal – Instituto de Desarrollo Económico del Principado de Asturias (IDEPA) – RIS3 project

Principal Investigator and affiliation: Samuel Ver Hoeye, University of Oviedo

Duration: 01/07/2015 - 30/06/2016 **Amount:** 30.000,00 Euro

3. Title: Development of novel transmitters and receivers based on graphene for the enhancement of mm/submm-wave technologies – ON TARGET. REF.: FUO-EM-023-13

Company: TREELOGIC (subcontract in EUROSTARS E!7357 project)

Principal Investigator and affiliation: Samuel Ver Hoeye, University of Oviedo

Duration: 01/01/2013 - 31/12/2014 **Amount:** 112.000,00 Euro