

Electrónica y Tecnología de Computadores

Áreas de conocimiento: Electrónica, Tecnología Electrónica

Director: Juan Antonio López Villanueva

Secretario: Luis Parrilla Roure

Página web: <http://electronica.ugr.es>

Profesorado: CU: 9, PTU: 13, PDI Contratado y Otros: 26.

Grupos de Investigación.

TIC127 DITEC - TECNICAS DIGITALES

- Responsable: LUIS PARRILLA ROURE

TIC105 GRUPO DE INVESTIGACION EN DISPOSITIVOS ELECTRONICOS

- Responsable: JUAN ENRIQUE CARCELLER BELTRAN

TIC216 GRUPO DE INVESTIGACIÓN EN NANOELECTRÓNICA

- Responsable: FRANCISCO J GAMIZ PEREZ

FQM381 Nanoestructuras, propiedades cuánticas y aplicaciones tecnológicas

- Responsable: JUAN B. ROLDAN ARANDA

TIC250 Pervasive Electronics Advanced Research Laboratory

- Responsable: NOEL RODRÍGUEZ SANTIAGO

Dirección y participación en Proyectos I+D

- 2017 Desarrollo del subsistema de potencia para CubeSats y NanoSatélites, , 01/01/2017-31/12/2018

Investigador/a FRANCISCO JIMENEZ MOLINOS

Investigador/a JUAN B. ROLDAN ARANDA

Responsable ANDRÉS MARÍA ROLDÁN ARANDA

- 2017 IMPLEMENTATION OF A NOVEL PLATFORM TO MONITOR TUMOUR HETEROGENEITY AS A CRUCIAL

DETERMINANT FOR INDIVIDUALIZED DIAGNOSTIC AND THERAPEUTIC OUTCOME., , 01/01/2017-

31/12/2019

Investigador/a FRANCISCO J GAMIZ PEREZ

- 2017 Plataformas analíticas y microrreactores para seguridad agroalimentaria y sostenibilidad medioambiental, , 01/01/2017-31/12/2019

Investigador/a PABLO ESCOBEDO ARAQUE

Investigador/a MIGUEL ÁNGEL CARVAJAL RODRÍGUEZ

Investigador/a ANTONIO MARTINEZ OLMOS

Responsable ALBERTO JOSE PALMA LOPEZ

- 2017 PSI2016-75086-P: El conductor Nace y se Hace: Percepción de Peligros y Asunción de Riesgos: Influencia

del Entrenamiento, los Estilos de Conducción y el Clima Familiar en la Conducción, , 15/01/2017-15/01/2020

Responsable PEDRO GARCÍA FERNÁNDEZ

Publicaciones en revistas

- 2018 Artículo: Asymmetric enhanced surface interdigitated electrode capacitor with two out-of-plane electrodes, Sensors and Actuators B: Chemical, 254, , 588-596

ALBERTO JOSE PALMA LOPEZ

ALMUDENA RIVADENEYRA TORRES

JOSÉ FERNÁNDEZ SALMERÓN

JUAN ANTONIO LOPEZ VILLANUEVA

- 2018 Review: Device Physics of Hybrid Perovskite Solar cells: Theory and Experiment, Advanced Energy

Materials (Online), , , 1702772-1-1702772-36

JUAN ANTONIO JIMENEZ TEJADA

- 2018 Artículo: Unified compact ECC-AES co-processor with Group-Key support for IoT devices in Wireless

Sensor Networks, Sensors, 18, 1, 251-

ANTONIO GARCÍA RÍOS

DIEGO PEDRO MORALES SANTOS

ENCARNACIÓN CASTILLO MORALES

LUIS PARRILLA ROURE

- 2018 Artículo: MULTIVARIATE ANALYSIS AND EXTRACTION OF PARAMETERS IN RESISTIVE RAMS USING THE

QUANTUM POINT CONTACT MODEL, Journal of Applied Physics, 123, 014501, -

FRANCISCO JIMENEZ MOLINOS

JUAN B. ROLDAN ARANDA

PEDRO GARCÍA FERNÁNDEZ

- 2018 Artículo: Organic thin film transistors using a liquid crystalline palladium phthalocyanine as active layer,

