

CURRICULUM VITAE

PERSONAL INFORMATION

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Born: Seville, Spain, October 12, 1977

EDUCATION

- November 2004: Ph. D. in Communications Technologies (Signal and Data Processing), University Carlos III of Madrid. Thesis: "New Adaptive Filtering Algorithms via Adaptive Combination and their Applications" (with honors – Extraordinary Ph. D. award). Supervisor: Dr. Aníbal R. Figueiras-Vidal.
- September 2000: Degree in Telecommunication Engineering, Technical University of Madrid, Spain. Ranked number 1 of his promotion (with honors – National degree award).

PROFESSIONAL EXPERIENCE

- Nov 2009 – present: Associate Professor, Dept. Signal Theory and Communications, University Carlos III of Madrid.
- Nov 2007 – Nov 2009: Associate Professor (internship), Dept. Signal Theory and Communications, University Carlos III of Madrid.
- Dec 2006 – Nov 2007: Visiting Professor, Dept. Signal Theory and Communications, University Carlos III of Madrid.
- Dec 2005 – Dec 2006: Guest Postdoc, Dept. Informatics and Mathematical Modelling, Technical University of Denmark. Funded by the Spanish Ministry of Education (postdoc and Fulbright grants program).
- Dec 2004 – Dec 2005: Assistant Professor, Dept. Signal Theory and Communications, University Carlos III of Madrid.
- Apr 2001 – Nov 2004: Research Assistant, Dept. Signal Theory and Communications, University Carlos III of Madrid. Funded by the Spanish Ministry of Education (program for training university personnel).
- Oct 1998 – May 1999: Trainee at Hewlett-Packard, Spain.

RESEARCH INTERESTS

Adaptive Systems, Machine Learning, Multivariate Analysis for Feature Selection, Kernel Methods, Organization, Representation and Analysis of Multimedia Data, Data Mining.

STAYS IN FOREIGN INSTITUTIONS

- Nov 2012 (2 weeks): ITT Kharagpur, India. Stay funded by the bilateral cooperation project PRI-PIBIN-2011-1266 to supervise the project and plan joint works in the line of Adaptive Filtering and Networks for Distributed Estimation.
- 2005 – 2006 (15 months): Guest Postdoc, Dept. Informatics and Mathematical Modelling, Technical University of Denmark. Working in Intelligent Audio Processing for Music Representation and Retrieval.
- 2004 (3 months): Visiting Researcher, Dept. Electrical Engineering, UCLA, CA. Working with Prof. A. H. Sayed in the analysis of algorithms for adaptive combination of adaptive filters
- 2002 (3 months): Visiting Researcher, Dept. Computer Science, University of Sheffield, UK. Working with Dr. A. J. C. Sharkey in the design of novel algorithms for combining Artificial Neural Networks.

TEACHING EXPERIENCE

- Co-supervisor for two completed Ph. D. Theses:
 - “New combination criteria for committees of cooperative deciders”, presented by Vanessa Gómez-Verdejo, 2007.
 - “Applications of Combinations of Adaptive Filters to Room Acoustics”, presented by Luis A. Azpicueta-Ruiz, 2011.
- Supervisor for two on-going Ph. D. Thesis.
- Ph. D. courses: Data Processing (UC3M, 2007, 2008, 2009, 2010, 2011, 2012, 2013), Applications of Data Processing (UC3M, 2008, 2009, 2010, 2011, 2012, 2013), Advanced Digital Signal Processing (DTU, 2007), Seminar on Neural Networks (UC3M, 2005).
- MSc courses: Digital Signal Processing (UC3M, 2007, 2008, 2009), Digital Information Processing (UC3M, 2005, 2007, 2008, 2009, 2010, 2011, 2012, 2013), Linear Systems (UC3M, 2004, 2005, 2008, 2009, 2010, 2011, 2012, 2013), Digital Signal Processing Lab (UC3M, 2004, 2005), Machine Learning for Signal Processing (DTU, 2006).

