

**PUBLICACIONES DERIVADAS DE LAS TESIS DEFENDIDAS EN EL PROGRAMA DE
DOCTORADO EN TECNOLOGÍAS DE LA INFORMACIÓN Y LAS COMUNICACIONES EN
EL AÑO 2013**

Doctorando	Leopoldo Carro Calvo
Tesis	Development of New Evolutionary Schemes for Clustering-like problems
Directores	Sancho Salcedo Sanz y Antonio Portilla Figueras
Fecha lectura	16/04/2013
Calificación	Sobresaliente cum laude
<ol style="list-style-type: none"> 1. L. Carro-Calvo, S. Salcedo-Sanz, R. Gil-Pita, A. Portilla-Figueras and M. Rosa-Zurera, "An evolutionary multiclass algorithm for automatic classification of high range resolution radar targets," <i>Integrated Computer-Aided Engineering</i>, vol. 16, no. 1, pp. 51-60, 2009. (JCR: 2.042) 2. L. Carro-Calvo, S. Salcedo-Sanz, A. Portilla-Figueras and E. G. Ortiz-García, "A Genetic Algorithm with Switch-Device Encoding for Optimal Partition of Switched Industrial Ethernet Networks," <i>Journal of Network and Computers Applications</i>, vol. 33, pp. 375-382, 2010. (JCR: 1.111) 3. L. Carro-Calvo, S. Salcedo-Sanz, E. G. Ortiz-García and A. Portilla-Figueras, "An incremental-encoding evolutionary algorithm for color reduction in images," <i>Integrated Computer-Aided Engineering</i>, vol. 17, no. 3, pp. 261-269, 2010. (JCR: 2.042) 4. L. Carro-Calvo, S. Salcedo-Sanz, N. Kirchner-Bossi, A. Portilla-Figueras, L. Prieto, R. García-Herrera and E. Hernández-Martín, "Extraction of synoptic pressure patterns for long-term wind speed estimation in wind farms using evolutionary computing," <i>Energy</i>, vol. 36, pp. 1571-1581, 2011. (JCR: 2.952) 5. L. Carro-Calvo, S. Salcedo-Sanz, N. Kirchner-Bossi, L. Prieto, A. Portilla-Figueras and S. Jiménez-Fernández, "Wind speed reconstruction from synoptic pressure patterns using an evolutionary algorithm," <i>Applied Energy</i>, vol. 89, no. 1, pp. 347-354, 2012. (JCR: 3.888) 6. L. Agustín-Blas, S. Salcedo-Sanz, S. Jiménez-Fernández, L. Carro-Calvo, J. del Ser and J. A. Portilla-Figueras, "A new grouping genetic algorithm for clustering problems," <i>Expert Systems with Applications</i>, vol. 39, no. 10, pp. 9695-9703, 2012. (JCR: 2.908) 7. N. Kirchner-Bossi, L. Prieto, R. García Herrera, L. Carro-Calvo and S. Salcedo-Sanz, "Multi-decadal Variability in a Centennial Reconstruction of Daily Wind," <i>Applied Energy</i>, vol. 105, pp. 30-46, 2013. (JCR: 3.888) 8. L. Carro-Calvo, S. Salcedo-Sanz and J. Luterbacher, "Neural Computation in Paleoclimatology: General Methodology and a Case Study," <i>Neurocomputing</i>, vol. 113, pp. 262-268, 2013. (JCR: 1.440) 	

Doctorando	Javier del Ser Lorente
Tesis	Study and Development of Advanced Meta-Heuristic Approaches for Resource Allocation in Intelligent Communication Systems.
Directores	Sancho Salcedo Sanz y Antonio Portilla Figueras
Fecha lectura	15/05/2013
Calificación	Sobresaliente <i>cum laude</i>

