



Curriculum vitae Standardized form

Total number of pages: 41

Name: Roberto López Valcarce

Date: October 16, 2016

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PERSONAL DATA

Family name: López-Valcarce
ID/Passport no: 10082556T
Nationality: Spanish

First name: Roberto
Date of birth : 12/05/1971
Gender: M

PRESENT PROFESSIONAL POSITION

Institution: University of Vigo
Faculty, School or Institute: Escuela Técnica superior de Ingenieros de Telecomunicación
Department: Dept. of Signal Theory and Communications
Address: Rúa Maxwell s/n, 36310 Vigo
Country: Spain

Telephone (indicate prefix, number and extension): +34 986 818659
Fax: +34 986 812116
E-mail: valcarce@gts.uvigo.es

Specialization (UNESCO codes): 33259 (Signal Processing in Communications)
Professional status: Associate Professor
Start date: November 1, 2006

Administrative status

Staff Hired Acting Fellowship holder
 Others specify:

Full-time
Part-time

PRESENT RESEARCH AREA

Brief summary (key words).

Signal processing, digital communications, adaptive filtering

ACADEMIC BACKGROUND

| Bachelor | Centre | Date |
|-------------------------------|--------------------|----------------|
| Telecommunication Engineering | University of Vigo | September 1995 |

| Master's | Centre | Date |
|-----------------------------------|--------------------|----------|
| Electrical & Computer Engineering | University of Iowa | May 1998 |

| Ph.D. | Centre | Date |
|-----------------------------------|--------------------|---------------|
| Electrical & Computer Engineering | University of Iowa | November 2000 |
| Telecommunication Engineering | University of Vigo | November 2001 |

FORMER PROFESSIONAL & SCIENTIFIC POSITIONS

| <i>Position</i> | <i>Centre/Company</i> | <i>Institution</i> | <i>Start date</i> | <i>End date</i> |
|--|--|--------------------------------------|----------------------|----------------------|
| <i>Research Associate</i> | <i>Dept. Signal Theory and Communications</i> | <i>University of Vigo</i> | <i>November 2001</i> | <i>October 2006</i> |
| <i>Project Engineer</i> | <i>Dept. Signal Theory and Communications</i> | <i>University of Vigo</i> | <i>April 2001</i> | <i>October 2001</i> |
| <i>Research Assistant</i> | <i>Dept. Signal Theory and Communications</i> | <i>University of Vigo</i> | <i>February 2001</i> | <i>March 2001</i> |
| <i>Research Assistant</i> | <i>Dept. Electrical & Computer Engineering</i> | <i>University of Iowa</i> | <i>August 1998</i> | <i>December 2000</i> |
| <i>Research Assistant (M.S. Student)</i> | <i>Dept. Electrical & Computer Engineering</i> | <i>University of Iowa</i> | <i>August 1996</i> | <i>July 1998</i> |
| <i>Research Assistant</i> | <i>Dept. Signal Theory and Communications</i> | <i>University Carlos III, Madrid</i> | <i>March 1996</i> | <i>July 1996</i> |
| <i>Project Engineer</i> | <i>Intelsis S.A.</i> | | <i>February 1995</i> | <i>February 1996</i> |

LANGUAGES (A = AVERAGE, G = GOOD, F = FLUENT)

| <i>Language</i> | <i>Speaks</i> | <i>Reads</i> | <i>Writes</i> |
|--------------------------------|---------------|--------------|---------------|
| <i>English</i> | <i>F</i> | <i>F</i> | <i>F</i> |
| <i>Spanish (mother tongue)</i> | <i>F</i> | <i>F</i> | <i>F</i> |

**PARTICIPATION IN PUBLICLY FUNDED RESEARCH PROJECTS
(NATIONAL AND INTERNATIONAL)**

21. *PROJECT TITLE: Foundations and Methodologies for Future Communication and Sensor Networks (Red COMONSENS) Ref. TEC2015-69648-REDC*

FUNDING INSTITUTION: Spanish Ministry of Economy and Competitiveness

PARTICIPANTS: Polytechnic Univ. of Catalonia (Coordinator), Univ. of Vigo, Univ. of Cantabria, Univ. of A Coruña, Univ. Carlos III de Madrid, Polytechnic Univ. of Madrid, Univ. of Sevilla, Univ. Pompeu Fabra, Centro de Estudios e Investigaciones Técnicas de Gipuzkoa.

LENGTH FROM: 01/12/2015 TO: 30/11/2017

NUMBER OF PARTICIPANT RESEARCHERS: 120 (in 9 groups of different Spanish institutions)

COORDINATOR: Javier Rodríguez Fonollosa (Polytechnic Univ. of Catalonia)

PRINCIPAL INVESTIGATOR: Roberto López Valcarce (at University of Vigo) AMOUNT: 51.500 €

20. *PROJECT TITLE: Communications and Signal Processing in Adverse Scenarios (COMPASS)*

FUNDING INSTITUTION: Spanish Ministry of Economy and Competitiveness

PARTICIPANTS: University of Vigo (Coord.), Universidad Politécnica de Cataluña

LENGTH FROM: 01/01/2014 TO: 31/12/2016

NUMBER OF PARTICIPANT RESEARCHERS: 12

PRINCIPAL INVESTIGATOR: Roberto López Valcarce AMOUNT: 169.100 €

19. *PROJECT TITLE: TÁCTICA*

FUNDING INSTITUTION: Spanish Ministry of Economy and Competitiveness and European Regional Development Fund (ERDF)

PARTICIPANTS: University of Vigo

LENGTH FROM: Dec. 2013 TO: Dec. 2015

NUMBER OF PARTICIPANT RESEARCHERS: 21

COORDINATOR: Nuria González Prelcic AMOUNT: 8.874.878 €

18. *PROJECT TITLE: RedTEIC: Thematic Network in Emerging Information and Communication Technologies*

FUNDING INSTITUTION: Galician Regional Government (Xunta de Galicia)

PARTICIPANTS: University of A Coruña (Coordinator), University of Vigo

LENGTH FROM: Oct. 2014 TO: Dec. 2015

NUMBER OF PARTICIPANT RESEARCHERS: 9 (at University of Vigo)

COORDINATOR: Adriana Dapena Janeiro (University of A Coruña)

PRINCIPAL INVESTIGATOR (University of Vigo): Fernando Pérez González AMOUNT: 120.000 €

17. PROJECT TITLE: Programa de Consolidación y Estructuración de Unidades de Investigación Competitivas (modalidad "Grupo de Referencia Competitiva")

FUNDING INSTITUTION: Galician Regional Government (Xunta de Galicia)
PARTICIPANTS: University of Vigo LENGTH FROM: 16-10-2013 TO: 30-11-2016
NUMBER OF PARTICIPANT RESEARCHERS UVIGO: 5
PRINCIPAL INVESTIGATOR: Fernando Pérez González AMOUNT: 370.000 €

16. PROJECT TITLE: AtlantTIC: Consolidation and Structuring of Competitive Research Units (Strategic Clusters)

FUNDING INSTITUTION: Galician Regional Government (Xunta de Galicia)
PARTICIPANTS: University of Vigo LENGTH FROM: 08-06-2012 TO: 30-11-2013
NUMBER OF PARTICIPANT RESEARCHERS: 10 research groups at University of Vigo
PRINCIPAL INVESTIGATOR: Nuria González Prelcic AMOUNT: 500.000 €

15. PROJECT TITLE: Foundations and Methodologies for Future Communication and Sensor Networks (COMONSENS) Ref. CSD2008-00010

FUNDING INSTITUTION: Spanish Ministry of Science and Innovation . Program: CONSOLIDER-INGENIO 2010
PARTICIPANTS: Polytechnic Univ.of Catalonia (Coordinator), Univ. of Vigo, Univ.of Cantabria, Univ. of A Coruña, Univ. Carlos III de Madrid, Polytechnic Univ.of Madrid, Univ. of Sevilla, Univ. Pompeu Fabra,Univ. of Valencia, Centro de Estudios e Investigaciones Técnicas de Gipuzkoa.
LENGTH FROM: Dec. 2008 TO: Dec. 2014
NUMBER OF PARTICIPANT RESEARCHERS: 135 (in 10 groups of different Spanish institutions)
COORDINATOR: Javier Rodríguez Fonollosa (Univ. Politécnica de Cataluña)
PRINCIPAL INVESTIGATOR: Roberto López Valcarce (in the University of Vigo group)
AMOUNT: 246.358 € (for the Vigo group)

14. PROJECT TITLE: Dynamic Spectrum Access and Cognitive Communications (DYNACS)

FUNDING INSTITUTION: Spanish Ministry of Science and Innovation
PARTICIPANTS: Universidad Politécnica de Cataluña (Coord.), Universidad de Vigo
LENGTH FROM:01/01/2011 TO: 30/06/2014
NUMBER OF PARTICIPANT RESEARCHERS: 14
PRINCIPAL INVESTIGATOR: Roberto López Valcarce AMOUNT: 217.600 €