(UC3M: University Carlos III of Madrid; DTU: Technical University of Denmark)

(Several of the UC3M courses have been coordinated and taught in English language)

PARTICIPATION IN R&D PROJECTS WITH PUBLIC FUNDING

- 2012 – 2014: “Distributed Learning in Energy-Efficient Adaptive Sensor Networks (DILEAS)”. Spanish Ministry of Innovation and Science (105.996 €). Principal Researcher: Dr. Jerónimo Arenas-García.
- 2012 – 2014: “Advanced Adaptive Filtering for Sensor Networks and Sparse Systems Applications”. Spanish Ministry of Innovation and Science (74.800 €). Principal Researcher: Dr. Jerónimo Arenas-García.
- 2011: “Analysis of Multimedia Repositories via Latent Spaces for Representation and Search”. Madrid Community and Universidad Carlos III de Madrid (12.644,24 €). Principal Researcher: Dr. Jerónimo Arenas-García.

- 2009 – 2011: “Advanced Automatic Learning for Signal and Data Processing”. Spanish Ministry of Innovation and Science (CICYT program) (160.930 €). Principal Researcher: Dr. Ángel Navia-Vázquez.
- 2006 – 2009: “Distributed Multimedia Processing”. Community of Madrid Council (187.520,47€). Principal Researcher: Dr. Aníbal R. Figueiras-Vidal.
- 2006 – 2009: Member of the “Pattern Analysis, Statistical Modelling and Computational Learning (PASCAL) Network of Excellence”. European Union. Principal Researcher: Dr. John Shawe-Taylor.
- 2005 – 2006: “Intelligent Sound”. Danish Research Council for Technology and Production Sciences (14 mill DKK). Principal Researcher: Dr. Lars Kai Hansen.
- 2005 – 2008: “New Neural Methods for Signal and Data Processing”. Spanish Ministry of Education and Science (CICYT program) (134.827€). Principal Researcher: Dr. Aníbal R. Figueiras-Vidal.
- 2002 – 2005: “New Algorithms for Efficient Management of Multimedia Contents in Mobile Communication Networks”. Spanish Ministry of Science and Technology (CICYT program) (199.797€). Principal Researcher: Dr. Aníbal R. Figueiras-Vidal.

PARTICIPATION IN R&D CONTRACTS WITH PRIVATE FUNDING

- 2007 – 2010: “Technologies for the Automatic Creation and Management of Intelligent Audiovisual Content”. Funding Agency: CDTI (CENIT program), Spanish Ministry of Science and Innovation (563.880€). Research subcontracted by Alcatel-Lucent, Spain, and MediaPro. Principal Researcher: Dr. Aníbal R. Figueiras-Vidal.
- 2007: “Data Mining Techniques in Communication Networks for the MOLE project”. Ericsson, S.A. (100.000€). Principal Researcher: Aníbal R. Figueiras-Vidal
- 2003 – 2004: “Classification and Clustering techniques applied to fraud detection in Telephony”. Telefónica I+D (22.350€). Principal Reseracher: Aníbal R. Figueiras-Vidal.
- 2000: “Second Phase of the Communication System for the Hearing Impaired Community”. Airtel Móviles Foundation (60.000€). Principal Researcher: Dr. Santiago Aguilera-Navarro.

REVIEWS AND COMMITTEES

- General Co-Chair of the IEEE Intl. Workshop on Machine Learning for Signal Processing, Santander, Spain, 2012.
- From April 2012: Associate Editor, IEEE Signal Processing Letters.
- From 2009: Elected Member of the Machine Learning for Signal Processing Technical Committee of the IEEE Signal Processing Society.
- Reviewer for several international journals: IEEE Trans. on Signal Processing, IEEE Trans. Geoscience and Remote Sensing, IEEE Trans. Image Processing, IEEE. Trans. on Neural Networks, IEEE Trans. on Communications, IEEE Trans. Circuits and Systems I, IEEE Trans. on Instrumentation and Measurements, IEEE Signal Processing Letters, Electronics Letters, Image and Video Processing, Signal Processing, Neurocomputing, EURASIP Research Letters in Signal Processing, EURASIP Journal Advances in Signal Processing, EURASIP Journal of Signal Processing Systems.
- Area Chair at EUSIPCO 2010.

