

**DEPARTAMENTO DE TEORIA**  
**DE LA SEÑAL Y COMUNIC.**

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COMUNIC.**

**Áreas de conocimiento:**

- TEORIA DE LA SEÑAL Y COMUNICACIONES

## **ÁREA DE CONOCIMIENTO: TEORIA DE LA SEÑAL Y COMUNICACIONES**

### **Actividades de investigación**

#### **Tesis Doctorales**

- Innovative Electromagnetic Designs Making Use of Periodic Structures and Advanced Optimization Tools  
*Autores:* QUEVEDO, O.  
*Director:* RAJO, E.  
*Año:* 2010
- Metamaterial-Loaded Printed Antennas: Design and Applications  
*Autores:* HERRAIZ, F.J.  
*Director:* SEGOVIA, D.  
*Año:* 2010
- Optimización de Energía y Eficiencia de Transmisión con Análisis de Imparcialidad para Comunicaciones Inalámbricas Adaptativas  
*Autores:* ESCUDERO, J. J.  
*Director:* GARCIA-ARMADA, A.  
*Año:* 2010
- Sparse Gaussian Processes for Large-Scale Machine Learning  
*Autores:* LAZARO, M.  
*Director:* FIGUEIRAS-VIDAL, A. R.  
*Año:* 2010
- Ultra-Wideband Pashed Array antennas for Low-Frequency Radio Astronomy  
*Autores:* LERA, E.D.  
*Director:* GARCIA, L. E. ; DUFFETT-SMITH, M.  
*Año:* 2010

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

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

- ARTES, A. ; AGUADO, D.; DELGADO, D.; SUKNO, F.; SANTA CRUZ, C.  
Individual Identification using Personality Traits , *Journal of Network and Computer Applications*, Vol. 33, 2010, pp. 293-299, ESTADOS UNIDOS DE AMERICA.