13. PROJECT TITLE: Consolidation and Structuring of Competitive Research Units (Competitive Reference Group)

FUNDING INSTITUTION: Consellería de Educación e Ordenación Universitaria, Xunta de Galicia
LENGTH FROM: 01/10/2010 TO: 31/12/2012
PRINCIPAL INVESTIGATOR: Fernando Pérez González
AMOUNT: 168.000 € Number of participant researchers: (UVIGO) 8

12. PROJECT TITLE: *SPROACTIVE: Signal Processing for Cognitive Radio Systems*
FUNDING INSTITUTION: *Spanish Ministry of Science and Education*
PARTICIPANTS: *Universidad de Vigo, Universidad Politécnica de Cataluña*
LENGTH: FROM:13-XII-2007 TO: 12-XII-2010
PRINCIPAL INVESTIGATOR: *Roberto López Valcarce*
AMOUNT: 228.600 € Number of participant researchers: (UVIGO) 8

11. PROJECT TITLE: *Consolidation and Structuring of Competitive Research Units (Competitive Reference Group)*
FUNDING INSTITUTION: *Galician Regional Government*
PARTICIPANTS: *Universidad de Vigo*
LENGTH: FROM:01/10/2006 TO: 30/09/2009
PRINCIPAL INVESTIGATOR: *Fernando Pérez González*
AMOUNT: 340.000 € Number of participant researchers: (UVIGO) 5

10. PROJECT TITLE: *Satellite Communications Network of Excellence-II*
FUNDING INSTITUTION: *European Union, 6xth Framework Programme*
PARTICIPANTS: *German Aerospace Centre DLR (Coordinator), Universidad de Vigo and 21 more centers*
LENGTH: FROM:V-2006 TO: XII-2008
PRINCIPAL INVESTIGATOR: *Fco. Javier González Castaño and Carlos Mosquera Nartallo*
AMOUNT: 215.000 € Number of participant researchers: (UVIGO) 9

9. PROJECT TITLE: *Satellite Communications Network of Excellence*
FUNDING INSTITUTION: *European Union, 6xth Framework Programme*
PARTICIPANTS: *German Aerospace Centre DLR (Coordinator), Universidad de Vigo and 19 more centers*
LENGTH: FROM:1-I-2004 TO: 31-XII-2005
PRINCIPAL INVESTIGATOR: *Fco. Javier González Castaño*
AMOUNT: 125.000 € Number of participant researchers: (UVIGO) 7

8. PROJECT TITLE: *Algorithm development for a vectored DSL modem*
FUNDING INSTITUTION: *Spanish Agency for International Cooperation, and Tunisian Government*
PARTICIPANTS: *Universidad de Vigo and Université du 7 novembre à Carthage*
LENGTH: FROM:24-I-2006 TO: 23-I--2008
PRINCIPAL INVESTIGATOR: *Roberto López Valcarce and Hichem Besbes*
AMOUNT: 23.710 € Number of participant researchers: (UVIGO) 1

7. PROJECT TITLE: *DIPSTICK: Theory and Applications of "Dirty Paper Signaling"*
FUNDING INSTITUTION: *Spanish Ministry of Science and Education*
PARTICIPANTS: *Universidad de Vigo*
LENGTH: FROM:13-XII-2004 TO: 12-XII-2007
PRINCIPAL INVESTIGATOR: *Carlos Mosquera Nartallo*
AMOUNT: 171.620 € Number of participant researchers: 8

6. PROJECT TITLE: *Certification for watermarking techniques (CERTIMARK)*
FUNDING INSTITUTION: *European Community, 5th Framework Programme*
PARTICIPANTS: *Universidad de Vigo and 12 more centres*
LENGTH FROM: *01/05/2000 TO: 30/09/2002*
PRINCIPAL INVESTIGATOR: *Fernando Pérez González*
AMOUNT: *210.000 €*

5. PROJECT TITLE: *Multiresolution analysis for signal processing in multimedia and digital communications (AMULET)*
FUNDING INSTITUTION: *Spanish Ministry of Science and Technology*
PARTICIPANTS: *Universidad de Vigo*
LENGTH: FROM : *01/01/2003 TO: 31/12/2004*
PRINCIPAL INVESTIGATOR: *Nuria González Prelcic*
AMOUNT: *92.340 €*

4. PROJECT TITLE: *Adaptive recursive filters for blind equalization of digital communication systems*
FUNDING INSTITUTION: *Spanish Ministry of Education and Science ("Ramón y Cajal" Programme)*
LENGTH: FROM: *01/11/2001 TO: 31/10/2006*
PRINCIPAL INVESTIGATOR L: *Roberto López Valcarce*
AMOUNT: *5.707 €*

3. PROJECT TITLE: *Digital watermarking techniques and 2D bar codes for security of printed documents (SEQRDOCS)*
FUNDING INSTITUTION: *Galician Regional Government*
PARTICIPANTS: *Universidad de Vigo*
LENGTH: FROM: *VIII-2004 TO: VIII-2007*
PRINCIPAL INVESTIGATOR: *Fernando Pérez González*
AMOUNT: *70.000 €*

2. PROJECT TITLE: *Fractionally spaced equalization of nonlinear channels*
FUNDING INSTITUTION: *U.S. National Science Foundation*
PARTICIPANTS: *University of Iowa*
LENGTH: FROM: *VIII-1999 TO: VII-2004*
PRINCIPAL INVESTIGATOR: *Soura Dasgupta*

1. PROJECT TITLE: *A wavelet packet approach to the implementation of fast digital controllers*
FUNDING INSTITUTION: *U.S. National Science Foundation*
PARTICIPANTS: *University of Iowa*
LENGTH: FROM: *VIII-1994 TO: VII-1999*
PRINCIPAL INVESTIGATOR: *Soura Dasgupta*

PUBLICATIONS

Indicate volume, first and last page (year) and key.

Key: B= full book, CB.= chapter of book, A= article, R= review, E= editor

(*) This information only has to be filled in those areas where this classification is available

2017

55. *AUTHORS:* E. Antonio-Rodríguez, S. Werner, R. López-Valcarce, T. Riihonen, R. Wichman
TITLE: Wideband full-duplex MIMO relays with blind adaptive self-interference cancellation

JOURNAL: Signal Processing

KEY: A

DATE OF PUBLICATION: January 2017

DOI: 10.1016/j.sigpro.2016.06.010

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION ()*: YES NO

IMPACT FACTOR()*: 2.063

2016

54. *AUTHORS:* J. Sala, G. Vázquez-Vilar, R. López-Valcarce, S. Sedighi, A. Taherpour
TITLE: Multiantenna GLR Detection of Rank-One Signals with Known Power Spectral Shape under Spatially Uncorrelated Noise

JOURNAL: IEEE Transactions on Signal Processing

KEY: A

DATE OF PUBLICATION: December 2016

DOI: 10.1109/TSP.2016.2601290

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION ()*: YES NO

IMPACT FACTOR()*: 2.624

2015

53. *AUTHORS:* D. Romero, R. López-Valcarce, G. Leus
TITLE: Compression Limits for Random Vectors with Linearly Parameterized Second-Order Statistics

JOURNAL/BOOK TITLE: IEEE Transactions on Information Theory

KEY: A

DATE OF PUBLICATION: March 2015

DOI: 10.1109/TIT.2015.2394784

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION ()*: YES NO

IMPACT FACTOR()*: 2.65

52. *AUTHORS:* R. López-Valcarce, J. Villares, J. Riba, W. Gappmair, C. Mosquera
TITLE: Cramér-Rao Bounds for SNR Estimation of Oversampled Linearly Modulated Signals

JOURNAL/BOOK TITLE: IEEE Transactions on Signal Processing

KEY: A

DATE OF PUBLICATION: April 2015

DOI: 10.1109/TSP.2015.2396013

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION ()*: YES NO

IMPACT FACTOR()*: 3.198

51. AUTHORS: M. Vecchio, R. López-Valcarce
TITLE: A Greedy Topology Design to Accelerate Consensus in Broadcast Wireless Sensor Networks

JOURNAL/BOOK TITLE: Information Processing Letters KEY: A
DATE OF PUBLICATION: March 2015 DOI: 10.1016/j.ipl.2014.11.009
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 0.546

50. AUTHORS: M. Vecchio, R. López-Valcarce
TITLE: Improving Area Coverage of Wireless Sensor Networks Via Controllable Mobile Nodes: a Greedy Approach

JOURNAL/BOOK TITLE: Journal of Network and Computer Applications KEY: A
DATE OF PUBLICATION: February 2015 DOI: 10.1016/j.jnca.2014.10.007
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.229