- Special Session co-organizer at the 2010 Asilomar Conf. on Computers, Signals and Systems, and at the 2011 European Signal Processing Conference (EUSIPCO 2011).
- Member of the Program Committee of the IAPR Workshop on Cognitive Information Processing (2008, 2010, and 2012 editions), and of the IEEE Workshop on Mach. Learning for Signal Processing (2009, 2010, 2011, 2012, 2013 editions).
- Session Chairman and Secretary of the Learning'04 Intl. Conference.
- Reviewer for EUSIPCO 2004, 2009-2011, URSI 2006, ICASSP 2007-2013, ICANN 2007, CIP 2008, 2010, MLSP 2009-2013, ICPR 2010, IJCNN 2010.
- External evaluator in the Scientific Research and/or Technological Development Program, Information Technologies Area, Uruguay Ministry of Education and Culture, 2007.
- External evaluator for the Spanish Agency of Projects Evaluation (ANEP) from 2010.

PAPERS IN INTERNATIONAL JOURNALS

- [1] J. Arenas-García, K. B. Petersen, G. Camps-Valls, and L. K. Hansen, "Kernel Multivariate Analysis Framework for Supervised Subspace Learning," *IEEE Signal Process. Magazine*, pp. 16-29, Jul. 2013.
- [2] D. Comminiello, M. Scarpiniti, L. A. Azpicueta-Ruiz, J. Arenas-García, and A. Uncini, "Functional Link Adaptive Filters for Nonlinear Acoustic Echo Cancellation," *IEEE Trans. Audio, Speech, and Lang. Process.*, vol. 21, pp. 1502-1512, Jul. 2013.
- [3] L. A. Azpicueta-Ruiz, M. Zeller, A. R. Figueiras-Vidal, W. Kellermann, and J. Arenas-García, "Enhanced Adaptive Volterra Filtering by Automatic Attenuation of Memory Regions and Its Application to Acoustic Echo Cancellation," *IEEE Trans. Signal Processing*, vol. 61, pp. 2745-2750, Jun. 2013.
- [4] M. T. M. Silva and J. Arenas-García, "A soft-switching blind equalization scheme via convex combination of adaptive filters," *IEEE Trans. Signal Processing*, vol. 61, pp. 1171-1182, Mar. 2013.
- [5] A. Navia Vázquez, J. Arenas-García, "Combination of Recursive Least p-Norm Algorithms for robust Adaptive Filtering in Alpha-Stable Noise," *IEEE Trans. Signal Processing*, vol. 60, pp. 1478-1482, Mar. 2012.
- [6] V. Gómez-Verdejo, M. Martínez-Ramón, J. Arenas-García, M. Lázaro-Gredilla, and H. Molina-Bulla, "Support Vector Machines with constraints for sparsity in the primal parameters," *IEEE Trans. Neural Networks*, vol. 22, pp. 1269-1283, Aug. 2011.
- [7] V. Gómez-Verdejo, J. Arenas-García, M. Lázaro-Gredilla, and A. Navia-Vázquez, "Adaptive One Class Support Vector Machine," *IEEE Trans. Signal Processing*, vol. 59, pp. 2975-2981, Jun. 2011.
- [8] M. Zeller, L. A. Azpicueta-Ruiz, J. Arenas-García, and W. Kellermann, "Adaptive Volterra Filters with Evolutionary Quadratic Kernels using a Combination Scheme for Memory Control," *IEEE Trans. Signal Process.*, vol. 59, pp. 1449-1464, Apr. 2011.
- [9] L. A. Azpicueta-Ruiz, M. Zeller, A. R. Figueiras-Vidal, J. Arenas-García and W. Kellermann, "Adaptive Combination of Volterra Kernels and its Application to Nonlinear Acoustic Echo Cancellation," *IEEE Trans. Audio, Speech and Language Processing*, vol. 19, pp. 97-110, Ene. 2011.