- BACA, E.; CEVERINO, A.; PEREZ, M.M.; GRATACOS, M.; BAYES, M.; SANTIAGO, R.; LEIVA, J.M.; PRADO, M. D. ; ARTES, A. ; CEVERINO, A.; DIAZ, C.; FERNANDEZ, P.; FERNANDEZ, J.; DIAZ, M.; DE LEON, J.; BACA, E.; SAIZ, J.; MANN, J.; PARSEY, R.V.; CARRACEDO, A.; ESTIVILL, X.; OQUENDO, M.A.  
Nucleotide Variation in Central Nervous System Genes Among Male Suicide Attempters, *AMERICAN JOURNAL OF MEDICAL GENETICS PART B-NEUROPSYCHIATRIC GENETICS*, Vol. 153, Núm. 1, 2010, pp. 208-213, ESTADOS UNIDOS DE AMERICA.
- BLANCO, C.M.; ARTES, A. ; CARBALLO, J.J.; BACA, E.; PEREZ, M.; JIMENEZ, M.A.; RYNN, M.; SHAFFER, D.; OQUENDO, M.A.  
Stability of childhood anxiety disorder diagnoses: a follow-up naturalistic study in psychiatric care, *EUROPEAN CHILD & ADOLESCENT PSYCHIATRY*, Vol. 19, Núm. 4, 2010, pp. 395-403.
- BYSTROM, M.; RICHARDSON, I.; KANNANGARA, S.; FRUTOS, M.D.  
Dynamic replacement of video coding elements , *SIGNAL PROCESSING-IMAGE COMMUNICATION*, Vol. 25, Núm. 4, 2010, pp. 303-313.
- CORVAJA, R.; GARCIA-ARMADA, A.  
SINR Degradation in MIMO-OFDM Systems with Channel Estimation Errors and Partial Phase Noise Compensation, *IEEE Transactions on Communications*, Vol. 58, Núm. 8, 2010, pp. 2199-2203.
- CRAEYE, C.; ANDRES, B.; GARCIA, L. E. ; SARKIS, R.  
An Open-Source Code for the Calculation of the Effects of Mutual Coupling in Arrays of Wires and for the ASM-MBF Method, *International Journal of Antennas and Propagation*, 2010, EGIPTO.
- DE VICENTE, J. ; DIAZ-DE-MARIA, F.  
Uncertainty decoding on Frequency Filtered parameters for robust ASR, *Speech Communication*, Vol. 52, Núm. 5, 2010, pp. 440-449, HOLANDA.
- DJURIC, P.; MIGUEZ, J.  
Assessment of Nonlinear Dynamic Models by Kolmogorov-Smirnov Statistics, *IEEE Transactions on Signal Processing*, Vol. 58, Núm. 10, 2010, pp. 5069-5079, ESTADOS UNIDOS DE AMERICA.
- DURAN, R.; RICO, R.; GARCIA, L.E.; MARTINEZ, I.; GOMEZ, I.; ACEBRON, J. A.  
Parallelizing a hybrid finite element-boundary integral method for the analysis of scattering and radiation of electromagnetic waves, *FINITE ELEMENTS IN ANALYSIS AND DESIGN*, Vol. 48, Núm. 8, 2010, pp. 645-657.
- EL BAAMRANI, K.; GIL, V.P.; GARCIA-ARMADA, A.; AIT OUAHMAN, A.  
Multi-user Sub-carrier and Power allocation algorithm for OFDM/Offset-QAM, *IEEE Signal Processing Letters*, Vol. 17, Núm. 2, 2010, pp. 161-164, ESTADOS UNIDOS DE AMERICA.
- FEIJOO, J. R. ; ROJO, J. L. ; CID-SUEIRO, J. ; CONDE, P.; MATA-VIGIL, J.L.  
Modeling Link Events in High Reliability Networks With Support Vector Machines, *IEEE TRANSACTIONS ON RELIABILITY*, Vol. 59, Núm. 1, 2010, pp. 191-202, ESTADOS UNIDOS DE AMERICA.
- FRESIA, M.; PEREZ CRUZ, F. ; POOR, H.V.; VERDÚ, S.  
Joint Source and Channel Coding , *IEEE Signal Processing Magazine*, Vol. 27, Núm. 6, 2010, pp. 104-113, ESTADOS UNIDOS DE AMERICA.
- FRUTOS, M.D.; ORELLANA, D.; PUJOL, J.C.; DIAZ-DE-MARIA, F.  
An improved fast mode decision algorithm for intraprediction in H.264/AVC video coding, *SIGNAL PROCESSING-IMAGE COMMUNICATION*, Vol. 25, Núm. 10, 2010, pp. 709-716.