1. J. del Ser, N. Bilbao, S. Gil, M. Matinmikko and S. Salcedo-Sanz, "Iterative Power and Subcarrier Allocation in Rate-Constrained Orthogonal Multicarrier Downlink Systems based on Hybrid Harmony Search Heuristics" Engineering Applications of Artificial Intelligence, vol. 24, no. 5, pp. 748-756, 2011. (JCR: 1.444)
2. D. Manjarres, J. Del Ser, S. Gil-López, M. Vechio, I. Landa-Torres, S. Salcedo-Sanz and R. López-Valcarce, "On the design of a novel two-objective harmony search approach for distance- and connectivity-based localization in wireless sensor networks," Engineering Applications of Artificial Intelligence, vol. 26, pp. 669-676, 2013 . (JCR: 1.444)
3. S. Salcedo-Sanz, D. Manjarres, A. Pastor-Sánchez, J. Del Ser and A. Portilla-Figueras, "One-way urban traffic reconfiguration using a multi-objective Harmony Search approach," Expert Systems with Applications, vol. 40, pp. 3341-3350, 2013. (JCR: 2.908)
4. S. Salcedo-Sanz, J. del Ser and Z. W. Geem, "An Island Grouping Genetic Algorithm for Fuzzy Partitioning Problems", The Scientific World Journal, vol. 2014, Article ID 916371, 2014. (JCR: 1.730)
5. S. Salcedo-Sanz, A. Pastor-Sánchez, J. del Ser, L. Prieto and Z. W. Geem, "A Coral Reefs Optimization algorithm with Harmony Search operators for accurate wind speed prediction", Renewable Energy, vol. 75, pp. 93-101, 2015. (JCR: 2.226)
6. L. Cuadra, S. Salcedo-Sanz, J. del Ser, S. Jiménez-Fernández and Z. W. Geem, "A Critical Review of Robustness in Power Grids Using Complex Networks Concepts", Energies, vol. 8, no. 9, pp. 9211-9265 , 2015. (JCR: 2.072)

Doctorando	Sergio Álvarez Pardo
Tesis	Vision-based traffic monitoring system with hierarchical camera calibration
Directores	Miguel Ángel Sotelo y David Fernández Llorca
Fecha lectura	05/2013
Calificación	Sobresaliente <i>cum laude</i>

1. D. F. Llorca, I. G. Daza, S. Álvarez, A. Martínez-Hellín, M. A. Sotelo. **Parking assistance system for leaving perpendicular parking lots: experiments in daytime/nighttime conditions**, IEEE

Intelligent Transportation Systems Magazine (2014).

2. S. Álvarez, D. F. Llorca, M. A. Sotelo. **Hierarchical Camera Auto-calibration for Traffic Surveillance Systems**, Expert Systems with Applications (2013).
3. S. Álvarez, M. A. Sotelo, M. Ocaña, D. F. Llorca, I. Parra, **Perception advances in outdoor vehicle detection for automatic cruise control**, Robotica (2010).
4. D. F. Llorca, M. A. Sotelo, I. Parra, J. E. Naranjo, M. Gavilán, S. Álvarez, **An Experimental study on pitch compensation in pedestrian detection systems for collision avoidance and mitigation**, IEEE Transactions on Intelligent Transportation Systems, Vol. 10, no. 3, 469-474 (2009).

Doctorando	Carlos Alberto Bazán Prieto
Tesis	Compresión de señales electroencefalográficas con sistemas de tasa múltiple y calidad bajo demanda
Directores	Manuel Blanco Velasco y Julián Cárdenas Barrera
Fecha lectura	12/06/2013
Calificación	Sobresaliente cum laude
<ol style="list-style-type: none"> 1. C. Bazán Prieto, Manuel Blanco Velasco, J. Cárdenas Barrera y F. Cruz Roldán, " Retained energy-based coding for EEG signals ", Medical Engineering and Physics, vol. 34, nº 7, pp. 892-899, 2012. (JCR: 1.779) 2. C. Bazán Prieto, Manuel Blanco Velasco, J. Cárdenas Barrera y F. Cruz Roldán, " Analysis of tractable distortion metrics for EEG compression applications", Physiological Measurement, vol. 33, nº 7, pp. 1237-1247, 2012. (JCR: 1.496) 	