- [10] M. Lázaro-Gredilla, L. A. Azpicueta-Ruiz, A. R. Figueiras-Vidal and J. Arenas-García, "Adaptively biasing the weights of adaptive filters," *IEEE Trans. Signal Process.*, vol. 58, pp. 3890-3895, Jul. 2010.
- [11] V. Gómez-Verdejo, J. Arenas-García and A. R. Figueiras-Vidal, "Committees of Adaboost Ensembles with modified emphasis functions," *Neurocomputing*, vol. 73, pp. 1289-1292, Mar. 2010.
- [12] J. Arenas-García and A. R. Figueiras-Vidal, "Adaptive Combination of Proportionate Filters for Sparse Echo Cancellation," *IEEE Trans. Audio, Speech and Language Processing*, vol. 17, pp. 1087-1098, 2009.
- [13] J. Arenas-García and G. Camps-Valls, "Efficient Kernel Orthonormalized PLS for Remote Sensing Applications," *IEEE Trans. Geoscience and Remote Sensing*, vol. 46, pp. 2872-2881, 2008.
- [14] V. Gómez-Verdejo, J. Arenas-García, and A. R. Figueiras-Vidal, "A Dynamically Adjusted Mixed Emphasis Method for Building Boosting Ensembles," *IEEE Trans. Neural Networks*, vol. 19, pp. 3-17, 2008.
- [15] J. Arenas-García, V. Gómez-Verdejo, and A. R. Figueiras-Vidal, "Fast Evaluation of Neural Networks via Confidence Rating," *Neurocomputing*, vol. 70, pp. 2775-2782, 2007.
- [16] J. Arenas-García, M. Martínez-Ramón, A. Navia-Vázquez and A. R. Figueiras-Vidal, "Plant Identification via Adaptive Combination of LMS Filters", *Signal Processing*, vol. 86, pp. 2430-2438, 2006.
- [17] V. Gómez-Verdejo, M. Ortega-Moral, J. Arenas-García and A. R. Figueiras-Vidal, "Boosting by weighting critical and erroneous samples," *Neurocomputing*, vol. 69, pp. 679-685, 2006.
- [18] J. Arenas-García, A. R. Figueiras-Vidal and A. H. Sayed, "Mean-Square Performance of Convex Combinations of Adaptive Filters," *IEEE Trans. Signal Processing*, vol. 54, pp. 1078-1090, 2006.
- [19] J. Arenas-García, V. Gómez-Verdejo and A. R. Figueiras-Vidal, "New Algorithms for Improved Adaptive Convex Combination of LMS Transversal Filters," *IEEE Trans. on Instrumentation and Measurement*, vol. 54, pp. 2239-2249, 2005.
- [20] J. Arenas-García and A. R. Figueiras-Vidal, "Adaptive Combination of Normalised Filters for Robust System Identification," *Electronics Letters*, vol. 41, pp. 874-875, 2005.
- [21] M. Sánchez-Fernández, M. de-Prado-Cumplido, J. Arenas-García and F. Pérez-Cruz, "SVM Multiregression for Non-Linear Channel Estimation in Multiple-Input Multiple-Output Systems," *IEEE Trans. on Signal Processing*, vol. 52, n° 8, pp. 2298-2307, Aug. 2004.
- [22] E. Parrado-Hernández, J. Arenas-García, I. Mora-Jiménez and A. Navia-Vázquez, "On Problem-Oriented Kernel Refining," *Neurocomputing*, vol. 55, n° 1-2, pp. 135-150, Sep. 2003.
- [23] E. Parrado-Hernández, I. Mora-Jiménez, J. Arenas-García, A. R. Figueiras-Vidal and A. Navia-Vázquez, "Growing Support Vector Classifiers with controlled complexity," *Pattern Recognition*, vol. 36, n°7, pp. 1479-1488, Jul. 2003.