2014

49. AUTHORS: D. Romero, R. López-Valcarce
TITLE: Spectrum Sensing for Wireless Microphone Signals using Multiple Antennas

JOURNAL/BOOK TITLE: IEEE Transactions on Vehicular Technology KEY: A
DATE OF PUBLICATION: November 2014 DOI: 10.1109/TVT.2014.2316513
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.978

48. AUTHORS: J. F. Schmidt, D. Romero, R. López-Valcarce
TITLE: Active Interference Cancellation for OFDM Spectrum Sculpting: Linear Processing is Optimal

JOURNAL/BOOK TITLE: IEEE Communications Letters KEY: A
DATE OF PUBLICATION: September 2014 DOI: 10.1109/LCOMM.2014.2338316
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.463

2013

48. AUTHORS: J. F. Schmidt, S. Costas-Sanz, R. López-Valcarce
TITLE: Choose Your Subcarriers Wisely: Active Interference Cancellation for Cognitive OFDM

JOURNAL/BOOK TITLE: IEEE J. Emerging and Selected Topics in Circuits and Systems KEY: A
DATE OF PUBLICATION: December 2013 DOI:
10.1109/JETCAS.2013.2280808
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.524

47. AUTHORS: E. Ben Salem, S. Cherif, H. Besbes, R. López-Valcarce
TITLE: Lattice implementation of adaptive channel shortening in multicarrier transmission over IIR channels
JOURNAL/BOOK TITLE: EURASIP Journal on Advances in Signal Processing KEY: A
DATE OF PUBLICATION: December 2013 DOI: 10.1186/1687-6180-2013-174
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 0.81

46. AUTHORS: S. Silva Pereira, R. López-Valcarce, A. Pagès-Zamora
TITLE: A Diffusion-Based EM Algorithm for Distributed Estimation in Unreliable Sensor Networks
JOURNAL/BOOK TITLE: IEEE Signal Processing Letters KEY: A
DATE OF PUBLICATION: June 2013 DOI: 10.1109/LSP.2013.2260329
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.388

45. AUTHORS: J. Muñoz, J. Vales-Alonso, F. Quiñoy-García, S. Costas, M. Pillado, F. J. González-Castaño, M. García-Sánchez, R. López-Valcarce, C. López-Bravo
TITLE: A Cognitive Mobile BTS Solution with Software-Defined Radioelectric Sensing
JOURNAL/BOOK TITLE: Sensors KEY: A
DATE OF PUBLICATION: February 2013 DOI: 10.3390/s130202051
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.048

44. AUTHORS: D. Manjarrés, J. Del Ser, S. Gil-López, M. Vecchio, I. Landa-Torres, S. Salcedo-Sanz, R. López-Valcarce
TITLE: On the Design of a Novel Two-Objective Harmony Search Approach for Distance- and Connectivity-based Localization in Wireless Sensor Networks
JOURNAL/BOOK TITLE: Engineering Applications of Artificial Intelligence KEY: A
DATE OF PUBLICATION: February 2013 DOI: 10.1016/j.engappai.2012.06.002
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.962

43. AUTHORS: D. Manjarrés, J. Del Ser, S. Gil-López, M. Vecchio, I. Landa-Torres, R. López-Valcarce
TITLE: A Novel Heuristic Approach for Distance- and Connectivity-based Multihop Node Localization in Wireless Sensor Networks
JOURNAL/BOOK TITLE: Soft Computing KEY: A
DATE OF PUBLICATION: January 2013 DOI: 10.1007/s00500-012-0897-2
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.880

2012

42. AUTHORS: R. López-Valcarce, E. Antonio-Rodríguez, C. Mosquera, F. Pérez-González
TITLE: An Adaptive Feedback Canceller for Full-Duplex Relays Based on Spectrum Shaping
JOURNAL/BOOK TITLE: IEEE Journal on Selected Areas in Communications (Special Issue on Theories and Methods for Advanced Wireless Relays) KEY: A
DATE OF PUBLICATION: August 2012 DOI: 10.1109/JSAC.2012.120923
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 3.121

41. AUTHORS: J. Sala, G. Vazquez-Vilar, R. López-Valcarce
TITLE: Multiantenna GLR detection of rank-one signals with known power spectrum in white noise with unknown spatial correlation
JOURNAL/BOOK TITLE: IEEE Trans. on Signal Processing KEY: A
DATE OF PUBLICATION: June 2012 DOI: 10.1109/TSP.2012.2189767
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.813

40. AUTHORS: M. Vecchio, R. López-Valcarce, F. Marcelloni
TITLE: A Two-Objective Evolutionary Approach based on Topological Constraints for Node Localization in Wireless Sensor Networks
JOURNAL/BOOK TITLE: Applied Soft Computing KEY: A
DATE OF PUBLICATION: July 2012 DOI: 10.1016/j.asoc.2011.03.012
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.140

2011

39. AUTHORS: G. Vazquez-Vilar, R. López-Valcarce
TITLE: Spectrum sensing exploiting guard bands and weak channels
JOURNAL/BOOK TITLE: IEEE Trans. on Signal Processing KEY: A
DATE OF PUBLICATION: December 2011 DOI: 10.1109/TSP.2011.2167615
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.631

38. AUTHORS: G. Vazquez-Vilar, R. López-Valcarce, J. Sala
TITLE: Multiantenna spectrum sensing exploiting spectral a priori information
JOURNAL/BOOK TITLE: IEEE Trans. on Wireless Communications KEY: A
DATE OF PUBLICATION: December 2011 DOI: 10.1109/TWC.2011.101211.110665
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.152

37. AUTHORS: D. Ramírez, G. Vazquez-Vilar, R. López-Valcarce, J. Vía, I. Santamaría
TITLE: Detection of rank-P signals in Cognitive Radio Networks with uncalibrated multiple antennas
JOURNAL/BOOK TITLE: IEEE Trans. on Signal Processing KEY: A
DATE OF PUBLICATION: August 2011 DOI: 10.1109/TSP.2011.2146779
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.631

2010

36. AUTHORS: W. Gappmair, R. López-Valcarce, C. Mosquera
TITLE: Joint NDA Estimation of Carrier Frequency/Phase and SNR for Linearly Modulated Signals
JOURNAL/BOOK TITLE: IEEE Signal Processing Letters, vol. 17(5), pp. 517 - 520 KEY: A
DATE OF PUBLICATION: May 2010 DOI: 10.1109/LSP.2010.2045545
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.203

35. AUTHORS: M. Álvarez-Díaz, R. López-Valcarce, C. Mosquera
TITLE: SNR estimation for multilevel constellations using higher-order moments
JOURNAL/BOOK TITLE: IEEE Trans. on Signal Processing, vol. 58(3), Part 2, pp 1515-1526 KEY: A
DATE OF PUBLICATION: March 2010 DOI: 10.1109/TSP.2009.2036069
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.335

34. AUTHORS: M. Álvarez-Díaz, R. López-Valcarce, I. Gómez-Alonso
TITLE: Blind ℓ_1 -norm-based phase estimation for cross-QAM robust to finite precision effects
JOURNAL/BOOK TITLE: Signal Processing, vol. 90(11), pp 2934-2946 KEY: A
DATE OF PUBLICATION: November 2010 DOI: 10.1016/j.sigpro.2010.04.019
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.256

33. AUTHORS: R. Elasmí-Ksibi, S. Cherif, R. López-Valcarce, H. Besbes
TITLE: Closed-form real single-tone frequency estimator based on a normalized IIR notch filter
JOURNAL/BOOK TITLE: Signal Processing, vol. 90(6), pp 1905-1915 KEY: A
DATE OF PUBLICATION: June 2010 DOI: 10.1016/j.sigpro.2009.12.011
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.256

32. AUTHORS: R. Elasmí-Ksibi, H. Besbes, R. López-Valcarce, S. Cherif
TITLE: Frequency estimation of real-valued single-tone in colored noise using multiple autocorrelation lags
JOURNAL/BOOK TITLE: Signal Processing, vol. 90(7), pp 2303-2307 KEY: A
DATE OF PUBLICATION: July 2010 DOI: 10.1016/j.sigpro.2010.01.025
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.256

31. AUTHORS: C. Mosquera, R. López-Valcarce, S. K. Jayaweera
TITLE: Stepsize sequence design for distributed average consensus
JOURNAL/BOOK TITLE: IEEE Signal Processing Letters, vol. 17(2), pp. 169 - 172 KEY: A
DATE OF PUBLICATION: February 2010 DOI: 10.1109/LSP.2009.2035373
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 1.203

