CV date	10/10/2025

Part A. PERSONAL INFORMATION

First name	FRANCISCO		
Family name	GAMIZ PEREZ		
Gender (*)	MALE	Birth date	xx/xx/xxxx
ID number			
e-mail			
Open Researcher and Contributor ID (ORCID) (*)		0000-0002-5072-7924	

A.1. Current position

Position	CU		
Initial date	01/04/2005		
Institution	Universidad de Granada		
Department/Center		Electrónica y Tecnología de Computadores	
Country	Spain	Teleph. number	xxxxxxxxxx
Key words	Biosensors, nanoelectronics, Monte Carlo simulation, AFM, Solid State Physics, 2D materials, graphene		

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
1992-1993	PhD Fellowship/University Granada/Spain
1993-1995	Teaching Assistant/University of Granada/Spain
1995-1999	Associate Professor/University of Granada/Spain
1999-2000	Visiting researcher/IBM T.J.Watson NY/USA
2000-2005	Associate Professor/University of Granada/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD Physics	Universidad de Granada	1994
Graduated in Physics	Universidad de Granada	1991

Part B. CV SUMMARY

General indicators of quality of scientific production:
Number of “sexenios”: 6 (Last 2016-2021, Included transference “sexenio”)
PhD advisor in the last ten years: 10
Total Cites: 7120; Average cites/year (2020-2024): 350
Total Q1 Publications: 148
H Index: 36 (WoS), 36 (Scopus), 42(Google Scholar)

Francisco Gamiz graduated in Physics with Honors (National Award of the Spanish Ministry of Education) in 1991 at the UGR and obtained the PhD degree (Extraordinary Award) in 1994. In 1991, he began his work of simulating semiconductor devices by the Monte Carlo method. In 1999 he visited the TJ Watson Research Center of IBM (USA) with Dr. Fischetti. In 2000 and 2002 he coordinated two MINECO cooperation projects with Prof. Selberherr and Prof. Kosina of TUWien. New Monte Carlo techniques were developed in collaboration with Prof. Asenov of Glasgow University to incorporate the effects of carrier quantization into device simulations. In 2003 he participated in the EU FP5 FET project “EXTRA: Extremely Fast Silicon Transistor Based On Carrier Velocity Modulation” with VTT (Finland), and the Universities of Tokyo and Wuppertal. In 2004, Prof.Gamiz coordinated the European project EUROSOI in EU-FP6. An outcome of EUROSOI project is the EUROSOI conferences series that since 2005 has been the forum for the discussion of SOI technology in Europe. Prof. Gamiz is the president of the Steering Committee of EUROSOI-ULIS conference. Also, in 2004 and within the FP6, it participated in the SINANO Network of Excellence project, the precursor of the current SINANO Institute that brings together the most important actors in European

Nanoelectronics. In FP7, Prof. Gamiz coordinates EUROSOI +, whose objective is the training of young researchers in SOI technology, as well as making it accessible to university groups and small companies through MPW (multiproject wafers) projects. In 2011 CEA-LETI and STMicroelectronics launched an offer of MPW in the FDSOI technology of 28nm thanks to the mediation of the EUROSOI + project. FP7 also participates in the European project NANOSIL. In 2006, a co-tutelle agreement is signed with Prof. Cristoloveanu in MINATEC through which several PhD students carry out long training stays in Grenoble. Since 2010, Prof. Gamiz has achieved six infrastructure projects from MINECO and Junta de Andalucia with total funding of more than € 6M, which has been used to set up the Laboratory of Nanoelectronics, Graphene, and 2D Materials (CITIC-UGR). In 2014, the Governing Board of the UGR appointed Prof.Gamiz as Director of Nanoelectronics Laboratory. In 2010, collaboration agreements were signed with SOITEC, IMEC, CEA-LETI, Tokyo Institute of Technology, IMEP-MINATEC, Glasgow University, GlobalFoundries, or Synopsys (UK). Prof. Gamiz has participated in European industrial projects with CATRENE or ECSEL labels: REACHING-22, PLACES2BE, and H2020-WAYTOGO-FAST. In 2008 Prof. Gamiz founded the Nanoelectronics research group. The combination in the same group of advanced fabrication facilities, advanced characterization techniques, and simulation tools has allowed the development of lines of great interest and social impact. The first research line is focused in the design of semiconductor memory cells. Eighteen (18) international patents have been filed in this field: USA, Japan, Korea, and Europe. Prof. Gamiz coordinated the H2020 European project REMINDER with a budget of € 4.5M and 9 partners from Europe and Korea. In 2018, a research contract is signed with Prof. Yong Tae Kim of the Korea Institute of Science and Technology, and a framework research agreement with National Chiao Tung University (NCTU) of Taiwan (Prof. Edward Chang). Prof.Gamiz is also advisor of the H2020 Marie Curie Global Fellowship Grants TRAPS2D and GO2NANO, and Horizonte Europe CONCEPT2D. Since November, 2021 Prof. Gamiz is Head of the Research Center for Information and Communication Technologies, CITIC-UGR. Prof. Gamiz is member of the Academia de Ciencias Matemáticas, Fisico-Quimicas y Naturales de Granada.