Journal of Applied Physics, 123, , 115501-1-115501-10

JUAN ANTONIO JIMENEZ TEJADA

- 2018 Artículo: Elliptic Curve Cryptography hardware accelerator for high-performance secure servers, Journal of Supercomputing, , , 1-16
ANTONIO GARCÍA RÍOS
DIEGO PEDRO MORALES SANTOS
ENCARNACIÓN CASTILLO MORALES
LUIS PARRILLA ROURE
- 2018 Artículo: Design guidelines of laser reduced graphene oxide conformal thermistor for IoT applications, Sensors and Actuators A: Physical, 274, , 148-154
ALMUDENA RIVADENEYRA TORRES
DIEGO PEDRO MORALES SANTOS
ENCARNACIÓN CASTILLO MORALES
FRANCISCO J. ROMERO MALDONADO
FRANCISCO JAVIER GARCÍA RUIZ
NOEL RODRÍGUEZ SANTIAGO
- 2018 Artículo: Non-invasive oxygen determination in intelligent packaging using a Smartphone, IEEE Sensors Journal, 18, 11, 4351-4357
ANTONIO MARTINEZ OLMOS
MIGUEL ÁNGEL CARVAJAL RODRÍGUEZ
PABLO ESCOBEDO ARAQUE
- 2017 Artículo: Effects of the extension of conductive filaments, a simulation approach, Journal of Vacuum Science and Technology. Part B. Microelectronics and Nanometer Structures, 35, 1, 01A105-
FRANCISCO JIMENEZ MOLINOS
JUAN B. ROLDAN ARANDA
PEDRO GARCÍA FERNÁNDEZ
- 2017 Artículo: In-depth study of the physics behind resistive switching in TiN/Ti/HfO₂/W structures, Journal of Vacuum Science and Technology. Part B. Microelectronics and Nanometer Structures, 35, 1, 01A110-1-01A110-5
FRANCISCO JIMENEZ MOLINOS
GERARDO GONZÁLEZ CORDERO
JUAN B. ROLDAN ARANDA
- 2017 Artículo: A new area-efficient BCD-digit multiplier, Digital Signal Processing, 62, 1, 1-10
ANTONIO GARCÍA RÍOS
ANTONIO LLORIS RUIZ
DIEGO PEDRO MORALES SANTOS
ENCARNACIÓN CASTILLO MORALES
LUIS PARRILLA ROURE
- 2017 Artículo: Systematic Method for Electrical Characterization of Random Telegraph Noise in MOSFETs, Solid-State Electronics, 128, 1, 115-120
FRANCISCO J GAMIZ PEREZ
NOEL RODRÍGUEZ SANTIAGO
- 2017 Artículo: Flexible Passive near Field Communication Tag for Multigas Sensing, Analytical Chemistry, 89, , 1697-1703
ALBERTO JOSE PALMA LOPEZ
ANTONIO MARTINEZ OLMOS
MIGUEL ÁNGEL CARVAJAL RODRÍGUEZ
PABLO ESCOBEDO ARAQUE
- 2017 Artículo: Polynomial pattern finding in scattered data, Journal of Computational and Applied Mathematics, 318, , 107-116
ANDRÉS MARÍA ROLDÁN ARANDA
JUAN B. ROLDAN ARANDA
- 2017 Artículo: Confinement Orientation Effects in S/D Tunneling, Solid-State Electronics, 128, , 48-53
ANDRES GODOY MEDINA
CARLOS SAMPEDRO MATARÍN
FRANCISCO J GAMIZ PEREZ
LUCA DONETTI
- 2017 Artículo: Further on 'Broadband electronically tunable reflection-based phase shifter for active-steering microwave reflectarray systems in Ku-Band': prototype validation, Journal of Electromagnetic Waves and Applications, 31, 4, 427-432
JOSÉ LUIS PADILLA DE LA TORRE
- 2017 Artículo: 16S rRNA gene-based characterization of bacteria potentially associated with phosphate and carbonate precipitation from a granular autotrophic nitrogen removal bioreactor, Applied Microbiology and Biotechnology, 101, , 817-829
ALMUDENA RIVADENEYRA TORRES