2009

30. AUTHORS: W. Gappmair, R. López-Valcarce, C. Mosquera
TITLE: Cramer-Rao Lower Bound and EM Algorithm for Envelope-Based SNR Estimation of Nonconstant Modulus Constellations
JOURNAL/BOOK TITLE: IEEE Trans. on Communications, vol. 57(6), pp. 1622-1627 KEY: A
DATE OF PUBLICATION: June 2009 DOI: 10.1109/TCOMM.2009.06.0700932
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.070

29. AUTHORS: W. Gappmair, R. López-Valcarce, C. Mosquera
TITLE: Powerful Algorithms for Coherent NDA Estimation of the Signal-to-Noise Ratio
JOURNAL/BOOK TITLE: Mediterranean Journal of Electronics and Communications, vol. 5, pp. 83-90
DATE OF PUBLICATION: 2009 KEY: A
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): N/A

2008

28. AUTHORS: C. Mosquera, S. Scalise, R. López-Valcarce
TITLE: Non-Data-Aided Symbol Rate Estimation of Linearly Modulated Signals
JOURNAL/BOOK TITLE: IEEE Trans. on Signal Processing, vol. 56(2), pp. 664-674. KEY: A
DATE OF PUBLICATION: February 2008 DOI: 10.1109/TSP.2007.907888
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR(*): 2.335

2007

27. AUTHORS : R. López-Valcarce and C. Mosquera
TITLE: Sixth-order statistics-based non-data-aided SNR estimation
JOURNAL/BOOK TITLE: IEEE Communications Letters, vol. 11(4), pp. 351-353 KEY: A
DATE OF PUBLICATION: April 2007
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 1.058

26. **AUTHORS** : Antonio Artés Rodríguez, Fernando Pérez González, Jesús Cid Sueiro, Roberto López Valcarce, Carlos Mosquera Nartallo and Fernando Pérez Cruz
BOOK TITLE: *Comunicaciones Digitales (Textbook in Spanish)*. Pearson Prentice-Hall
ISBN: 9788483223482 **KEY**: B **DATE OF PUBLICATION**: May 2007

2006

25. **AUTHORS** : R. López-Valcarce
TITLE: *Second-order blind algorithms for adaptive recursive linear equalizers: analysis and lattice implementation*
JOURNAL/BOOK TITLE: *Int. Journal of Adaptive Control and Signal Processing*, vol. 20, pp. 265-289
KEY: A **DATE OF PUBLICATION**: August 2006
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO **IMPACT FACTOR (*)**: 0.698

2005

24. **AUTHORS** : R. López-Valcarce
TITLE: *Realizable minimum-mean squared error channel shorteners*
JOURNAL/BOOK TITLE: *IEEE Trans. Signal Processing*, vol. 53(11), pp. 4354-4362 **KEY**: A
DATE OF PUBLICATION: November 2005
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO **IMPACT FACTOR (*)**: 1.820

2004

23. **AUTHORS** : J. H. Gunther, R. López-Valcarce
TITLE: *Blind input, initial state, and system identification of SIMO Laguerre systems*
JOURNAL/BOOK TITLE: *IEEE Trans. Signal Processing*, vol. 52(12), pp. 3357-3369 **KEY**: A
PUBLICATION DATE: December 2004
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO **IMPACT FACTOR (*)**: 1.755

22. **AUTHORS** : R. López-Valcarce
TITLE: *Minimum delay spread TEQ design in multicarrier systems*
JOURNAL/BOOK TITLE: *IEEE Signal Processing Letters*, vol. 11(8), pp. 682-685 **KEY**: A
PUBLICATION DATE: August 2004
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO **IMPACT FACTOR (*)**: 0.995

21. AUTHORS : R. López-Valcarce, C. Mosquera, F. Pérez-González
TITLE: Estimation of road vehicle speed using two omnidirectional microphones: a Maximum Likelihood approach
JOURNAL/BOOK TITLE: EURASIP Journal on Applied Signal Processing, vol. 2004(8), pp. 1059-1077
KEY: A
PUBLICATION DATE: August 2004
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.583

20. AUTHORS : R. López-Valcarce
TITLE: Realizable linear and decision feedback equalizers: properties and connections
JOURNAL/BOOK TITLE: IEEE Trans. Signal Processing, vol. 52(3), pp. 757-773 KEY: A
PUBLICATION DATE: March 2004
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 1.755

19. AUTHORS : R. López-Valcarce
TITLE: Cost minimization interpretation of the Fourth-Power phase estimator and links to the Multimodulus Algorithm
JOURNAL/BOOK TITLE: IEE Electronics Letters, vol. 40(12), pp. 278-279 KEY: A
PUBLICATION DATE: February 19, 2004
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.968

2003

18. AUTHORS : R. López-Valcarce
TITLE: An algorithm for unit-norm equation error system identification based on the method of multipliers
JOURNAL/BOOK TITLE: IEEE Trans. Signal Processing, vol. 51(12), pp. 3080-3085 KEY: A
PUBLICATION DATE: December 2003
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 1.458

17. AUTHORS : R. López-Valcarce, F. Pérez-González
TITLE: Subband hyperstable adaptive IIR filters
JOURNAL/BOOK TITLE: IEEE Trans. Circuits and Systems II: Analog and Digital Signal Processing, vol. 50(7), pp. 383-389 KEY: A
PUBLICATION DATE: July 2003
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.681

16. AUTHORS : R. López-Valcarce, S. Dasgupta
TITLE: Second order statistical properties of nonlinearly distorted phase shift keyed (PSK) signals
JOURNAL/BOOK TITLE: IEEE Communications Letters, vol. 7(7), pp. 323-325 KEY: A
PUBLICATION DATE: July 2003
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 1.196

2001

15. AUTHORS : R. López-Valcarce, S. Dasgupta
TITLE: *Blind equalization of nonlinear channels from second order statistics*
JOURNAL/BOOK TITLE: IEEE Trans. Signal Processing, vol. 49(12), pp. 3084-3097 KEY: A
PUBLICATION DATE: December 2001
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 1.268

14. AUTHORS : R. López-Valcarce, F. Pérez-González
TITLE: *Efficient reinitialization of the prewhitened constant modulus algorithm*
JOURNAL/BOOK TITLE: IEEE Communications Letters, vol. 5(12), pp. 488-490 KEY: A
PUBLICATION DATE: December 2001
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.689

13. AUTHORS : R. López-Valcarce, Z. Ding, S. Dasgupta
TITLE: *Equalization and interference cancellation in linear multi-user systems based on second order statistics*
JOURNAL/BOOK TITLE: IEEE Trans. Signal Processing, vol. 49(9), pp. 2042-2049 KEY: A
PUBLICATION DATE: September 2001
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 1.268

12. AUTHORS : R. López-Valcarce, S. Dasgupta
TITLE: *Blind channel identification with colored sources based on second order statistics: a linear prediction approach*
JOURNAL/BOOK TITLE: IEEE Trans. Signal Processing, vol. 49(9), pp. 2050-2059 KEY: A
PUBLICATION DATE: September 2001
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 1.268

11. AUTHORS : R. López-Valcarce, F. Pérez-González
TITLE: *Adaptive lattice IIR filtering revisited: Convergence issues and new algorithms with improved stability properties*
JOURNAL/BOOK TITLE: IEEE Trans. Signal Processing, vol. 49(4), pp. 811-821 KEY: A
PUBLICATION DATE: April 2001
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 1.268

10. AUTHORS : R. López-Valcarce, S. Dasgupta
TITLE: *Some properties of the matrix exponential*
JOURNAL/BOOK TITLE: IEEE Trans. Circuits and Systems II: Analog and Digital Signal Processing, vol. 48(2), pp. 213-215 KEY: A
PUBLICATION DATE: February 2001
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.559

2000

9. *AUTHORS* : R. López-Valcarce, S. Dasgupta

TITLE: Exponential asymptotic stability of time-varying inverse prediction error filters

JOURNAL/BOOK TITLE: IEEE Trans. Signal Processing, vol. 48(7), pp. 1928-1936

KEY: A

PUBLICATION DATE: July 2000

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO *IMPACT FACTOR* (*): 1.203

1999

8. *AUTHORS* : R. López-Valcarce, F. Pérez-González

TITLE: Some remarks on the lattice form of the Steiglitz-McBride iteration

JOURNAL/BOOK TITLE: IEEE Signal Processing Letters, vol. 6(11), pp. 290-292

KEY: A

PUBLICATION DATE: November 1999

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO *IMPACT FACTOR* (*): 0.806

7. *AUTHORS* : R. López-Valcarce, C. Mosquera, F. Pérez-González

TITLE: Hyperstable adaptive IIR algorithms with polyphase structures: analysis and design

JOURNAL/BOOK TITLE: IEEE Trans. Signal Processing, vol. 47(7), pp. 2043-2046

KEY: A

PUBLICATION DATE: July 1999

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO *IMPACT FACTOR* (*): 1.552