Doctorando	Rubén Buendía López
Tesis	Improvements in Bioimpedance Spectroscopy Data Analysis: Artifact Correction, Cole Parameters, and Body Fluid Estimation
Directores	Roberto Gil Pita y Fernando Seoane Martínez
Fecha lectura	4/10/2013
Calificación	Sobresaliente cum laude
<ol style="list-style-type: none"> 1. Rubén Buendía López, Fernando Seoane, Kay Lindecrantz, I Bosaesus, Roberto Gil Pita, G Johannsson, L. Ellegard, LC Ward, "Estimation of body fluids with bioimpedance spectroscopy: state of the art methods and proposal of novel methods", <i>Physiological Measurement</i>, 36, pp. 2171-2187, 2015. JCR: 1,808 (2014 Impact Factor), posición 36 de 76 en Engineering, Biomedical (Q2). 2. Rubén Buendía, F. Seoane, I. Bosaesus, R. Gil-Pita, G. Johannsson, L. Ellegard, K. Lindecrantz, "Robustness study of the different immittance spectra and frequency ranges in bioimpedance 	

spectroscopy analysis for assessment of total body composition”, *Physiological measurement*, 35 (7), pp. 1373-1395, 2014. **JCR: 1,808** (2014 Impact Factor), posición 36 de 76 en Engineering, Biomedical (**Q2**). 5 citas en ResearcherID, 6 citas en Google Scholar.

3. F. Seoane, I. Mohino, J. Ferreira, L. Álvarez, Rubén Buendía, D. Ayllon, C. Llerena, R. Gil-Pita, “Wearable Biomedical Measurement Systems for Assessment of Mental Stress of Combatants in Real Time”, *Sensors*, 14 (4), pp. 7120-7141, 2014. **JCR: 2,245** (2014 Impact Factor), posición 10 de 56 en Instruments and Instrumentation (**Q1**). 14 citas en ResearcherID, 24 citas en Google Scholar.
4. F. Seoane, J. Ferreira, L. Álvarez, Rubén Buendía, D. Ayllon, C. Llerena, R. Gil-Pita, “Sensorized Garments and Tetrode-Enabled Measurement Instrumentation for Ambulatory Assessment of the Autonomic Nervous System Response in the ATREC Project”, *Sensors*, 13 (7), pp. 8997-9015, 2013. **JCR: 2,048** (2013 Impact Factor), posición 10 de 56 en Instruments and Instrumentation (**Q1**). 7 citas en ResearcherID, 13 citas en Google Scholar.
5. Rubén Buendía, Paco Bogónez-Franco, Lexa Nescolarde, Fernando Seoane, “Influence of electrode mismatch on Cole parameter estimation from Total Right Side Electrical Bioimpedance Spectroscopy measurements”. *Medical Engineering & Physics* (Elsevier) 34, pp. 1024–1028, 2012. **JCR: 1,779** (2012 Impact Factor), posición 34 de 79 en Biomedical Engineering (**Q2**), 4 citas en ResearcherID, 7 citas en Google Scholar.
6. Ruben Buendía, Fernando Seoane, Roberto Gil Pita, “Experimental validation of a method for removing the capacitive leakage artefact from electrical bioimpedance spectroscopy measurements”. *Measurements Science and Technology* (IOP Publishing) 21 (2010) 115802 (8pp). **JCR: 1,350** (2010 Impact Factor), Posición 20 de 87 en Engineering Multidisciplinar (**Q1**). 9 citas en ResearcherID, 18 citas en Google Scholar.
7. Ruben Buendía, Roberto Gil Pita, Fernando Seoane, “Cole Parameter Estimation from the Modulus of the Electrical Bioimpedance for Assessment of Body Composition. A Full Spectroscopy Approach”, *Journal of Electrical Bioimpedance*, vol. 2, (2011) pp. 72-78. 1 cita en ResearcherID, 23 citas en Google Scholar.