BOOK CHAPTER

- [1] J. Arenas-García, K. B. Petersen, "Kernel Multivariate Analysis in Remote Sensing Feature Extraction," in G. Camps-Valls and L. Bruzzone (eds) *Kernel Methods for Remote Sensing Data Analysis*, Wiley & Sons, 2009, pp. 329-352.

PAPERS IN INTERNATIONAL REFEREED CONFERENCES

- [1] V. Nascimento, M. T. M. Silva, J. Arenas-García, "A low-cost implementation strategy for combinations of adaptive filters," in *Proc. ICASSP 2013*, Vancouver, Canada, May. 2013.
- [2] S. Muñoz-Romero, J. Arenas-García, V. Gómez-Verdejo, "Iterative Orthonormalized Partial Least Squares with Sparsity Constraints," in *Proc. ICASSP 2013*, Vancouver, Canada, May. 2013.
- [3] J. Fernández-Bes, L. A. Azpicueta-Ruiz, M. T. M. Silva, J. Arenas-García, "A Novel Scheme For Diffusion Networks With Least-Squares Adaptive Combiners," in *Proc. 2012 Machine Learning for Signal Processing Workshop*, Santander, Spain, Sep. 2012.
- [4] E. Izquierdo-Verdiguier, J. Arenas-García, S. Muñoz-Romero, L. Gómez-Chova, and G. Camps-Valls, "Semisupervised Kernel Orthonormalized Partial Least Squares," in *Proc. 2012 Machine Learning for Signal Processing Workshop*, Santander, Spain, Sep. 2012.
- [5] Á. Gonzalo-Ayuso, M. T.M. Silva, V. H. Nascimento, and J. Arenas-García, "Improving Sparse Echo Cancellation Via Convex Combination Of Two NLMS Filters With Different Lengths," in *Proc. 2012 Machine Learning for Signal Processing Workshop*, Santander, Spain, Sep. 2012.
- [6] J. Arenas-García, María de Diego, L. A. Azpicueta-Ruiz, Miguel Ferrer, Alberto González, "Combinations of Proportionate Adaptive Filters in Acoustics: an Application to Active Noise Control," in *Proc. EUSIPCO'11*, pp. 1269-1273, Barcelona, Spain, 2011.
- [7] L. A. Azpicueta-Ruiz, M. Lázaro-Gredilla, A. R. Figueiras-Vidal, J. Arenas-García, "A block-based approach to adaptively bias the weights of adaptive filters," in *Proc. 2011 Machine Learning for Signal Processing Workshop*, Beijing, China, Sep. 2011.
- [8] J. Arenas-García and M. Lázaro-Gredilla, "Tracking performance of adaptively biased adaptive filters," in *Proc. ICASSP 2011*, pp. 4128-4131, Praga, May. 2011.
- [9] L. A. Azpicueta-Ruiz, M. Zeller, A. R. Figueiras-Vidal, J. Arenas-García, "Least-squares adaptation of affine combinations of multiple adaptive filters," in *Proc. 2010 IEEE Intl. Symposium on Circuits and Systems (ISCAS)*, pp. 2976-2979, París, Francia, 2010.
- [10] J. Arenas-García, C. Moriana-Varo, J. Larsen, "Combination of supervised and semi-supervised regression models for improved unbiased estimation," in *Proc. 7th Intl. Symp. on Wireless Communication Systems*, pp. 364-368, York, UK, Sep. 2010.
- [11] D. García-García, E. Parrado-Hernández, J. Arenas-García and F. Díaz, "Music genre classification using the temporal structure of songs," in *Proc. 2010 Machine Learning for Signal Processing Workshop*, Kittilä, Finland, Aug. 2010 (in press).
- [12] M. T. M. Silva, V. H. Nascimento and Jerónimo Arenas-García, "A transient analysis for the convex combination of two adaptive filters with transfer of coefficients," in *Proc. ICASSP'10*, pp. 3842-3845, Dallas, TX, Mar. 2010.