6. *AUTHORS* : R. López-Valcarce, S. Dasgupta

TITLE: A new proof for the stability of equation-error models

JOURNAL/BOOK TITLE: IEEE Signal Processing Letters, vol. 6(6), pp. 148-150

KEY: A

PUBLICATION DATE: June 1999

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO *IMPACT FACTOR* (*): 0.806

1998

5. *AUTHORS* : R. López-Valcarce, S. Dasgupta

TITLE: Stable estimates in equation-error identification: an open problem

JOURNAL/BOOK TITLE: Open Problems in Mathematical Systems and Control Theory, Springer-Verlag (ISBN 1-85233-044-9)

KEY: CL

PUBLICATION DATE: 1998

JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR OF PUBLICATION (*): YES NO *IMPACT FACTOR* (*): -

4. AUTHORS : R. López-Valcarce, S. Dasgupta
TITLE: *On the stability of equation-error estimates of all-pole systems*
JOURNAL/BOOK TITLE: IEEE Signal Processing Letters, vol. 5(10), pp. 268-270 KEY: A
PUBLICATION DATE: October 1998
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.588

3. AUTHORS : C. Mosquera, R. López-Valcarce, F. Pérez-González
TITLE: *A note on the bias of the modified output error algorithm*
JOURNAL/BOOK TITLE: IEEE Trans. on Automatic Control, vol. 43(9), pp. 1261-1262 KEY: A
PUBLICATION DATE: September 1998
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.588

2. AUTHORS : R. López-Valcarce, F. Pérez-González
TITLE: *An adaptive recursive filter for autoregressive inputs*
JOURNAL/BOOK TITLE: Int. Journal of Adaptive Control and Signal Processing, vol. 12(6), pp. 467-494
KEY: A PUBLICATION DATE: September 1998
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.181

1997

1. AUTHORS : R. López-Valcarce, F. Pérez-González
TITLE: *New results and theoretical analysis of the master-slave family of recursive identification algorithms*
JOURNAL/BOOK TITLE: Signal Processing, vol. 58(1), pp. 79-94 KEY: A
PUBLICATION DATE: April 1997
JOURNAL WITHIN THE 25% HIGHEST IMPACT FACTOR IN ITS KNOWLEDGE AREA AT THE YEAR
OF PUBLICATION (*): YES NO IMPACT FACTOR (*): 0.432

PARTICIPATION IN SIGNIFICANT RESEARCH CONTRACTS WITH INDUSTRY AND/OR CIVIL ADMINISTRATIONS

13. **CONTRACT TITLE: *Signal processing for digital predistortion***

FUNDING ENTITIES: TRedess 2010, S.L.

LENGTH FROM:31/10/2014 TO: 15/12/2014

PRINCIPAL INVESTIGATOR: Roberto López Valcarce

12. **CONTRACT TITLE: *Study, analysis and implementation of spectrum sensing algorithms for cognitive radio scenarios***

FUNDING ENTITIES: Galician R&D Center for Telecommunications (GRADIANT)

LENGTH FROM:12/02/2014 TO: 31/05/2014

PRINCIPAL INVESTIGATOR: Roberto López Valcarce

11. **CONTRACT TITLE: *Adaptive digital predistorter for DVB-T modulators***

FUNDING ENTITIES: Galician R&D Center for Telecommunications (GRADIANT)

LENGTH FROM:01/07/2011 TO: 28/02/2013

PRINCIPAL INVESTIGATOR: Roberto López Valcarce

10. **CONTRACT TITLE: *Fixed digital predistorter for DVB-T modulators***

FUNDING ENTITIES: Galician R&D Center for Telecommunications (GRADIANT)

LENGTH FROM:01/03/2010 TO: 28/02/2011

PRINCIPAL INVESTIGATOR: Roberto López Valcarce

9. **CONTRACT TITLE: *Study and simulation at the physical layer level of the new terrestrial broadcast standard DVB-T2***

FUNDING ENTITIES: Sistemas Audiovisuales Itelsis, S.L.

LENGTH FROM:01/11/2009 TO: 31/12/2009

PRINCIPAL INVESTIGATOR: Roberto López Valcarce

8. **CONTRACT TITLE: *Echo canceller in Intermediate Frequency for communication equipment***

FUNDING ENTITIES: Galician R&D Center for Telecommunications (GRADIANT)

LENGTH FROM:11/12/2008 TO: 31/12/2009

PRINCIPAL INVESTIGATOR: Roberto López Valcarce

7. **CONTRACT TITLE: *Design and development of a digital sampling rate conversion and equalization stage for communications equipment***

FUNDING ENTITIES: Sistemas Audiovisuales Itelsis, S.L.

LENGTH FROM:07/03/2008 TO: 06/10/2008

PRINCIPAL INVESTIGATOR: Roberto López Valcarce

6. **CONTRACT TITLE: *Robust spectral shaping for communications equipment***

FUNDING ENTITIES: Tredess 2010, S. L. (Santiago de Compostela, Spain)

LENGTH FROM: July 1, 2007

TO: June 30, 2008

PRINCIPAL INVESTIGATORS: Roberto López Valcarce

5. CONTRACT TITLE: **Distortion compensation for power amplifier systems**
FUNDING ENTITIES: Tredess 2010, S. L. (Santiago de Compostela, Spain)
LENGTH FROM: June 1, 2005 TO: May 31, 2007
PRINCIPAL INVESTIGATORS: Roberto López Valcarce

4. CONTRACT TITLE: **R&D Contract between University of Vigo and Telcor**
FUNDING ENTITIES: Telcor Group (Santiago de Compostela, Spain)
LENGTH FROM: 23-V-2005 TO: 22-V-2007
PROJECT DIRECTOR: Fernando Pérez González
TECHNICAL CODIRECTORS: Carlos Mosquera Nartallo and Roberto López Valcarce

3. CONTRACT TITLE: **R&D Contract between University of Vigo and Televés, S.A.**
FUNDING ENTITIES: Televés, S.A. (Santiago de Compostela, Spain)
LENGTH FROM: 1-IV-2004 TO: 31-III-2005
PRINCIPAL INVESTIGATOR: Fernando Pérez González

2. CONTRACT TITLE: **Blind equalizer for communications equipment**
FUNDING ENTITIES: Tredess 2010, S. L. (Santiago de Compostela, Spain)
LENGTH FROM: May 1, 2003 TO: August 8, 2004
PRINCIPAL INVESTIGATORS: Roberto López Valcarce and Carlos Mosquera Nartallo

1. CONTRACT TITLE: **Planning of Terrestrial Digital TV Networks for mobile receivers**
FUNDING ENTITIES: Televés S.A. (Santiago de Compostela, Spain)
LENGTH FROM: January 1, 1999 TO: December 31, 2000
PRINCIPAL INVESTIGATORS: Fernando Pérez González

PATENTS AND UTILITY MODELS

5. TITLE: Flat Spectrum Signal Processing System

INVENTORS: A. Prieto Davila, C. Mosquera Nartallo, R. López Valcarce, F. Pérez-González

APPLICATION No.: EP 1 555 769 (A3) - 21/11/2012

PRIORITY COUNTRY: ES

ASSOCIATED SPANISH PATENT: ES2274659 (B2) - 01/08/2008

PRIORITY DATE: 23-XII-2003

APPLICANT/PROPRIETOR: Tredess 2010, S.L.

OTHER DESIGNATED STATES: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU

MC NL PL PT RO SE SI SK TR AL BA HR LV MK YU

OPERATING COMPANIES: Tredess 2010, S.L.

4. TITLE: Signal Processing System for Spectrum Shaping

INVENTORS: R. López Valcarce, C. Mosquera Nartallo, F. Pérez-González, A. Prieto Davila

APPLICATION No.: EP 1 744 455 (A3) - 28/11/2012

PRIORITY COUNTRY: ES

ASSOCIATED SPANISH PATENT: ES2297976 (B2) - 01/12/2008

PRIORITY DATE: 12-VII-2005

APPLICANT/PROPRIETOR: Tredess 2010, S.L.

OTHER DESIGNATED STATES: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU

MC NL PL PT RO SE SI SK TR

OPERATING COMPANIES: Tredess 2010, S.L.

3. TITLE: Radio and/or television signal measuring device

INVENTORS: J.L. Ledo Gaviero, J. Rey Juncal, G. Loyácono Pardo, M.A. Ucha Cuevas, F. Pérez

González, C. Mosquera Nartallo, R. López Valcarce

APPLICATION No.: EP 2128634 (A1) - 02/12/2009

PRIORITY COUNTRY: ES

ASSOCIATED SPANISH PATENT: ES2341206 (B1) - 03/05/2011

PRIORITY DATE: 26-V-2008

APPLICANT/PROPRIETOR: Sistemas Integrados de Servicios de Telecontrol, S.L.