Doctorando	Juan Eulogio Sánchez García
Tesis	Cost based optimization for strategic mobile radio access network planning using metaheuristics
Directores	Antonio Portilla Figueras y Sancho Salcedo Sanz
Fecha lectura	14/11/2013
Calificación	Sobresaliente cum laude
<ol style="list-style-type: none"> 1. Ahmadzadeh, J. E. Sánchez-García, B. Saavedra-Moreno, A. Portilla-Figueras and S. Salcedo-Sanz, “Capacity estimation algorithm for simultaneous support of multi-class traffic services 	

in mobile WiMAX”, Computer Communications, vol. 35, no. 1, pp. 109-119, 2012. (JCR: 0.815)

2. S. Salcedo-Sanz, J. E. Sánchez-García, J. A. Portilla-Figueras, S. Jimenez-Fernandez and A. M. Ahmadzadeh, "A Coral-Reefs Optimization algorithm for the optimal service distribution problem in mobile radio access networks," Transactions on Emergent Telecommunication Technologies, vol. 25, no. 11, pp. 1057-1069, 2014. (JCR: 1.049)
3. J. E. Sánchez-García, J. A. Portilla-Figueras and S. Salcedo-Sanz, “2G/3G CONNET: An educational software for teaching 2G/3G mobile communications to engineering students,” Computer Applications in Engineering Education, vol.23, no. 1, pp. 1-12, 2015. (JCR: 0.333)

Doctorando	Itziar Landa Torres
Tesis	Grouping Harmony Search: principles, novel adaptations and practical applications
Directores	Sancho Salcedo Sanz y Sergio Gil López
Fecha lectura	19/11/2013
Calificación	Sobresaliente cum laude

1. I. Landa-Torres, S. Salcedo-Sanz, S. Gil-López, J. del Ser-Lorente and J. A. Portilla-Figueras, “A novel grouping Harmony Search algorithm for the multiple-type access node location problem,” Expert Systems with Applications, vol. 39, no. 5, pp. 5262-5270, 2012. (JCR: 2.908)
2. I. Landa-Torres, J. del Ser-Lorente, S. Salcedo-Sanz, S. Gil-López and J. A. Portilla-Figueras, “A comparative study of two hybrid grouping evolutionary techniques for the capacitated p-median problem,” Computers & Operations Research, vol. 39, no. 9, pp. 2214-2222, 2012. (JCR: 2.116)
3. I. Landa-Torres, E. G. Ortiz-García, S. Salcedo-Sanz, M. J. Segovia-Vargas, S. Gil-López, M. Miranda, J. M. Leiva-Murillo and J. Del Ser, “Evaluating the internationalization success of companies through a hybrid grouping Harmony Search - Extreme Learning Machine approach,” IEEE Journal on Selected Topics in Signal Processing, vol. 6, no. 4, pp. 388-397, 2012. (JCR: 2.647)
4. I. Landa-Torres, S. Gil-Lopez, J. Del Ser, S. Salcedo-Sanz, D. Manjarrés and A. Portilla-Figueras, “Efficient citywide planning of open WiFi access networks using novel grouping harmony search heuristics,” Engineering Applications of Artificial Intelligence, vol. 26, 1024-1030, 2013. (JCR: 1.444)
5. I. Landa-Torres, D. Manjarrés, S. Salcedo-Sanz, S. Gil-López and J. Del Ser, “A multi-objective grouping harmony search algorithm for the optimal distribution of 24-hour medical emergency units,” Expert Systems with Applications, vol. 40, pp. 2343-2349, 2013. (JCR: 2.908)

Doctorando	Susel Fernández Melián
Tesis	Contribución a la alineación de ontologías utilizando lógica difusa
Directores	Juan Ramón Velasco Pérez e Iván Marsá Maestre
Fecha lectura	27/11/2013
<p>1. Fernandez, S., Marsa-Maestre, I., Velasco, J. R., & Alarcos, B. (2013). Ontology alignment architecture for semantic sensor web integration. <i>Sensors</i>, 13(9), 12581-12604.</p> <p>2. Fernandez, S., Hadfi, R., Ito, T., Marsa-Maestre, I., & Velasco, J. R. (2016). Ontology-based architecture for intelligent transportation systems using a traffic sensor network. <i>Sensors</i>, 16(8), 1287.</p> <p>3. Fernandez, S., & Ito, T. Semantic Integration of Sensor Data with SSN Ontology in a Multi-Agent Architecture for Intelligent Transportation Systems. <i>IEICE TRANSACTIONS on Information and Systems</i>, 100(12), 2915-2922.</p>	