- 2017 Artículo: A physically based model for resistive memories including a detailed temperature and variability description, *Microelectronic Engineering*, 178, , 26-29
FRANCISCO JIMENEZ MOLINOS
GERARDO GONZÁLEZ CORDERO
JUAN B. ROLDAN ARANDA
- 2017 Artículo: Compact Modeling of Organic Thin-Film Transistors with Solution Processed Octadecyl Substituted Tetrabenzotriazaporphyrin as an Active Layer, *IEEE Transactions on Electron Devices*, 64, 6, 2629-2634
JUAN ANTONIO JIMENEZ TEJADA
- 2017 Artículo: Electromagnetic near field inhomogeneity reduction for image acquisition optimization in high resolution multi-channel magnetic resonance imaging (MRI) systems, *IEEE Access*, 5, -, 5149-5157
JOSÉ LUIS PADILLA DE LA TORRE
- 2017 Artículo: Are Situation Awareness and Decision-Making in driving totally conscious processes?, *Transportation Research. Part F: Traffic Psychology and Behaviour*, 44, , 168-179
PEDRO GARCÍA FERNÁNDEZ
- 2017 Artículo: Human neuro-activity for securing Body Area Networks: application to People-centric, Internet of Things, *IEEE Communications Magazine*, 55, 2, 62-67
JOSÉ LUIS PADILLA DE LA TORRE
- 2017 Artículo: Implementation of Band-to-Band Tunneling Phenomena in a Multi-Subband Ensemble Monte Carlo Simulator: Application to Silicon TFETs, *IEEE Transactions on Electron Devices*, , , -
FRANCISCO J GAMIZ PEREZ
JOSÉ LUIS PADILLA DE LA TORRE
- 2017 Artículo: Boundary condition model for the simulation of organic solar cells, *Organic electronics*, 48, , 85-95
JUAN ANTONIO JIMENEZ TEJADA
JUAN ENRIQUE CARCELLER BELTRAN
- 2017 Artículo: Effects of Ion Distributions on Charge Collection in Perovskite Solar Cells, *ACS Energy Letters*, 2, , 1450-1453
JUAN ANTONIO JIMENEZ TEJADA
- 2017 Artículo: Entropy analysis for damage quantification of hysteretic dampers used as seismic protection of buildings, *Applied Sciences*, 7, 6, 628-642
ANDRÉS MARÍA ROLDÁN ARANDA
- 2017 Artículo: Implementation of Band-to-Band Tunneling Phenomena in Multi-Subband-Ensemble Monte Carlo simulator: Application to Silicon TFETs, *IEEE Transactions on Electron Devices*, 64, 8, 3084-3091
CARLOS SAMPEDRO MATARÍN
FRANCISCO J GAMIZ PEREZ
JOSÉ LUIS PADILLA DE LA TORRE
- 2017 Artículo: Wavelet energy ratio index for health monitoring of hysteretic dampers, *Structural Control and Health Monitoring*, , , -
ANDRÉS MARÍA ROLDÁN ARANDA
- 2017 Artículo: Strategy for required data reduction in the practical implementation in a low-cost electronic platform of an index for damage assessment of seismic dampers, *Measurement: Journal of the International Measurement Confederation*, , , 1-8
ANDRÉS MARÍA ROLDÁN ARANDA
- 2017 Artículo: Characterization of an Interdigitated Capacitive Structure With Branches for Relative Humidity Sensing, *IEEE Sensors Letters*, 1, 5, 1500404-
ALBERTO JOSE PALMA LOPEZ
ALMUDENA RIVADENEYRA TORRES
JOSÉ FERNÁNDEZ SALMERÓN
- 2017 Artículo: Comparison of Fabrication Techniques for Flexible UHF RFID Tag Antennas, *IEEE Antennas and Propagation Magazine*, , Octubre, 159-168
ALBERTO JOSE PALMA LOPEZ
ALMUDENA RIVADENEYRA TORRES
JOSÉ FERNÁNDEZ SALMERÓN
- 2017 Artículo: A compact dosimetric system for MOSFETs based on passive NFC tag and smartphone, *Sensors and Actuators A: Physical*, 267, , 82-89
ALBERTO JOSE PALMA LOPEZ
ANTONIO MARTINEZ OLMOS
FERNANDO MARTÍNEZ MARTÍ
MIGUEL ÁNGEL CARVAJAL RODRÍGUEZ
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- 2017 Artículo: Extended Analysis of the Z2FET: operation as capacitorless eDRAM, *IEEE Transactions on Electron Devices*, 54, 11, 4486-4491
CARLOS NAVARRO MORAL