OTHER DESIGNATED STATES: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT

LU LV MC MK MT NL NO PL PT RO SE SI SK TR

OPERATING COMPANIES: Sistemas Integrados de Servicios de Telecontrol, S.L.

2. TITLE: Radio and/or television signal measuring device

INVENTORS: J.L. Ledo Gaviero, J. Rey Juncal, G. Loyácono Pardo, M.A. Ucha Cuevas, F. Pérez

González, C. Mosquera Nartallo, R. López Valcarce

APPLICATION No.: EP 21111050 (A3) - 25/04/2012

PRIORITY COUNTRY: ES

ASSOCIATED SPANISH PATENT: ES2361310 (A1) - 16/06/2011

PRIORITY DATE: 27-XI-2008

APPLICANT/PROPRIETOR: Sistemas Integrados de Servicios de Telecontrol, S.L.

OTHER DESIGNATED STATES: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT

LU LV MC MK MT NL NO PL PT RO SE SI SK TR

OPERATING COMPANIES: Sistemas Integrados de Servicios de Telecontrol, S.L.

1. TITLE: Sistema de clasificación de señales de televisión

INVENTORS: J.L. Ledo Gaviero, M.A. Ucha Cuevas, C. Mosquera Nartallo, F. Pérez González, R. López Valcarce

APPLICATION No.: ES2367745 (A1) - 8/11/2011

PRIORITY COUNTRY: ES

PRIORITY DATE: 7-X-2009

APPLICANT/PROPRIETOR: Sistemas Integrados

de Servicios de Telecontrol, S.L.

OTHER DESIGNATED STATES:

OPERATING COMPANIES: Sistemas Integrados de Servicios de Telecontrol, S.L.

STAYS IN INTERNATIONAL CENTRES

KEY: D=PhD student, P=postdoctoral. G= guest, S=staff, O=others (specify)

CENTRE: Polytechnic University of Catalonia

PLACE: Barcelona COUNTRY: Spain YEAR: 2003 LENGTH: 12 months

TOPIC: Estimation and equalization of communication channels KEY: P

CENTRE: University of Iowa

PLACE: Iowa City, IA COUNTRY: USA YEAR: 1996-1998 LENGTH: 22 months

TOPIC: Linear prediction of nonstationary processes KEY: O (M.S. in Electrical & Computer Engineering)

CENTRE: University of Iowa

PLACE: Iowa City, IA COUNTRY: USA YEAR: 1998-2000 LENGTH: 34 months

TOPIC: Blind equalization of nonlinear digital communication channels KEY: D

COMMUNICATIONS TO INTERNATIONAL CONFERENCES

2016

86. *AUTHORS: R. López-Valcarce, N. González-Prelcic, C. Rusu, R.W. Heath Jr.*
TITLE: Hybrid Precoders and Combiners for mmWave MIMO Systems with Per-Antenna Power constraints
TYPE OF PRESENTATION: Contributed paper
CONGRESS: Global Communications Conference (GLOBECOM 2016)
LOCATION: Washington, USA *YEAR: December 2016*

85. *AUTHORS: P. Gimenez-Febrer, A. Pagès-Zamora, R. López-Valcarce*
TITLE: Online EM-based distributed estimation in sensor networks with faulty nodes
TYPE OF PRESENTATION: Contributed paper
CONGRESS: European Signal Processing Conference (EUSIPCO 2016)
LOCATION: Budapest, Hungary *YEAR: September 2016*

84. *AUTHORS: C. Mosquera, R. López-Valcarce*
TITLE: Bandwidth Allocation in Partial Duplex Relaying
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Workshop on Signal Processing Advances for Wireless Communications (SPAWC 2016)
LOCATION: Edinburgh, Scotland *YEAR: July 2016*

83. *AUTHORS: R. López-Valcarce, D. Romero*
TITLE: Design of Data-Injection Adversarial Attacks against Spatial Field Detectors
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Statistical Signal Processing (SSP 2016)
LOCATION: Palma de Mallorca, Spain *YEAR: June 2016*

82. *AUTHORS: R. López-Valcarce, D. Romero, J. Sala, A. Pagès-Zamora*
TITLE: Distributed Multivariate Regression with Unknown Noise Covariance in the presence of Outliers: A Minimum Description Length Approach
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Statistical Signal Processing (SSP 2016)
LOCATION: Palma de Mallorca, Spain *YEAR: June 2016*

2015

81. *AUTHORS: R. López-Valcarce, D. Romero*
TITLE: Attack detectors for data aggregation in clustered sensor networks
TYPE OF PRESENTATION: Contributed paper
CONGRESS: European Signal Processing Conference (EUSIPCO 2015)
LOCATION: Nice, France *YEAR: September 2015*

2014

75. *AUTHORS: J. F. Schmidt, R. López-Valcarce*
TITLE: Detecting Misreporting Attacks to the Proportional Fair Scheduler
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Information Forensics and Security (WIFS 2014)
LOCATION: Atlanta, USA *YEAR: December 2014*

74. *AUTHORS: J. F. Schmidt, D. Romero, R. López-Valcarce*
TITLE: Low-power Active Interference Cancellation for OFDM Spectrum Sculpting
TYPE OF PRESENTATION: Contributed paper
CONGRESS: European Signal Processing Conference (EUSIPCO 2014)
LOCATION: Lisbon, Portugal *YEAR: September 2014*

73. *AUTHORS: D. Romero, R. López-Valcarce*
TITLE: Nearly-Optimal Compression Matrices for Signal Power Estimation
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Workshop on Signal Processing Adv. in Wireless Communications (SPAWC 2014)
LOCATION: Toronto, Canada *YEAR: June 2014*

72. *AUTHORS: S. Valcárcel-Macua, C. Moreno-León, J. Samuel-Romero, S. Silva Pereira, J. Zazo, A. Pagès-Zamora, R. López-Valcarce, S. Zazo*
TITLE: How to Implement Doubly-Stochastic Matrices for Consensus-Based Distributed Algorithms
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM 2014)
LOCATION: A Coruña, Spain *YEAR: June 2014*

71. *AUTHORS: E. Antonio-Rodríguez, R. López-Valcarce, T. Riihonen, S. Werner, R. Wichman*
TITLE: SINR Optimization in Wideband Full-Duplex MIMO Relays under Limited Dynamic Range
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM 2014)
LOCATION: A Coruña, Spain *YEAR: June 2014*

70. *AUTHORS: J. F. Schmidt, R. López-Valcarce*
TITLE: Antenna competition to boost Active Interference Cancellation in cognitive MIMO-OFDM
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM 2014)
LOCATION: A Coruña, Spain *YEAR: June 2014*

69. *AUTHORS: R. López-Valcarce, S. Silva Pereira, A. Pagès-Zamora*
TITLE: Distributed Total Least Squares Estimation over Networks
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2014)
LOCATION: Florence, Italy *YEAR: May 2014*

68. *AUTHORS: J. F. Schmidt, R. López-Valcarce*
TITLE: OFDM spectrum sculpting with Active Interference Cancellation: keeping spectral spurs at bay
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2014)
LOCATION: Florence, Italy YEAR: May 2014

2013

67. *AUTHORS: J. F. Schmidt, R. López-Valcarce*
TITLE: Low-Complexity Primary User Protection for Cognitive OFDM
TYPE OF PRESENTATION: Contributed paper
CONGRESS: European Signal Processing Conference (EUSIPCO 2013)
LOCATION: Marrakech, Morocco YEAR: September 2013

66. *AUTHORS: E. Antonio-Rodriguez, R. López-Valcarce, T. Riihonen, S. Werner, R. Wichman*
TITLE: Adaptive Self-interference Cancellation in Wideband Full-Duplex Decode-and-Forward MIMO Relays
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Workshop on Signal Processing Advances for Wireless Communications (SPAWC 2013)
LOCATION: Darmstadt, Germany YEAR: June 2013

65. *AUTHORS: D. Romero, R. López-Valcarce*
TITLE: Spectrum Sensing in Time-Varying Channels Using Multiple Antennas
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Workshop on Signal Processing Advances for Wireless Communications (SPAWC 2013)
LOCATION: Darmstadt, Germany YEAR: June 2013

64. *AUTHORS: D. Romero, R. López-Valcarce, G. Leus*
TITLE: Compressive Wideband Spectrum Sensing with Spectral Prior Information
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2013)
LOCATION: Vancouver, Canada YEAR: May 2013

63. *AUTHORS: E. Antonio-Rodriguez, R. López-Valcarce, T. Riihonen, S. Werner, R. Wichman*
TITLE: Autocorrelation-based adaptation rule for feedback equalization in wideband full-duplex amplify-and-forward MIMO relays
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2013)
LOCATION: Vancouver, Canada YEAR: May 2013