- GALLARDO, A. ; MONTERO, J.M.  
Histogram Equalization-Based Features for Speech, Music and Song Discrimination , *IEEE Signal Processing Letters*, Vol. 17, Núm. 7, 2010, pp. 659-662, ESTADOS UNIDOS DE AMERICA.
- GARCIA, D.; GARCIA, L.E.; GOMEZ, I.  
An interface between an hp-adaptive finite element package and the pre- and post-processor GiD, *FINITE ELEMENTS IN ANALYSIS AND DESIGN*, Vol. 46, Núm. 4, 2010, pp. 328-338.
- GARCIA, L. E. ; GARCIA, O.; SEGOVIA, D. ; GONZALEZ, V.  
Multiple order dual-band active ring filters with composite right/left handed cells , *PROGRESS IN ELECTROMAGNETICS RESEARCH*, Vol. 104, 2010, pp. 201-219.
- GIL, V.P.; FERNANDEZ-GETINO, M. J. ; GARCIA-ARMADA, A.; TORRES, R.; GARCIA, J.J.; SANCHEZ-FERNANDEZ, M. ; DOMINGO, M.; FERNANDEZ, O.  
A MIMO-OFDM Testbed, Channel Measurements, and System Considerations for Outdoor-Indoor WiMAX , *EURASIP Journal on Wireless Communications and Networking*, Vol. 2010, 2010, pp. 1-13, EGIPTO.
- GIL, V.P.; RIBEIRO, C.; GAMEIRO, A.; GARCIA-ARMADA, A.  
Effects of Channel estimation on multi-user Virtual MIMO-OFDMA Relay-based networks , *EURASIP Journal on Wireless Communications and Networking*, 2010, EGIPTO.
- GIL, V.P.; RIBEIRO, C.; SILVA GAMEIRO, A.M.; GARCIA-ARMADA, A.  
Effects of Channel Estimation on Multiuser Virtual MIMO-OFDMA Relay-Based Networks , *EURASIP Journal on Wireless Communications and Networking*, 2010, EGIPTO.
- GOMEZ, V.; ARENAS, J. ; FIGUEIRAS-VIDAL, A. R.  
Committees of Adaboost ensembles with modified emphasis functions, *Neurocomputing (Amsterdam)*, Vol. 73, 2010, pp. 1289-1292, HOLANDA.
- GONZALEZ, V.; JIMENEZ, J.L.; PARRA, A.; GARCIA, L. E. ; SEGOVIA, D.  
Dual-composite right-left-handed transmission lines for the design of compact diplexers, *IET microwaves, antennas & propagation*, Vol. 4, Núm. 8, 2010, pp. 982-990, REINO UNIDO.
- GUERRERO, C.A.; MALANDA, A.; IRIARTE, J.; NAVIA, A.  
New feature extraction approach for epileptic EEG signal detection using time-frequency distributions, *MEDICAL AND BIOLOGICAL ENGINEERING AND COMPUTING*, Vol. 48, Núm. 4, 2010, pp. 321-330, ALEMANIA.
- INCLAN, L. F. D. ; QUEVEDO, O.; RAJO, E.  
Soft Surfaces for Reducing Mutual Coupling Between Loaded PIFA Antennas, *IEEE antennas and wireless propagation letters*, Vol. 9, 2010, pp. 91-94, ESTADOS UNIDOS DE AMERICA.
- JABRANE, Y.; GIL, V.P.; GARCIA-ARMADA, A.; SAID, B.A.E.; OUAHMAN, A.A.  
Reduction of Power Envelope Fluctuations in OFDM Signals by using Neural Networks , *IEEE Communications letters*, Vol. 14, Núm. 7, 2010, pp. 599-601, ESTADOS UNIDOS DE AMERICA.
- KANNANGARA, C.S.; PHILP, J.M.; RICHARDSON, I.E.; BYSTROM, M.; FRUTOS, M.D.  
A Syntax for Defining, Communicating, and Implementing Video Decoder Function and Structure, *IEEE transactions on circuits and systems for video technology*, Vol. 20, Núm. 9, 2010, pp. 1176-1186, ESTADOS UNIDOS DE AMERICA.
- LAZARO, M.; AZPICUETA, L.A.; FIGUEIRAS-VIDAL, A. R. ; ARENAS, J.  
Adaptively Biasing the Weights of Adaptive Filters, *IEEE Transactions on Signal Processing*, Vol. 58, Núm. 7, 2010, pp. 3890-3895, ESTADOS UNIDOS DE AMERICA.