- FRANCISCO J GAMIZ PEREZ
NOEL RODRÍGUEZ SANTIAGO
- 2017 Artículo: High Photocurrent in Gated Graphene-Silicon Hybrid Photodiodes, ACS PHOTONICS, 4, 6, 1506-1514
ANDRES GODOY MEDINA
FRANCISCO JAVIER GARCÍA RUIZ
- 2017 Artículo: Identification and Visualization of the Intellectual Structure in Graphene Research, Frontiers in Research Metrics and Analytics, 2, , 1-22
NOEL RODRÍGUEZ SANTIAGO
- 2017 Artículo: Insights on the body charging and noise generation by impact ionization in fully depleted SOI MOSFETs, IEEE Transactions on Electron Devices, 64, 12, 5093-5098
FRANCISCO J GAMIZ PEREZ
NOEL RODRÍGUEZ SANTIAGO
- 2017 Artículo: A Bayesian framework for the inference of gene regulatory networks from time and pseudo-time series data, Bioinformatics, , , btx605-
ISABEL MARIA TIENDA LUNA
- 2017 Artículo: Modeling of Quantum Confinement and Capacitance in III-V Gate-All-Around 1-D Transistors, IEEE Transactions on Electron Devices, 64, 12, 4889-4896
FRANCISCO JAVIER GARCÍA RUIZ
- 2017 Artículo: Electrostatic performance of InSb, GaSb, Si and Ge p-channel nanowires, Journal of Physics D: Applied Physics, 50, 495106, -
ANDRES GODOY MEDINA
FRANCISCO J GAMIZ PEREZ
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- 2017 Artículo: Read range enhancement of a sensing RFID tag by photovoltaic panel, Journal of Sensors, 2017, 7264703, -
JESUS BANQUERI OZAEZ
MIGUEL ÁNGEL CARVAJAL RODRÍGUEZ
- 2017 Artículo: A 3D kinetic Monte Carlo simulation study of resistive switching processes in Ni/HfO₂/Si-n+-based RRAMs, Journal of Physics D: Applied Physics, 50, 33, 3351-
FRANCISCO JIMENEZ MOLINOS
FRANCISCO MANUEL GOMEZ CAMPOS
JUAN B. ROLDAN ARANDA
PEDRO GARCÍA FERNÁNDEZ
- 2017 Artículo: Portable multispectral imaging system based on Raspberry Pi, Sensor Review, 37, 3, 322-329
ANTONIO MARTINEZ OLMOS
MIGUEL ÁNGEL CARVAJAL RODRÍGUEZ

Contribuciones en congresos

- 2017 Comunicación en congreso: Effect of the Metal-Organic Interfaces in Analytical Modeling of Organic Solar Cells, 231st Electrochemical Society Meeting, 28/05/2017, NEW ORLEANS (USA), Congreso
JUAN ANTONIO JIMENEZ TEJADA
- 2017 Poster en Congreso: Effect of anions and cations on the performance of Perovskite Solar Cells, International Conference on Perovskite Thin Film Photovoltaics, 01/03/2017, Valencia (Spain), Congreso
JUAN ANTONIO JIMENEZ TEJADA
- 2017 Comunicación en congreso: Classification Algorithms for Fetal QRS Extraction in Abdominal ECG Signals, 10th International Work-Conference on Bioinformatics and Biomedical Engineering, 26/04/2017, Granada, Congreso
LUIS PARRILLA ROURE
ENCARNACIÓN CASTILLO MORALES
- 2017 Poster en Congreso: Multi-Subband Ensemble Monte Carlo Simulations of scaled GAA MOSFETs, - 2017 Joint International EUROSOI Workshop and International Conference on Ultimate Integration on Silicon, 03/04/2017, ATENAS (GRECIA), Congreso
FRANCISCO J GAMIZ PEREZ
LUCA DONETTI
CARLOS SAMPEDRO MATARÍN
FRANCISCO JAVIER GARCÍA RUIZ
ANDRES GODOY MEDINA
- 2017 Poster en Congreso: Multi-Subband Ensemble Monte Carlo simulations of scaled GAA MOSFETs, - 2017 Joint International EUROSOI Workshop and International Conference on Ultimate Integration on Silicon, 03/04/2017, ATENAS (GRECIA), Congreso
ANDRES GODOY MEDINA
FRANCISCO JAVIER GARCÍA RUIZ



- 2017 Ponencia en Congreso: Assessment of gate leakage mechanism utilizing Multi-Subband Ensemble Monte Carlo,- 2017 Joint International EUROSOI Workshop and International Conference on Ultimate Integration on Silicon, 03/04/2017, ATENAS (GRECIA), Congreso
CARLOS SAMPEDRO MATARÍN
FRANCISCO J GAMIZ PEREZ
ANDRES GODOY MEDINA
LUCA DONETTI
JOSÉ LUIS PADILLA DE LA TORRE
- 2017 Comunicación en congreso: Securing Passwords Beyond Human Capabilities with a Wearable Neuro-Device, 7th. INTERNATIONAL WORK-CONFERENCE on the INTERPLAY between NATURAL and ARTIFICIAL COMPUTATION, 19/06/2017, La Coruña, Spain, Congreso
JOSÉ LUIS PADILLA DE LA TORRE