62. *AUTHORS: E. Antonio-Rodríguez, R. López-Valcarce*
TITLE: Cancelling Self-Interference in Full-Duplex relays without Angle-of-Arrival information
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2013)
LOCATION: Vancouver, Canada YEAR: May 2013

61. *AUTHORS: S. Silva Pereira, A. Pagès-Zamora, R. López-Valcarce*
TITLE: A Diffusion-based distributed EM algorithm for density estimation in wireless sensor networks
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2013)
LOCATION: Vancouver, Canada YEAR: May 2013

2012

60. *AUTHORS: D. Romero, R. López-Valcarce, G. Leus*
TITLE: Generalized Matched-Filter detector for fast-fading channels
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2012)
LOCATION: Kyoto, Japan YEAR: March 2012

59. *AUTHORS: M. E. Domínguez-Jiménez, N. González-Prelcic, G. Vazquez-Vilar, R. López-Valcarce*
TITLE: Design of Universal Multicoset sampling patterns for compressed sensing of multiband sparse signals
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2012)
LOCATION: Kyoto, Japan YEAR: March 2012

58. *AUTHORS: E. Antonio-Rodríguez, R. López-Valcarce*
TITLE: Adaptive self-interference suppression for full-duplex relays with multiple receive antennas
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Adv. in Wireless Communications (SPAWC 2012)
LOCATION: Çesme, Turkey YEAR: June 2012

57. *AUTHORS: D. Romero, J. Vía, R. López-Valcarce, I. Santamaría*
TITLE: Detection of Gaussian Signals in Unknown Time-Varying Channels
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Statistical Signal Processing Workshop (SSP 2012)
LOCATION: Ann Arbor, Michigan, USA YEAR: August 2012

56. *AUTHORS: D. Romero, R. López-Valcarce*
TITLE: Detection of Unknown Constant Magnitude Signals in Time-Varying Channels
TYPE OF PRESENTATION: Contributed paper
CONGRESS: International Workshop on Cognitive Information Processing (CIP 2012)
LOCATION: Baiona, Spain YEAR: May 2012

2011

55. *AUTHORS: D. Romero, R. López-Valcarce*
TITLE: Bandlimited or constant envelope? Exploiting wavefrom properties in Wireless Microphone detection
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP 2011)
LOCATION: San Juan, Puerto Rico YEAR: December 2011

54. *AUTHORS: D. Romero, R. López-Valcarce*
TITLE: Distributed spectrum sensing with multi-antenna sensors under calibration errors
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC 2011)
LOCATION: San Francisco, USA YEAR: June 2011

53. *AUTHORS: D. Romero, R. López-Valcarce*
TITLE: Multiantenna detection of constant-envelope signals in noise of unknown variance
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC 2011)
LOCATION: San Francisco, USA YEAR: June 2011

52. *AUTHORS: G. Vazquez-Vilar, R. López-Valcarce, A. Pandharipande*
TITLE: Detection diversity of multiantenna spectrum sensors
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2011)
LOCATION: Prague, Check Republic YEAR: May 2011

51. *AUTHORS: D. Ramírez, G. Vazquez-Vilar, R. López-Valcarce, J. Vía, I. Santamaría*
TITLE: Multiantenna detection under noise uncertainty and primary user spatial structure
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2011)
LOCATION: Prague, Check Republic YEAR: May 2011

50. *AUTHORS: D. Manjarres, J. Del Ser, S. Gil-Lopez, M. Vecchio, I. Landa-Torres, R. Lopez-Valcarce*
TITLE: On the application of a hybrid Harmony Search algorithm to node localization in anchor-based Wireless Sensor Networks
TYPE OF PRESENTATION: Contributed paper
CONGRESS: Int. Conf. on Intelligent Systems Design and Applications (ISDA 2011)
LOCATION: Córdoba, Spain YEAR: November 2011

49. *AUTHORS: M. Vecchio, R. Lopez-Valcarce, F. Marcelloni*
TITLE: A study on the application of different two-objective evolutionary algorithms to the node localization problem in wireless sensor networks
TYPE OF PRESENTATION: Contributed paper
CONGRESS: Int. Conf. on Intelligent Systems Design and Applications (ISDA 2011)
LOCATION: Córdoba, Spain *YEAR: November 2011*

48. *AUTHORS: M. Vecchio, R. Lopez-Valcarce, F. Marcelloni*
TITLE: Solving the node localization problem in WSNs by a two-objective evolutionary algorithm and local descent
TYPE OF PRESENTATION: Contributed paper
CONGRESS: World Congress on Nature and Biologically Inspired Computing (NaBIC 2011)
LOCATION: Salamanca, Spain *YEAR: October 2011*

47. *AUTHORS: M. Vecchio, R. Lopez-Valcarce, F. Marcelloni*
TITLE: An Effective Metaheuristic Approach to Node Localization in Wireless Sensor Networks
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Mobile Adhoc and Sensor Systems (MASS 2011)
LOCATION: Valencia, Spain *YEAR: October 2011*

2010

46. *AUTHORS: R. López-Valcarce, G. Vazquez-Vilar, J. Sala*
TITLE: Multiantenna spectrum sensing for Cognitive Radio: overcoming noise uncertainty
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 2nd International Workshop on Cognitive Information Processing (CIP 2010)
LOCATION: Elba, Italy *YEAR: June 2010*

45. *AUTHORS: G. Vazquez-Vilar, R. López-Valcarce, C. Mosquera, N. González-Prelcic*
TITLE: Wideband spectral estimation from compressed measurements exploiting a priori spectral information in cognitive radio systems
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Int. Conf. on Acoustics, Speech, and Signal Processing (ICASSP 2010)
LOCATION: Dallas (USA) *YEAR: March 2010*

44. *AUTHORS: D. Ramírez, J. Vía, I. Santamaría, R. López-Valcarce, L. L. Scharf*
TITLE: Multiantenna spectrum sensing: Detection of spatial correlation among time-series with unknown spectra
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2010)
LOCATION: Dallas (USA) *YEAR: March 2010*

43. *AUTHORS: E. Ben Salem, R. López-Valcarce, H. Besbes, S. Cherif*
TITLE: A finite interval constant modulus criterion for multicarrier channel shortening
TYPE OF PRESENTATION: Contributed paper
CONGRESS: European Wireless 2010
LOCATION: Lucca (Italy) YEAR: April 2010

2009

42. *AUTHORS: R. Elasm-Ksibi, H. Besbes, S. Cherif, R. López-Valcarce*
TITLE: Equivalent full-band implementation of sub-band subspace methods for frequency estimation
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 3rd International Conference on Signals, Circuits & Systems (SCS)
LOCATION: Djerba (Tunisia) YEAR: November 2009

41. *AUTHORS: E. Ben Salem, H. Besbes, S. Cherif, R. López-Valcarce*
TITLE: Blind channel shortening algorithm based on correlation property of multicarrier signals
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 3rd International Conference on Signals, Circuits & Systems (SCS)
LOCATION: Djerba (Tunisia) YEAR: November 2009

40. *AUTHORS: R. López-Valcarce, G. Vazquez Vilar, M. Alvarez-Díaz*
TITLE: Multiantenna detection of multicarrier primary signals exploiting spectral a priori information
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 4th International Conference on Cognitive Radio Oriented Wireless Networks and Communications (CrownCom)
LOCATION: Hannover (Germany) YEAR: June 2009

39. *AUTHORS: R. López-Valcarce, G. Vazquez Vilar*
TITLE: Wideband spectrum sensing in cognitive radio: joint estimation of noise variance and multiple signal levels
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC 2009)
LOCATION: Perugia (Italy) YEAR: June 2009

38. *AUTHORS: E. Ben Salem, H. Besbes, R. López-Valcarce, S. Cherif*
TITLE: Maximization of Useful-to-Null Subcarrier Energy Ratio for blind multicarrier SIMO channel shortening
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 17th European Signal Processing Conference (EUSIPCO 2009)
LOCATION: Glasgow (Scotland) YEAR: August 2009

37. *AUTHORS: R. Elasmı-Ksıbi, R. L3pez-Valcarce, H. Besbes, S. Cherif*
TITLE: Prefiltered Pisarenko frequency estimator for multiple real-valued sinusoids
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 17th European Signal Processing Conference (EUSIPCO 2009)
LOCATION: Glasgow (Scotland) YEAR: August 2009

36. *AUTHORS: R. Elasmı-Ksıbi, H. Besbes, S. Cherif, R. L3pez-Valcarce*
TITLE: Oversampled Filter Bank for Frequency Estimation
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 6th International Symposium on Image and Signal Processing and Analysis (ISPA 2009)
LOCATION: Salzburg (Austria) YEAR: September 2009