- LAZARO, M.; FIGUEIRAS-VIDAL, A. R.  
Marginalized Neural Network Mixtures for Large-Scale Regression, *IEEE Transactions on Neural Networks*, Vol. 21, Núm. 8, 2010, pp. 1345-1351, ESTADOS UNIDOS DE AMERICA.
- LAZARO, M.; QUIÑONERO, J.; FIGUEIRAS-VIDAL, A. R. ; RASMUSSEN, C.E.  
Sparse Spectrum Gaussian Process Regression , *Journal of Machine Learning Research*, Vol. 11, 2010, pp. 1865-1881, HOLANDA.
- LERA, E.D.; GONZALEZ, V.; VAZQUEZ, J. L. ; MAASKANT, R.; SEGOVIA, D.  
Study and Design of a Differentially-Fed Tapered Slot Antenna Array, *IEEE transactions on antennas and propagation*, Vol. 58, Núm. 1, 2010, pp. 68-78, ESTADOS UNIDOS DE AMERICA.
- MARTINEZ, E.; JIMENEZ, A.; DIAZ-DE-MARIA, F.  
An Adaptive Algorithm for Fast Inter Mode Decision in the H.264/AVC Video Coding Standard, *IEEE Transactions on consumer electronics*, Vol. 56, Núm. 2, 2010, pp. 826-834, ESTADOS UNIDOS DE AMERICA.
- MARTINEZ-RAMÓN, M. ; GALLARDO, A. ; CID-SUEIRO, J. ; HEILEMAN, G.L.; YUNG, K.T.; ZHENG, W.; ZHAO, C.; POSSE, S.  
Automatic Placement of Outer Volume Suppression Slices in MR Spectroscopic Imaging of the Human Brain, *MAGNETIC RESONANCE IN MEDICINE*, Vol. 63, Núm. 3, 2010, pp. 592-600.
- MARTINO, L.; MIGUEZ, J.  
A generalization of the adaptive rejection sampling algorithm , *Statistics and Computing*, 2010, REINO UNIDO.
- MARTINO, L.; MIGUEZ, J.  
Generalized rejection sampling schemes and applications in signal processing, *Signal processing*, Vol. 90, Núm. 11, 2010, pp. 2981-2995, HOLANDA.
- MIGUEZ, J.  
Analysis of a sequential Monte Carlo method for optimization in dynamical systems, *Signal processing*, Vol. 90, Núm. 5, 2010, pp. 1609-1622, HOLANDA.
- NAVIA, A. ; DIAZ, R.  
Fast error estimation for efficient support vector machine growing, *Neurocomputing (Amsterdam)*, Vol. 73, 2010, pp. 1018-1023, HOLANDA.
- NAVIA, A. ; MARTINEZ-RAMÓN, M. ; GARCIA, L. E. ; CHRISTODOULOU, C.G.  
Approximate Kernel Orthogonalization for Antenna Array Processing, *IEEE transactions on antennas and propagation*, Vol. 58, Núm. 12, 2010, pp. 3942-3950, ESTADOS UNIDOS DE AMERICA.
- OLMOS, P.M.; MURILLO, J. J. ; PEREZ CRUZ, F.  
Joint Nonlinear Channel Equalization and Soft LDPC Decoding With Gaussian Processes , *IEEE Transactions on Signal Processing*, Vol. 58, Núm. 3, 2010, pp. 1183-1192, ESTADOS UNIDOS DE AMERICA.
- PELAEZ, C. ; GARCIA, A.I.; VALVERDE, F. J.  
Analyzing phonetic confusions using formal concept analysis, *Journal of the Acoustical Society of America* , Vol. 128, Núm. 3, 2010, pp. 1377-1390, ESTADOS UNIDOS DE AMERICA.
- PEREZ CRUZ, F. ; KULKARNI, S.R.  
Robust and Low Complexity Distributed Kernel Least Squares Learning in Sensor Networks, *IEEE Signal Processing Letters*, Vol. 17, Núm. 4, 2010, pp. 355-358, ESTADOS UNIDOS DE AMERICA.