- [13] M. Zeller, L. A. Azpicueta-Ruiz, J. Arenas-García and W. Kellermann, "Efficient Adaptive DFT-Domain Volterra Filters using an automatically controlled number of quadratic kernel diagonals," in *Proc. ICASSP'10*, pp. 4062-4065, Dallas, TX, Mar. 2010.
- [14] V. H. Nascimento, M. T. M. Silva, L. A. Azpicueta-Ruiz and J. Arenas-García, "On the tracking performance of combinations of Least Mean Squares and Recursive Least Squares adaptive filters," in *Proc. ICASSP'10*, pp. 3710-3713, Dallas, TX, Mar. 2010.
- [15] J. Arenas-García, L. A. Azpicueta-Ruiz, A. R. Figueiras-Vidal, "Improved Adaptive Filtering Schemes via Adaptive Combination," 43rd Proc. Asilomar Conf. on Signals, Systems, and Computers, pp. 176-180, Pacific Grove, CA, 2009.
- [16] Sergio Muñoz-Romero, Jerónimo Arenas-García, and Vanessa Gómez-Verdejo, "Real Adaboost Ensembles with Emphasized Subsampling," *Proc. 2009 Intl. Workshop on Artificial Neural Networks*, pp. 440-447, Salamanca, Spain.
- [17] Vítor H. Nascimento, Magno T. M. Silva, and Jerónimo Arenas-García, "A Transient Analysis for the Convex Combination of Adaptive Filters," *Proc. 2009 Statistical Signal Processing Workshop*, pp. 53-56, Cardiff, UK.
- [18] L. A. Azpicueta-Ruiz, M. Zeller, J. Arenas-García, and W. Kellermann, "Novel schemes for nonlinear acoustic echo cancellation based on filter combinations," *Proc. ICASSP'09*, pp. 193- 196, Taipei, Taiwan, Apr. 2009.
- [19] L. A. Azpicueta-Ruiz, A. R. Figueiras-Vidal, and J. Arenas-García, "A New Least Squares Adaptation Scheme for the Affine Combination of Two Adaptive Filters," *Proc. 2008 Machine Learning for Signal Processing Workshop*, pp. 327-332, Cancun, Mexico, Oct. 2008.
- [20] J. Arenas-García and A. R. Figueiras-Vidal, "Adaptive Combination of IPNLMS filters for Robust Sparse Echo Cancellation," *Proc. 2008 Machine Learning for Signal Processing Workshop*, pp. 221-226, Cancun, Mexico, Oct. 2008.
- [21] L. A. Azpicueta-Ruiz, A. R. Figueiras-Vidal, and J. Arenas-García, "A Normalized Adaptation Scheme for the Convex Combination of two Adaptive Filters," *Proc. ICASSP'08*, pp. 3301-3304, Las Vegas, NV, Mar. 2008.
- [22] J. Arenas-García, E. Parrado-Hernández, A. Meng, L. K. Hansen, and J. Larsen, "Discovering Music Structure via Similarity Fusion," Music, Brain & Cognition workshop, NIPS'07.
- [23] L. A. Azpicueta-Ruiz, A. R. Figueiras-Vidal, and J. Arenas-García, "Acoustic Echo Cancellation in Frequency Domain using Combinations of Filters," *Proc. 19th Congress on Acoustics (ICA'07)*, Madrid, Spain, Sep. 2007.
- [24] L. K. Hansen, T. Lehn-Schiøler, K. B. Petersen, J. Arenas-García, J. Larsen, S. H. Jensen, "Learning and clean-up in a large scale music database," *Proc. EUSIPCO'07*, pp. 946-950, Poznan, Poland, Sep. 2007.
- [25] J. Arenas-García, A. Meng, K. B. Petersen, T. Lehn-Schiøler, L. K. Hansen, and J. Larsen, "Unveiling Music Structure via PLSA Similarity Fusion," *Proc. 2007 Machine Learning for Signal Processing Workshop*, pp. 419-424, Thessaloniki, Greece, Aug. 2007.
- [26] J. Arenas-García and G. Camps-Valls, "Feature Extraction from Remote Sensing Data using Kernel Orthonormalized PLS," *Proc. 2007 Intl. Geoscience and Remote Sensing Symposium*, Barcelona, Spain, Jul. 2007.
- [27] A. B. Nielsen, S. Sigurdsson, L. K. Hansen, and J. Arenas-García, "On the Relevance of Spectral Features for Instrument Classification," *Proc. ICASSP'07*, vol. II, pp. 485-

488, Hawaii, HI, Apr. 2007.

