

**DEPARTAMENTO DE**  
**TECNOLOGIA ELECTRONICA**

## **DEPARTAMENTO DE TECNOLOGIA ELECTRONICA**

### **Actividades de investigación**

#### **Tesis Doctorales**

- Estudio de dispositivos integrados fotónicos para la generación de peines de frecuencia óptica  
*Autores:* CORRAL, F.V.  
*Director/Codirectores:* CARPINTERO DEL, G.  
*Universidad:* UNIVERSIDAD CARLOS III DE MADRID  
*Centro donde se presentó:* CAMPUS DE LEGANES  
*Año:* 2016
- Millimeter-wave and terahertz optical heterodyne photonic integrated circuits for high data rate wireless communications  
*Autores:* PhD Robinson Cruzoe Guzmán Martínez  
*Director/Codirectores:* CARPINTERO DEL, G.  
*Universidad:* UNIVERSIDAD CARLOS III DE MADRID  
*Año:* 2016
- Nueva metodología para el endurecimiento óptimo de sistemas digitales con distribución de la funcionalidad, trabajando en entornos sometidos a la radiación ionizante  
*Autores:* VASKOVA, A.  
*Director/Codirectores:* LOPEZ, C.  
*Universidad:* UNIVERSIDAD CARLOS III DE MADRID  
*Centro donde se presentó:* CAMPUS DE LEGANES  
*Año:* 2016
- On-Chip Mode-Locked Microwave Photonic Integrated Circuits  
*Autores:* GORDON, C.D.  
*Director/Codirectores:* CARPINTERO DEL, G.  
*Universidad:* UNIVERSIDAD CARLOS III DE MADRID  
*Centro donde se presentó:* CAMPUS DE LEGANES  
*Año:* 2016
- Sensores interferométricos de alta sensibilidad para la obtención de imágenes optoacústicas en aplicaciones biomédicas  
*Autores:* GALLEGO CABO, D.  
*Director/Codirectores:* LAMELA, H.  
*Universidad:* UNIVERSIDAD CARLOS III DE MADRID  
*Año:* 2016
- Teledetección de gases mediante imagen hiperespectral por transformada de Fourier en el infrarrojo medio. Una contribución al problema de la cuantificación y la reducción de la dimensionalidad  
*Autores:* RODRIGUEZ, M.A.  
*Director/Codirectores:* MELENDEZ, J. ; SANCHEZ PENA, J.M.  
*Universidad:* UNIVERSIDAD CARLOS III DE MADRID

*Centro donde se presentó:* CAMPUS DE LEGANES  
*Año:* 2016

- Usability in biometric recognition systems  
*Autores:* BLANCO, R.  
*Director/Codirectores:* SANCHEZ, R.; LIU, J.  
*Universidad:* UNIVERSIDAD CARLOS III DE MADRID  
*Año:* 2016
  
- VCSEL-based Optical Frequency Comb Generation, Expansion and Optimization: An experimental study  
*Autores:* PRIOR, E.  
*Director/Codirectores:* DIOS, C.D.  
*Universidad:* UNIVERSIDAD CARLOS III DE MADRID  
*Centro donde se presentó:* CAMPUS DE LEGANES  
*Año:* 2016

## **Publicaciones y actividades de difusión de resultados**

### **Publicaciones en revistas científicas internacionales**

- ALGORRI, J.F.; GARCIA, B.; CUADRADO, A.; SANCHEZ PENA, J.M.; VERGAZ, R.  
Optimized Minimum-Forward Light Scattering by Dielectric Nanopillars, *IEEE Photonics technology letters*, Vol. 28, Núm. 20, 2016, pp. 2160-2163, ESTADOS UNIDOS DE AMERICA.
  
- ALGORRI, J.F.; POUDEREUX, D.; GARCIA, B.; URRUCHI, V.; SANCHEZ PENA, J.M.; VERGAZ, R. ; CAÑO-GARCIA, M.; QUINTANA, X.; GEDAY, M.A.; OTON, J.M.  
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- ALGORRI, J.F.; URRUCHI, V.; GARCIA, B.; SANCHEZ PENA, J.M.  
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Monitoring degradation mechanisms in PTB7:PC71BM photovoltaic cells by means of impedance spectroscopy, *Solar energy materials and solar cells* , Vol. 144, 2016, pp. 422-428, REINO UNIDO.
  