Part C. RELEVANT MERITS

C.1. Publications

1.-Journal. Martínez, A., Márquez, C., Lorenzo, F., Gutiérrez, F., Caño-García, M., Ávila, J., ... & Gámiz, F. (2025). Wafer-Scale Demonstration of BEOL-Compatible Ambipolar MoS2 Devices Enabled by Plasma-Enhanced Atomic Layer Deposition. ACS Applied Materials & Interfaces.

2.- Journal. Marquez, C., Gity, F., Galdon, J. C., Martinez, A., Salazar, N., Ansari, L., ... & Gamiz, F. (2025). On the Enhanced p-Type Performance of Back-Gated WS2 Devices. Advanced Electronic Materials, 2500079**.**

3.- Journal. Lozano-Chamizo, L., Márquez, C., Marciello, M., Galdon, J. C., de la Fuente-Zapico, E., Martinez-Mazón, P., ... & Gamiz, F. (2024). High enhancement of sensitivity and reproducibility in label-free SARS-CoV-2 detection with graphene field-effect transistor sensors through precise surface biofunctionalization control. Biosensors and Bioelectronics, 250, 116040.

4.- Journal. Marquez, C., Navarro,C., Karg,S., Ortega, R., Zota, C., Gamiz, F., “Low-Frequency Noise in InGaAs-OI Transistors ” (2024) IEEE Transactions on Electron Devices, 71 (6), 3964-3969 DOI: 10.1109/TED.2024.3392180

5.- Journal. Navarro, C., Karg, S., Marquez, C., Navarro, S., Convertino, C., Zota, C., Czornomas, L. Gamiz, F. (2019). Capacitor-less dynamic random access memory based on a III–V transistor with a gate length of 14 nm. Nature Electronics, 2(9), 412-419. DOI:10.1038/s41928-019-0282-6

6.- Journal. Marquez, C., Salazar,N., Gity, F., Navarro, C., Mirabelli, G., Galdon,J.C., Duffy, R., Navarro,S., Hurley, P.K., Gamiz, F., "Investigating the transient response of Schottky barrier backgated MoS2 transistors," in 2D Materials, Institute of Physics, 2020. DOI: 10.1088/2053-1583/ab7628.

7.- Journal. Marquez, C., Navarro, C., Navarro, S., Padilla, J. L., Donetti, L., Sampedro, C., Galy, P., Kim, Y.T., & Gamiz, F. (2019). On the Low-Frequency Noise Characterization of Z2-FET Devices. IEEE Access, 7, 42551-42556, 2019 DOI:10.1109/ACCESS.2019.2907062

8.- Journal. Navarro, S., Navarro, C., Marquez, C., Salazar, N., Galy, P., Cristoloveanu, S., & Gamiz, F. (2019). Reliability Study of Thin-Oxide Zero-Ionization, Zero- Swing FET 1T-DRAM Memory Cell. IEEE Electron Device Letters, vol.40 pp 1084-1087. July 2019 DOI:10.1109/LED.2019.2915118.

9.- Journal. Medina-Bailon,C., Padilla,J.L., Sampedro,C., Godoy,A., Donetti,L., and Gamiz,F., "Source-to-Drain Tunneling Analysis in FDSOI, DGSOI, and FinFET Devices by Means of Multisubband Ensemble Monte Carlo," in IEEE Transactions on Electron Devices, vol. 65, no. 11, pp. 4740-4746, (2018) DOI: 10.1109/TED.2018.2867721

10.- Journal. Padilla,J.L., Medina-Bailón,C., Márquez,C., Sampedro,C., Donetti,L., Gámiz,F., and Ionescu,A.M., "Gate Leakage Tunneling Impact on the InAs/GaSb Heterojunction Electron–Hole Bilayer Tunneling Field-Effect Transistor," in IEEE Transactions on Electron Devices, vol. 65, no. 10, pp. 4679-4686, Oct. 2018. DOI:10.1109/TED.2018.2866123

C.2. Conferences

1.- C. Medina-Bailon, C. Sampedro et al., "Efficient Implementation of S/D tunneling in 2D MS-EMC of Nanoelectronic Devices Including the Thickness Dependent Effective Mass," 2020 Joint International EUROSOI Workshop and International Conference on Ultimate Integration on Silicon, 2020, pp. 1-4, doi: 10.1109/EUROSOI-ULIS49407.2020.9365606.