- PEREZ CRUZ, F. ; RODRIGUES, M.R.D.; VERDÚ, S.  
MIMO Gaussian Channels With Arbitrary Inputs: Optimal Precoding and Power Allocation , *IEEE Transactions on Information Theory*, Vol. 56, Núm. 3, 2010, pp. 1070-1084, ESTADOS UNIDOS DE AMERICA.
- QUEVEDO, O.; PUCCI, E.; RAJO, E.  
Compact Loaded PIFA for Multifrequency Applications , *IEEE transactions on antennas and propagation*, Vol. 58, Núm. 3, 2010, pp. 656-664, ESTADOS UNIDOS DE AMERICA.
- QUEVEDO, O.; SANCHEZ-FERNANDEZ, M. ; PABLO, M.L.; RAJO, E.  
Alternating Radiation Patterns to Overcome Angle-of-Arrival Uncertainty, *IEEE antennas & propagation magazine*, Vol. 52, Núm. 1, 2010, pp. 236-242, ESTADOS UNIDOS DE AMERICA.
- RAJO, E. ; ZAMAN, A.U.; KILDAL, P.S.  
Parallel Plate Cavity Mode Suppression in Microstrip Circuit Packages Using a Lid of Nails, *IEEE microwave and wireless components letters*, Vol. 20, Núm. 1, 2010, pp. 31-33, ESTADOS UNIDOS DE AMERICA.
- SANCHEZ, C.J.; QUEVEDO, O.; REQUENA, J.; INCLAN, L. F. D. ; RAJO, E.  
Dual-band microstrip patch antenna based on short-circuited ring and spiral resonators for implantable medical devices, *IET microwaves, antennas & propagation*, Vol. 4, Núm. 8, 2010, pp. 1048-1055, REINO UNIDO.
- SANZ, S.; AMA, O.D.; FRUTOS, M.D.; DIAZ-DE-MARIA, F.  
Cauchy-Density-Based Basic Unit Layer Rate Controller for H.264/AVC, *IEEE transactions on circuits and systems for video technology*, Vol. 20, Núm. 8, 2010, pp. 1139-1143, ESTADOS UNIDOS DE AMERICA.
- SEOANE, I. ; RODRIGUEZ DE LOS SANTOS, G.; HERNANDEZ, J.A.; URUEÑA, M. ; ROMERAL, R. ; CUEVAS, A.; LARRABEITI, D.  
Analysis of delay mean and variance of collision-free WDM rings with segment recirculation of blocked traffic, *Photonic network communications*, 2010, ESTADOS UNIDOS DE AMERICA.
- VALVERDE, F. J. ; PELAEZ, C.  
Two information-theoretic tools to assess the performance of multi-class classifiers, *Pattern Recognition Letters*, Vol. 31, Núm. 12, 2010, pp. 1665-1671, REINO UNIDO.

## Libros

- GIL, V.P.; GARCIA ARMADA, A.  
Adaptive Modulation. Orthogonal Frequency Division Multiple Access Fundamentals and Applications. Series: Wireless Networks and Mobile Communications , 2010.

## Colaboraciones en obras colectivas

- OLMOS, P.M.; MURILLO, J. J. ; PEREZ CRUZ, F.  
*Gaussian Processes and its Application to the design of Digital Communication Receivers* , en: Application of Machine Learning, Yagang Zhang, 2010.
- PEREZ CRUZ, F.  
*Gaussian Processes and its Application to the design of Digital Communication Receiver*, en: Machine Learning, pp. 181-206, 2010.

- VALVERDE, F. J. ; PELAEZ, C.  
*Detecting Features from Confusion Matrices Using Generalized Formal Concept Analysis*, en: Hybrid Artificial Intelligence Systems, SPRINGER , ALEMANIA, pp. 375-382, 2010.