- [28] J. Arenas-García, A. Meng, K. B. Petersen and L. K. Hansen, "Multivariate Analysis and Kernel Methods for Music Data Analysis", Workshop on Advances in Models for Acoustic Processing, NIPS'06.
- [29] J. Arenas-García, K. B. Petersen and L. K. Hansen, "Sparse Kernel Ortho-normalized PLS for feature extraction in large data sets", *Advances in Neural Information Processing Systems 19*, MIT Press, Cambridge, MA, 2007.
- [30] J. Arenas-García, J. Larsen, L. K. Hansen and A. Meng, "Optimal Filtering of dynamics in short-time for music organization", *Proc. 7th Intl. Conf. on Music Information Retrieval*, pp. 290-295, Victoria, Canada, Oct. 2006.
- [31] T. Lehn-Schiøler, J. Arenas-García, K. B. Petersen and L. K. Hansen, "A Genre Classification Plug-in for Data Collection", *Proc. 7th Intl. Conf. on Music Information Retrieval*, pp. 320-321, Victoria, Canada, Oct. 2006.
- [32] J. Arenas-García and A. R. Figueiras-Vidal, "Improved Blind Equalization via Adaptive Combination of Constant Modulus Algorithms", *Proc. ICASSP'06*, vol. III, pp. 756-759, Toulouse, France, May. 2006.
- [33] J. Arenas-García, A. R. Figueiras-Vidal and A. H. Sayed, "Tracking Properties of a Convex Combination of Two Adaptive Filters", in *Proc. 2005 IEEE Workshop on Statistical Signal Proc.*, Burdeoux, France, Jul. 2005.
- [34] V. Gómez-Verdejo, J. Arenas-García, M. Ortega-Moral, and A. R. Figueiras-Vidal, "Designing RBF networks for weighted boosting", in *Proc. IJCNN 2005*, pp. 1057-1062, Montreal, Canada, Jul. 2005.
- [35] J. Arenas-García, V. Gómez-Verdejo, S. Muñoz-Romero, M. Ortega-Moral, and A. R. Figueiras-Vidal, "Fast Classification with Neural Networks via Confidence Rating", in *Proc. IWANN 2005*, pp. 622-629, LNCS, Springer, Barcelona, España, Jun. 2005.
- [36] V. Gómez-Verdejo, M. Ortega-Moral, J. Arenas-García and A. R. Figueiras-Vidal, "Boosting by weighting boundary and erroneous samples", in *Proc. 2005 European Symp. on Artificial Neural Networks*, pp. 85-90, Bruges, Belgium, Apr. 2005.
- [37] M. Ortega-Moral, V. Gómez-Verdejo, J. Arenas-García and A. R. Figueiras-Vidal, "An on-line Fisher discriminant" , in *Proc. 2005 European Symp. on Artificial Neural Networks*, pp. 175-180, Bruges, Belgium, Apr. 2005.
- [38] J. Arenas-García, A. R. Figueiras-Vidal and A. H. Sayed, "Steady-state Performance of Convex Combinations of Adaptive Filters", in *Proc. ICASSP'05*, vol. IV, pp. 33-36, Philadelphia, PA, USA.
- [39] J. Arenas-García, V. Gómez-Verdejo and A. Navia-Vázquez, "RLS Adaptation of One-Class SVM for Time Series Novelty Detection," in *Proc. of the Learning'04 Intl. Conference*, pp. 25-30, Elche, Spain, 2004.
- [40] J. Arenas-García and A. R. Figueiras-Vidal, "Adaptive Combination of Stochastic Gradient Filters with different Cost Functions," in *Proc. of the Learning'04 Intl. Conference*, pp. 123-128, Elche, Spain, 2004.
- [41] J. Arenas-García, V. Gómez-Verdejo, M. Martínez-Ramón and A. R. Figueiras-Vidal, "Separate-Variable Adaptive Combination of LMS Adaptive Filters for Plant Identification," in *Proc. of the 13th IEEE International Workshop on Neural Networks for Signal Processing*, pp. 239-248, Toulouse, France, Sep. 2003.
- [42] J. Arenas-García, M. Martínez-Ramón, V. Gómez-Verdejo and A. R. Figueiras-Vidal, "Multiple Plant Identifier via Adaptive LMS Convex Combination," in *Proc. of the 2003*