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- DU, B.; SONZA, M.; STERPONE, L.; PARRA, L.I.; PORTELA-GARCIA, M. ; LINDOSO, A. ; ENTRENA, L.A.  
Online test of control flow errors: a new debug interface-based approach, *IEEE Transactions on Computers*, Vol. 65, Núm. 6, 2016, pp. 1846-1855, ESTADOS UNIDOS DE AMERICA.
- FERNANDEZ, M.B.; SANCHEZ, R.; ROS, R.; LIU, J.  
Small fingerprint scanners used in mobile devices: the impact on biometric performance, *IET Biometrics*, Vol. 5, Núm. 1, 2016, pp. 28-36, REINO UNIDO.
- GARCÍA, A.; VERGAZ, R. ; ALGORRI, J.F.; ZITO, G.; CACACE, T.; MARINO, A.; OTON, J.M.; GEDAY, M.A.  
Reorientation of single-wall carbon nanotubes in negative anisotropy liquid crystals by an electric field, *Beilstein Journal of Nanotechnology*, Vol. 7, 2016, pp. 825-833, ALEMANIA.
- GORDON, C.D.; PhD Robinson Cruzoe Guzmán Martínez; CORRAL, V.; LO, M.C.; CARPINTERO DEL, G.  
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## Colaboraciones en obras colectivas

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## Documentos de trabajo

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## **Ponencias y Comunicaciones a congresos**

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## Propiedad Industrial/intelectual

- *Inventores*: ALGORRI, J.F.; URRUCHI, V.; SANCHEZ PENA, J.M.  
Microlente de cristal líquido y matriz de microlentes de cristal líquido  
*Tipo*: PATENTE  
*Titular*: UNIVERSIDAD CARLOS III DE MADRID  
*Número Solicitud*: **P201630757**  
*Fecha Solicitud*: 06/06/2016  
*Países*: ESPAÑA
  
- *Inventores*: CARRERO, J.M.; GONZALEZ, F.J.; RUIZ, M.B.; SANCHEZ PENA, J.M.  
Procedimiento y sistema para medir el tiempo de audiodescripción en flujos de transporte de radio y televisión  
*Tipo*: PATENTE  
*Titular*: UNIVERSIDAD CARLOS III DE MADRID  
*Número Solicitud*: **P201631471**  
*Fecha Solicitud*: 17/11/2016  
*Países*: ESPAÑA
  
- *Inventores*: PERIS, P.; MARTIN, H.; Juan Tapiador; Juan E. Tapiador; Juan M. Estevez-Tapiador; Carmen Camara  
AKARI-1: Generador de números pseudoaleatorios para dispositivos ligeros  
*Tipo*: PROTECCIÓN DE SOFTWARE  
*Titular*: UNIVERSIDAD CARLOS III DE MADRID  
*Número Registro*: **16/2016/3065**  
*Fecha Solicitud*: 12/02/2016  
*Países*: ESPAÑA
  
- *Inventores*: PERIS, P.; MARTIN, H.; Juan Tapiador; Juan E. Tapiador; Juan M. Estevez-Tapiador; Carmen Camara  
AKARI-2: Generador de números pseudoaleatorios para dispositivos ligeros  
*Tipo*: PROTECCIÓN DE SOFTWARE  
*Titular*: UNIVERSIDAD CARLOS III DE MADRID  
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## Actividades de formación y movilidad de personal investigador

### Estancias en otros centros

- ANDRES BARRADO BAUTISTA  
*Título:* SISTEMA DE GESTIÓN DE ENERGÍA PARA COCHE ELÉCTRICO HIBRIDO BASADO EN PILA DE COMBUSTIBLE  
*Centro Externo:* University of Toronto  
*País:* CANADA  
*Duración:* 01/07/2016 a 30/11/2016.
- ANTONIO JOSE SANCHEZ CLEMENTE; LUIS ALFONSO ENTRENA ARRONTES  
*Título:* Estancia de Investigación en el Grupo de Concepção de Circuitos de la UFRGS - Estudio sobre circuitos lógicos aproximados  
*Investigador Externo:* KASTENSMIDT, F.L., ALBANDES, I., TONFAT, J., SANTOS, A.  
*Centro Externo:* Universidade Federal do Río Grande do Sul  
*País:* BRASIL  
*Duración:* 22/08/2016 a 31/12/2016.
- CRISTINA FERNANDEZ HERRERO  
*Título:* High Frequency Magnetics  
*Centro Externo:* Tyndall National Institute  
*País:* IRLANDA  
*Duración:* 30/05/2016 a 01/08/2016.
- HONORIO MARTIN GONZALEZ  
*Título:* Self Repairable TRNG  
*Centro Externo:* CNRS LIRMM  
*País:* FRANCIA  
*Duración:* 01/06/2016 a 31/08/2016.
- PEDRO MARTIN MATEOS  
*Título:* Trabajos investigación bajo la supervisión del Prof. Bernhard Lendl  
*Centro Externo:* INSTITUTE OF CHEMICAL TECHNOLOGIES AND ANALYTCS- TU VIENNA  
*País:* AUSTRIA  
*Duración:* 01/06/2016 a 31/08/2016.
- PLINIO JESUS PINZON CASTILLO  
*Título:* Implementación una Unidad de Interrogación de Sensores FBG utilizando un Interferómetro Mach-Zehnder de Doble recorrido.  
*Centro Externo:* Aston Institute of Photonic Technologies  
*País:* REINO UNIDO  
*Duración:* 01/06/2016 a 31/08/2016.