## **Ponencias y Comunicaciones a congresos**

- ACHUTEGUI, K.; RODAS, J.; MIGUEZ, J.; ESCUDERO, C.J.  
*A Model-Switching Sequential Monte Carlo Algorithm for Indoor Tracking with Experimental RSS Data*; en: Proceedings of the International Conference on Indoor Positioning and Indoor Navigation, 2010.
- ARENAS, J.  
*Exploiting diversity and specialization in Intelligent Systems via Adaptive Combination*, 2010.
- ARENAS, J. ; AZPICUETA, L.A.; ZELLER, M.; KELLERMANN, W.  
*Efficient Adaptive DFT-Domain Volterra Filters using an automatically controlled number of quadratic kernel diagonals*, 2010.
- ARENAS, J. ; DIAZ-DE-MARIA, F. ; PARRADO, E.; GARCÍA-GARCÍA, D.  
*Music Genre Classification using the temporal structure of songs*, 2010.
- ARENAS, J. ; KELLERMANN, W.; ZELLER, M.; FIGUEIRAS-VIDAL, A. R. ; AZPICUETA, L.A.  
*Least-Squares Adaptation of Affine Combinations of Multiple Adaptive Filters*, 2010.
- ARENAS, J. ; MORIANA, C.; LARSEN, J.  
*Combination of supervised and semi-supervised regression models for improved unbiased estimation*, 2010.
- ARENAS, J. ; NASCIMENTO, V.H.; SILVA, M.T.M.  
*A transient analysis for the convex combination of two adaptive filters with transfer of coefficients*, 2010.
- ARENAS, J. ; SILVA, M.T.M.; NASCIMENTO, V.H.; AZPICUETA, L.A.  
*On the tracking performance of combinations of Least Mean Squares and Recursive Least Squares adaptive filters*, 2010.
- ARENAS, J. ; ZELLER, M.; KELLERMANN, W.; AZPICUETA, L.A.; FIGUEIRAS-VIDAL, A. R.  
*Improved Acoustic Echo Cancellation for low SNR based on blockwise combination of filters*, 2010.
- ARTES, A. ; VIÑUELAS, P.  
*Bayesian Joint Recovery of Correlated Signals in Distributed Compressed Sensing* , ELBA, ITALIA, 2010.
- GALLARDO, A. ; SAN SEGUNDO, R.  
*UPM-UC3M System for Music and Speech Segmentation* , VI Jornadas en Tecnología del Habla and II Iberian SLTech Workshop (FALA 2010), VIGO, ESPAÑA, 2010.
- GARCIA, J.J.; GARCIA-ARMADA, A.  
*PAPR Analysis of Alamouti Space-Time and Space-Frequency Coded Cyclic-Prefixed Single-Carrier Systems*; en: 15th International OFDM Workshop (InOWo'10), 2010.
- GARCIA, L. E. ; GARCIA, O.A.; GONZALEZ, V.; VAZQUEZ, J. L. ; SEGOVIA, D. ; SERNA, J.M.; FINN, T.; LOPEZ, J.A.  
*FIDA3: A novel active array design for the mid-frequency range of the Square Kilometre Array*; 2010.