2.- L. Donetti, C. Sampedro, F. G. Ruiz, A. Godoy and F. Gamiz, "3D multi-subband ensemble Monte Carlo simulation of 〈100〉 and 〈110〉 Si nanowire FETs," 2018 Joint International EUROSOI Workshop and International Conference on Ultimate Integration on Silicon (EUROSOI-ULIS), 2018, pp. 1-4, doi: 10.1109/ULIS.2018.8354724.

3.- C. Medina-Bailon et al., "Impact of Strain on S/D tunneling in FinFETs: a MS-EMC study," 2018 International Conference on Simulation of Semiconductor Processes and Devices (SISPAD), 2018, pp. 301-304, doi: 10.1109/SISPAD.2018.8551707.

4.- C. Medina-Bailon et al., "Multi-subband ensemble Monte Carlo study of tunneling leakage mechanisms," 2017 International Conference on Simulation of Semiconductor Processes and Devices (SISPAD), 2017, pp. 281-284, doi: 10.23919/SISPAD.2017.8085319.

5.- C. Medina-Bailon, C. Sampedro, J. L. Padilla, F. Gamiz, A. Godoy and L. Donetti, "Multi-subband ensemble Monte Carlo study of band-to-band tunneling in silicon-based TFETs," 2016 International Conference on Simulation of Semiconductor Processes and Devices (SISPAD), 2016, pp. 253-256, doi: 10.1109/SISPAD.2016.7605195.

C.3. Research projects

1 Title: +QCHIP “ TRANSFORMANDO LA INDUSTRIA DE SEMICONDUCTORESA TRAVÉS DE LA INTEGRACIÓN MONOLÍTICADE CIRCUITOS CMOS Y TECNOLOGÍAS INNOVADORAS **“ Catedra PERTE-CHIP TSI-069100-2023-0003 Principal researcher:** Francisco J.Gamiz Perez **Starting date**: 01/09/2023 **Total Funding**: 1.218.333 €

2 Title: EPoCA - Empowering Africa's Point of Care with Cutting-edge Graphene Biosensing for Rapid Detection and Interconnected Surveillance of Novel Ebola Virus Outbreaks **HE-HORIZON-JU-GH-EDCTP3-2023-01 Starting date: 01/07/2024, Principal researcher:** Francisco J.Gamiz Perez **Funding:** 561.875,00 €

3 Title: EU-FAMES “ TOWARDS ENERGY-SAVING CHIPS FOR DIGITAL, ANALOG AND RF “ Pilot line Chip JU **Starting date: 01/07/2024, Principal researcher:** Francisco J.Gamiz Perez **Funding:** 1.000.000,00 €

4 Title: 2d Semiconductor-Based Biosensors For The Early Diagnosis And Monitoring Of Malignant Melanoma. **Principal researcher:** FRANCISCO J GAMIZ PEREZ **Code:** PY18-4826; **Funding program:** Ayudas a proyectos de I+D+I Programa Operativo FEDER 2014-2020 **Starting Date:** 01/01/2020 **Total Funding:** 116.000 €

5 Title: Fabricacion, caracterizacion y modelado de dispositivos electrónicos basados en materiales bidimensionales multicapa. **Funding program:** Ministerio de Economía y Competitividad. Programa Retos. Plan Nacional. **Code:** TEC2017-89800-R **Starting Date:** 01/01/2018 **Duration:** 3 años **Total Funding:** 175.450€

6 Title: Revolutionary Embedded Memory for Internet of Things Devices and Energy Reduction **Funding program:** EU-Commission **Code:** H2020-687931 **Starting Date**: 01/01/2016 **Duration:** 1095 days **Total Funding:** 4.543.793,75 €

7 Title: Which Architecture Yields Two Other Generations Of Fully depleted Advanced Substrate & Technologies (WAYTOGO FAST) **Principal researcher**: F. GAMIZ **Funding Program:** EU-Commission **Code:** H2020-ECSEL-2014-2-662175 **Starting Date:** 01/05/2015 **Duration:** 730 days **Funding:** 120.000 €

C.4. Contracts, technological or transfer merits

1.- Contract Title: Estudio prospectivo de displays electroforéticos. Torre-Vega, Angel De La (Universidad de Granada). 2015-2016. 6050 €.