Doctorando	David Ayllón Álvarez
Tesis	Speech Enhancement Algorithms for Audiological Applications
Directores	Roberto Gil Pita y Manuel Rosa Zurera
Fecha lectura	29/11/2013
Calificación	Sobresaliente cum laude
<p>1. David Ayllón-Álvarez, H. Sanchez-Hevia, R. Gil Pita, M. Utrilla-Manso, M. Rosa-Zurera, "Indoor Blind Localization of Smartphones by means of Sensor Data Fusion", <i>IEEE Transactions on Instrumentation and Measurement</i> vol. 65 no. 4, pp. 783-794, 2016. JCR: 1,808 (2015 Impact Factor), posición 19 de 56 en Instruments & Instrumentation (Q2). 1 citas en Google Scholar,</p> <p>2. R. Gil-Pita, David Ayllón-Álvarez, J. Ranilla, C. Llerena-Aguilar, I. Diaz, "A Computationally Efficient Sound Environment Classifier for Hearing Aids", <i>IEEE Transactions on Biomedical Engineering</i> vol. 62, pp. 2358-2368, 2014. JCR: 2,468 (2015 Impact Factor), posición 22 de 76 en Engineering, Biomedical (Q2). 5 citas en Google Scholar,</p> <p>3. David Ayllón-Álvarez, M. Rosa-Zurera, M. Utrilla-Manso, R. Gil-Pita, "An evolutionary algorithm to optimize the microphone array configuration for speech acquisition in vehicles", <i>Engineering Applications of Artificial Intelligence</i> vol. 34, pp. 37-44, 2014. JCR: 2,207 (2014 Impact Factor), posición 12 de 83 en Engineering, Multidisciplinary (Q1). 2 citas en ResearcherID, 3 cita en Google Scholar,</p> <p>4. David Ayllón, Roberto Gil-Pita, Manuel Rosa Zurera, "Rate-constrained source separation for speech enhancement in wireless-communicated binaural hearing aids", <i>EURASIP Journal on Advances in Signal Processing</i>, vol. 2013:187, 2013. JCR: 0,808 (2013 Impact Factor), posición 164 de 247 en Engineering, Electrical and Electronic (Q3). 6 citas en Google Scholar.</p>	

5. David Ayllón, Roberto Gil-Pita, Manuel Rosa-Zurera, “Design of microphone arrays for hearing aids optimized to unknown subjects”, *Signal Processing*, vol. 93 no.11, pp. 3239-3250, 2013. **JCR: 2,238** (2013 Impact Factor), posición 51 de 247 en Engineering, Electrical and Electronic (**Q1**). 3 citas en Google Scholar.
6. David Ayllón, Roberto Gil-Pita, Pilar Jarabo-Amores, Manuel Rosa-Zurera, “Speech Source Separation using a Generalized Mean Shift algorithm”, *Signal Processing*, vol. 92 no. 9, pp. 2248-2252, 2012. **JCR: 1,851** (2012 Impact Factor), posición 57 de 242 en Engineering, Electrical and Electronic (**Q1**). 1 cita en ResearcherID, 5 citas en Google Scholar.
7. Roberto Gil Pita, L. Cuadra, E. Alexandre, D. Ayllón, L. Álvarez y M. Rosa Zurera, “Enhancing the energy efficiency of wireless-communicated binaural hearing aids for speech separation driven by soft-computing algorithms”, *Applied Soft Computing*, vol. 12 no. 7, pp. 1939-1949, 2012. **JCR: 2,140** (2012 Impact Factor), posición 18 de 99 en Computer Science, Interdisciplinary (**Q1**). 3 citas en ResearcherID, 8 citas en Google Scholar.
8. David Ayllón, Roberto Gil-Pita, Manuel Rosa-Zurera, Ana Padilla, Gema Piñero, Maria de Diego, Miguel Ferrer, Alberto Gonzalez, “Improving speech intelligibility in hearing aids- Part I: Signal processing algorithms”, *Waves*, vol. 6, pp- 61-69, 2014.