- GARCÍA-GARCÍA, D.; PARRADO, E. ; DIAZ-DE-MARIA, F.  
*Music Genre Classification using the Temporal Structure of Songs*, IEEE MLSP, Kittilä, FINLANDIA, 2010.
- GONZALEZ, I.; GOMEZ, V.; DIAZ-DE-MARIA, F. ; ARENAS, J.  
*UC3M at TRECVID 2010 Semantic Indexing Task*, Gaithersburg, Maryland, ESTADOS UNIDOS DE AMERICA, 2010.
- HELANDER, E.; SILEN, H.; MIGUEZ, J.; GABOUJ, M.  
*Maximum a Posteriori Voice Conversion Using Sequential Monte Carlo Methods*; en: Proceedings of the 11th Annual Conference of the International Speech Communication Association, 2010.
- HONG, L.; GARCIA, J.J.; GARCIA-ARMADA, A.  
*On the Optimality of Levin-Campello Bit and Power Loading*, 14th International OFDM Workshop (InOw'o'09), Hamburg, ALEMANIA, 2009.
- JABRANE, Y.; GIL, V.P.; GARCIA-ARMADA, A.; ALLAKI, S.; OUAHMAN, A.A.  
*Evaluation of the effects of pilots on the envelope fluctuations reduction based on neural fuzzy systems*, IEEE International Workshop on Signal Processing Advances in Wireless Communications, SPAWC, Marrakech, MARRUECOS, 2010.
- MARTINEZ, I.; SEOANE, I. ; GUERRERO, M. C.  
*Fair Quality of Experience (QoE) measurements related with Networking Technologies*; en: Wired/Wireless Internet Communications, 2010.
- MARTINO, L.; MIGUEZ, J.  
*A Rejection Sampling Scheme for Posterior Probability Distributions via the Ratio-of-Uniforms Method*; en: Proceedings of the 18th European Signal Processing Conference, 2010.
- MARTINO, L.; MIGUEZ, J.  
*Two adaptive rejection sampling methods for sampling a posteriori probability distributions*, World Meeting of the International Society for Bayesian Analysis 2010, BENIDORM, ESPAÑA, 2010.
- MENDAZA, A.; MIGUEL, O.; SANCHEZ-REILLO, R.; VALVERDE, F. J. ; PELAEZ, C.  
*Estudio de un sistema de reconocimiento biométrico mediante firma manuscrita online basado en SVM usando análisis formal de conceptos*; en: Libro de actas de las V jornadas de Reconocimiento Biométrico de Personas, , 2010.
- MIGUEZ, J.; CRISAN, D.; DJURIC, P.M.  
*Particle filters for the optimization of a general class of objective functions* , Workshop on numerical methods for solving the filtering problem and high order methods for solving parabolic PDEs, Londres, REINO UNIDO, 2010.
- MIGUEZ, J.; CRISAN, D.; DJURIC, P.M.  
*Solving a class of global optimization problems by way of Bayesian estimation methods*, World Meeting of the International Society for Bayesian Analysis 2010, BENIDORM, ESPAÑA, 2010.
- MIGUEZ, J.; DJURIC, P.M.; CLOSAS, P.; BUGALLO, M.F.  
*Evaluation of a Method's Robustness* ; en: Proceedings of the IEEE International Conference in Acoustics, Speech and Signal Processing 2010 , 2010.
- OLMOS, P.M.; MURILLO, J. J. ; PEREZ CRUZ, F.  
*Analyzing the Maxwell Decoder for LDPC Codes in Binary Erasure Channels*, Information Theory and Applications (ITA) Workshop, SAN DIEGO, ESTADOS UNIDOS DE AMERICA, 2010.

- OLMOS, P.M.; MURILLO, J. J. ; PEREZ CRUZ, F.  
*Soft LDPC decoding in nonlinear channels with Gaussian processes for classification* , IEEE International Symposium on Information Theory (ISIT), *Austin (TX)*, ESTADOS UNIDOS DE AMERICA, 2010.
- PARRADO, E. ; SHAW, J.; AMBROLADZE, A.  
*Data Dependent Priors in PAC-Bayes Bounds*, 19th International Conference on Computational Statistics, FRANCIA, 2010.
- PEREZ CRUZ, F. ; MARTINEZ, P.; MURILLO, J. J.  
*Tree-Structure Expectation Propagation for Decoding LDPC Codes over Binary Erasure Channels*, IEEE International Symposium on Information Theory (ISIT), *AUSTIN (TEXAS)*, ESTADOS UNIDOS DE AMERICA, 2010.
- PLATA-CHAVES, J.; LAZARO, M.  
*Closed-form error exponent for the Neyman-Pearson fusion of two-dimensional Markov local decisions* ; en: Proceedings of the 18th European Signal Processing Conference (EUSIPCO-2010) , 2010.
- SALAMANCA, L.; MURILLO, J. J. ; PEREZ CRUZ, F.  
*Bayesian BCJR for Channel Equalization and Decoding* ; en: Proceedings of the 2010 IEEE International Workshop on Machine Learning for Signal Processing (MLSP) , IEEE - THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC, 2010.
- SALAMANCA, L.; MURILLO, J. J. ; PEREZ CRUZ, F.  
*Channel Decoding with a Bayesian Equalizer* , IEEE International Symposium on Information Theory (ISIT), *Austin (TX)*, ESTADOS UNIDOS DE AMERICA, 2010.
- SANTOS-RODRIGUEZ, R.; GARCÍA-GARCÍA, D.  
*Cost-Sensitive Feature Selection Based on the Set Covering Machine*, Biological Data Mining and its Applications in Healthcare, International Conference on Data Mining, *Sydney*, AUSTRALIA, 2010.
- SEOANE, I. ; HERNANDEZ, J.A.; ROMERAL, R. ; URUEÑA, M. ; CALLE, E.; MANZANO, M.  
*A CTMC-based characterisation of the propagation of errors in GMPLS Optical Rings*; en: Actas del congreso , 2010.
- TRANBERG HANSEN, M.; ARROYO-VALLES, R.; CID-SUEIRO, J.  
*Testing Selective Transmission with Low Power Listening* ; en: Real World Wireless Sensor Networks, Lecture Notes in Computer Science. , SPRINGER VERLAG, 2010.
- VAZQUEZ, J. L. ; INCLAN, L. F. D. ; QUEVEDO, O.; RAJO, E.  
*Wideband Zero-Mode Circular Patch Antenna*, European Conference on Antennas and Propagation EUCAP 2010, *BARCELONA*, ESPAÑA, 2010.