2.- Contract Title: Development of capacitorless 1T DRAM. Gamiz, Francisco. (Korea Institute of Science and Technology) 2018. 22968 €

3.- Patent Title: Point mémoire RAM à un transistor **Patent number:** FR2011-58942 / WO2013-50707**Date:** 04/10/11 **Country:** USA, Korea, Japón, Unión Europea **Inventors:** Rodríguez-Santiago, Noel; Gamiz-Perez, Francisco J; Cristolovenau, Sorin

4. Patent Title: A2-RAM: capacitorless memory device with junction separated double body transistor**Patent number:** FR1052612/ US2013-148441 **Date:** 07/10/10 **Country:** USA, Korea, Japón, Unión Europea **Inventors:** Rodríguez, Noel; Cristoloveanu-, Sorin; Gamiz, Francisco J

5. Patent Title: POINT MÉMOIRE RAM À UN TRANSISTOR **Patent number:** FR0952452/ US2012-113730 **Date:** 15/04/09 **Country:** USA, Korea, Japón, Unión Europea **Inventors:** Rodríguez-Santiago, Noel; Cristoloveanu-, Sorin; Gamiz-Perez, Francisco J

6. Title: Procedimiento De Detección De Radiación Y Partículas Empleando Un Diodo Semiconductor Por Modulación De Bandas De Energía

Patent number: ES2 770 473 **Date:** 30/12/2018 **Country:** España; **Inventors:** Navarro, C., Gamiz, F., Marquez, C., Navarro, S., Sampedro, C.

C.5 Organization of International Conferences

1. Miembro del comité técnico de programa (TPC) del ESSDERC (European Solid-State Device Research Conference) (2004-2012)

2. Head of Steering Committee del EUROSOI workshop (2005-2014)

3. Head of the Organizing Committee ESSDERC-2010 (Sevilla, Septiembre, 2010)

4. Head of the Organizing Committee del EUROSOI-2005 (Granada, Enero-2005), EUROSOI-2011 (Granada, Enero 2011), and EUROSOI-2018

5. Head of the Organizing Committee SISPAD-2022 (Granada, Septiembre, 2022)

6. Member of the Steering Committee del Silicon-on-Insulator Symposium Electrochemical Society (USA) (2001-2015)

7. Member of the Technical Program Committee INFOS (2013-2017)

8. Member TPC International Symposium on VLSI Technology, Systems and Applications (Taiwan) (2011-2017)

C.6 Reviewer for International Journals indexed included in the JCR

1. **Reviewer SCI**: IEEE Transactions on Electron Devices; IEEE Electron Device Letters; Solid State Electronics; AIP Journal of Applied Physics, AIP Applied Physics Letters, Elsevier Microelectronics Engineering, Journal of Low-Power Electronics
2. **Reviewer Funding Agencies**: European Science Foundation, Swiss National Science Agency, ANEP (España), MICINN (España), MINECO(España), Technology Foundation STW (Holanda), Agency for Science, Technology and Research of Singapore.
3. **Head of Laboratory of Nanoelectrónica** de la U. de Granada (2008-2020).
4. **Member Governing Board** of SINANO Institute (European Institute for Nanoelectronics).
5. **Member Expert Panel:** IEEE International Roadmap for Devices and Systems.

6.-**Member** Circulo Mentor para la Investigación del Consejo Social de la UGR.

C.7. Awards

1.- **Award**: Premio del Consejo Social de la Universidad de Granada a los Grupos de Investigación de la Universidad de Granada que se distingan en contratar investigación

2.- **Award:** Premio del Consejo Social de la Universidad de Granada a la trayectoria de jóvenes investigadores-2003 Entidad: CONSEJO SOCIAL UNIVERSIDAD DE GRANADA

3.- **Award:** Premio “Universidad de Granada –Caja Rural de Granada a Investigadores con alta I+D+i” Edición 2016

4.- **Member of Academia** de Ciencias Matemáticas, Fisico-Químicas y Naturales de Granada.

5.- **Award:** Premio del Consejo Social de la Universidad de Granada a Proyectos de Transferencia en el Ambito de la Salud (2020).