- IEEE International Symposium on Intelligent Signal Processing*, pp. 137-142, Budapest, Hungary, Sep. 2003.
- [43] J. Arenas-García, A. R. Figueiras-Vidal and A. J. C. Sharkey, "The Beneficial Effects of Using Multi Net Systems that Focus on Hard Patterns," in *Proc. of the 4th Intl. Workshop on Multiple Classifier Systems*, pp. 45-54, LNCS, Springer, Surrey, UK, Jun. 2003.
- [44] J. Arenas-García and F. Pérez-Cruz, "Multi-Class Support Vector Machines: A new approach," in *Proc. ICASSP'03*, vol. II, pp. 781-784, Hong Kong, Apr. 2003.
- [45] I. Mora-Jiménez, A. Lyhyaoui, J. Arenas-García, A. Navia-Vázquez and A. R. Figueiras-Vidal, "A Trainable Classifier via k Nearest Neighbors," in *Proc. of the 2nd Intl. Conf. on Hybrid Intelligent Systems*, pp. 365-373, Santiago, Chile, Dec. 2002.
- [46] I. Mora-Jiménez, A. Lyhyaoui, J. Arenas-García and A. R. Figueiras-Vidal, "Creating Modular-like Ensembles by Output Clustering," in *Proc. of the Learning02*, Leganés-Madrid, Spain, Oct. 2002.
- [47] M. Martínez-Ramón, J. Arenas-García, A. Navia-Vázquez and A. R. Figueiras-Vidal, "An Adaptive Combination of Adaptive Filters for Plant Identification," in *Proc. of the 14th IEEE Intl. Conf. on Digital Signal Proc.*, pp. 1195-1198, Santorini, Greece, Jul. 2002.
- [48] J. Arenas-García, J. L. Martín-Sánchez, M. de-Prado-Cumplido, R. García-Gómez and S. Aguilera-Navarro, "Design and Development of a Mobile Communication System for the Hearing-Impaired Community," Conference and Workshop on Assistive Technologies for Vision and Hearing Impairment (CVHI), Castelvecchio Pascoli, Italy, Aug. 2001.
- [49] S. E. Palazuelos-Cagigas, J. L. Martín-Sánchez, J. Arenas-García, J. I. Godino-Llorente and S. Aguilera-Navarro, "Communication Strategies using PredWin for people with different sort of disabilities," Conference and Workshop on Assistive Technologies for Vision and Hearing Impairment (CVHI), Castelvecchio Pascoli, Italy, Aug. 2001.

PRIZES AND AWARDS

- Extraordinary Ph. D. award. Universidad Carlos III de Madrid (2007).
- National Award to graduation (first prize in Telecommunication Engineering) given by the Spanish Ministry of Education (2001).
- NORTEL Award for the Best Engineering Degree Thesis in Development of Applications for the Mobile Internet, given by the Spanish Association of Telecommunication Engineers (2001).

OTHER MERITS

- IEEE member from 2000. Member of the Signal Processing and Computational Intelligence societies.
- Member of the Spanish Team at the International Mathematical Olympiads of Hong-Kong (1994) and Canada (1995) and at the Iberoamerican Olympiads of Brazil (1994) and Chile (1995, silver medal).