## **Propiedad Industrial/intelectual**

- *Inventores:* GARCIA-ARMADA, A.; SANCHEZ-FERNANDEZ, M. ; CORVAJA, R.  
*Método de transmisión conjunta*  
*Titular:* UNIVERSIDAD CARLOS III DE MADRID  
*Número Solicitud:* P201031785  
*Fecha Solicitud:* 01/12/2010  
*Países:* ESPAÑA

## **Actividades de formación y movilidad de personal investigador**

### **Estancias en otros centros**

- **DARIO GARCIA GARCIA**  
*Título:* Visita al Dpto. CSML de University College London  
*Centro Externo:* University College London  
*País:* REINO UNIDO  
*Duración:* 01/05/2010 a 15/05/2010.
  
- **DARIO GARCIA GARCIA**  
*Título:* Teoría y aplicaciones de nuevas medidas de divergencia basadas en clasificadores  
*Centro Externo:* Universität Hamburg  
*País:* ALEMANIA  
*Duración:* 21/06/2010 a 29/10/2010.
  
- **EVA RAJO IGLESIAS**  
*Título:* Investigadora invitada en el grupo de antenas de Chalmers  
*Centro Externo:* Chalmers University of Technology  
*País:* SUECIA  
*Duración:* 01/10/2010 a 05/12/2010.
  
- **JOSE LUIS VAZQUEZ ROY**  
*Título:* Estudio sobre radares de formación de imágenes mediante múltiples elementos transmisores y receptores.  
*Centro Externo:* Goethe Universität Frankfurt am Main  
*País:* ALEMANIA  
*Entidad Financiadora:* MINISTERIO DE CIENCIA E INNOVACIÓN  
*Duración:* 01/01/2010 a 31/08/2010.
  
- **MARIA JULIA FERNANDEZ-GETINO GARCIA**  
*Título:* Estimación de canal en sistemas MIMO-OFDM  
*Centro Externo:* Instituto de Telecomunicações  
*País:* PORTUGAL  
*Duración:* 01/07/2010 a 30/09/2010.
  
- **MIGUEL LAZARO GREDILLA**  
*Título:* Regresión a gran escala con procesos Gaussianos multisalida  
*Centro Externo:* Machine Learning & Optimization Group. University of Manchester  
*País:* REINO UNIDO  
*Duración:* 24/05/2010 a 15/08/2010.
  
- **RAUL SANTOS RODRIGUEZ**  
*Título:* Structured Prediction Methods for Chord Transcription  
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