2008

35. *AUTHORS: R. L3pez-Valcarce, C. Mosquera*
TITLE: Maximum Likelihood SNR estimation for asynchronously oversampled OFDM signals
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC 2008)
LOCATION: Recife (Brasil) YEAR: July 2008

34. *AUTHORS: C. Mosquera, R. L3pez-Valcarce, S. Jayaweera*
TITLE: Distributed Estimation with Noisy Exchanges
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Advances in Wireless Communications (SPAWC 2008)
LOCATION: Recife (Brasil) YEAR: July 2008

33. *AUTHORS: R. Elasmı-Ksıbi, R. L3pez-Valcarce, H. Besbes, S. Cherif, M. Jaidane*
TITLE: A family of frequency estimators using higher-order sample covariance lags for real sinusoid detection
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 16th European Signal Processing Conference (EUSIPCO 2008)
LOCATION: Lausanne (Switzerland) YEAR: September 2008

32. *AUTHORS: E. Ben Salem, R. L3pez-Valcarce, H. Besbes S. Cherif.*
TITLE: Lattice implementation of Sum-squared Auto-correlation Minimization (SAM) channel shortener.
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 16th European Signal Processing Conference (EUSIPCO 2008)
LOCATION: Lausanne (Switzerland) YEAR: September 2008

31. *AUTHORS: M. Álvarez-Díaz, R. López-Valcarce, C. Mosquera*
TITLE: SNR estimation with heterogeneous frames
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 4th Advanced Satellite Mobile Systems Conference (ASMS 08)
LOCATION: Bologna (Italy) YEAR: August 2008

30. *AUTHORS: W. Gappmair, R. López-Valcarce, C. Mosquera*
TITLE: ML and EM Algorithm for non-data-aided SNR Estimation of Linearly Modulated Signals.
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 6th International Symposium on Communication Systems, Networks and Signal Processing (CNSDSP 08)
LOCATION: Graz (Austria) YEAR: July 2008

2007

29. *AUTHORS: Roberto López-Valcarce, Carlos Mosquera and Wilfried Gappmair*
TITLE: Iterative envelope-based SNR estimation for non-constant modulus constellations
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Advances for Wireless Communications (SPAWC 07)
LOCATION: Helsinki (Finland) YEAR: June 2007

2006

28. *AUTHORS: Carlos Mosquera, Sandro Scalise and Roberto López-Valcarce*
TITLE: Symbol rate estimation for DVB-S2 broadcasting
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 9th Int. Workshop on Signal Processing Advances for Space Communications
LOCATION: Noordwijk (Holland) YEAR: September 2006

27. *AUTHORS: Roberto López-Valcarce*
TITLE: Analysis of non-data-aided magnitude gain estimators
TYPE OF PRESENTATION: Invited paper
CONGRESS: Proc. of the 3rd Int. Symp. on Image/Video and Communications (ISIVC 2006)
LOCATION: Hammamet (Tunisia) YEAR: September 2006

26. *AUTHORS: Roberto López-Valcarce and Carlos Mosquera*
TITLE: Blind carrier phase estimation for non-equiprobable constellations
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Advances for Wireless Communications (SPAWC 06)
LOCATION: Cannes (France) YEAR: July 2006

25. *AUTHORS: Roberto López-Valcarce and Soura Dasgupta*
TITLE: Toward a theory of multirate nonlinear systems
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Signal Processing Advances for Wireless Communications (SPAWC 06)
LOCATION: Cannes (France) YEAR: July 2006

2005

24. *AUTHORS: Roberto López-Valcarce*
TITLE: Analysis of a first-order adaptive recursive predictor
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 44th IEEE Conference on Decision and Control and European Control Conference (CDC-ECC 2005)
LOCATION: Seville (Spain) YEAR: December 2005

23. *AUTHORS: Marcos Álvarez-Díaz and Roberto López-Valcarce*
TITLE: Diamond contour-based phase recovery for (cross)-QAM constellations
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Statistical Signal Processing (SSP 2005)
LOCATION: Bordeaux (France) YEAR: July 2005

2004

22. *AUTHORS: Roberto López-Valcarce, David Hurtado, Carlos Mosquera and Fernando Pérez-González*
TITLE: Bias analysis and removal of a microphone array based road traffic speed estimator
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 12th European Signal Processing Conference (EUSIPCO 2004)
LOCATION: Vienna (Austria) YEAR: September 2004

21. *AUTHORS: Roberto López-Valcarce*
TITLE: Broadband analysis of a microphone array based road traffic speed estimator
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM 2004)
LOCATION: Sitges (Spain) YEAR: July 2004

2003

20. *AUTHORS: Roberto López-Valcarce*
TITLE: Blind iterative decision feedback equalizers for block QAM transmission systems
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 6th Baiona Workshop on Signal Processing in Communications
LOCATION: Baiona (Spain) YEAR: September 2003

19. *AUTHORS: Roberto López-Valcarce*
TITLE: On the applicability to correlated sources of a blind channel equalization method robust to order overestimation
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 13th IFAC Symposium on System Identification (SYSID 2003)
LOCATION: Rotterdam (Netherlands) YEAR: August 2003

2002

18. *AUTHORS: Roberto López-Valcarce*
TITLE: Automatic delay selection in blind channel equalization: a prewhitening + eigenvector approach
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 36th Asilomar Conference on Signals, Systems and Computers
LOCATION: Pacific Grove, CA (USA) YEAR: November 2002

17. *AUTHORS: Roberto López-Valcarce*
TITLE: Channel equalization with staggered modulation formats
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 14th International Conference on Digital Signal Processing (DSP 2002)
LOCATION: Santorini (Greece) YEAR: July 2002

16. *AUTHORS: F. Pérez-González, R. López-Valcarce, C. Mosquera*
TITLE: Road vehicle speed estimation from a two-microphone array
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2002)
LOCATION: Orlando, FL (USA) YEAR: May 2002

15. *AUTHORS: R. López-Valcarce, F. Pérez-González*
TITLE: Analysis of the prewhitened constant modulus cost function
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2002)
LOCATION: Orlando, FL (USA) YEAR: May 2002

2001

14. *AUTHORS: R. López-Valcarce, S. Dasgupta*
TITLE: On blind equalization of rank deficient nonlinear channels
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Statistical Signal Processing (SSP 2001)
LOCATION: Singapur YEAR: August 2001

13. *AUTHORS: R. López-Valcarce, S. Dasgupta*
TITLE: Blind equalization of nonlinear channels from second-order statistics using precoding and channel diversity
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2001)
LOCATION: Salt Lake City, UT (USA) YEAR: May 2001

12. *AUTHORS: R. López-Valcarce, S. Dasgupta*
TITLE: Blind equalization of nonlinear digital satellite links with PSK modulation
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Symposium on Circuits and Systems (ISCAS 2001)
LOCATION: Sydney (Australia) YEAR: May 2001

11. *AUTHORS: R. López-Valcarce, S. Dasgupta*
TITLE: Second order statistics based blind channel equalization with correlated sources
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Symposium on Circuits and Systems (ISCAS 2001)
LOCATION: Sydney (Australia) YEAR: May 2001

2000

10. *AUTHORS: R. López-Valcarce, F. Pérez-González*
TITLE: On blind adaptive algorithms for IIR equalizers
TYPE OF PRESENTATION: Contributed paper
CONGRESS: 2000 Digital Signal Processing Workshop
LOCATION: Hunt, TX (USA) YEAR: October 2000

9. *AUTHORS: R. López-Valcarce, S. Dasgupta*
TITLE: The role of second-order statistics in blind equalization of nonlinear systems
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE Workshop on Statistical Signal and Array Processing (SSAP 2000)
LOCATION: Pocono Manor, PA (USA) YEAR: August 2000

8. *AUTHORS: R. López-Valcarce, F. Pérez-González*
TITLE: Misconvergence and stabilization of adaptive IIR lattice filters
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2000)
LOCATION: Istanbul (Turkey) YEAR: June 2000

7. *AUTHORS: R. López-Valcarce, S. Dasgupta*
TITLE: Blind channel identifiability/equalizability of single input multiple output nonlinear channels from second order statistics
TYPE OF PRESENTATION: Contributed paper
CONGRESS: IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2000)
LOCATION: Istanbul (Turkey) YEAR: June 2000

6. **AUTHORS:** Z. Ding, S. Dasgupta, R. López-Valcarce
TITLE: *Interference cancellation and blind equalization for linear multi-user systems*
TYPE OF PRESENTATION: *Contributed paper*
CONGRESS: *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2000)*
LOCATION: *Istanbul (Turkey)* **YEAR:** *June 2000*

1999

5. **AUTHORS:** R. López-Valcarce, S. Dasgupta
TITLE: *On the stability of the inverse time-varying prediction error filter obtained with the RWLS algorithm*
TYPE OF PRESENTATION: *Contributed paper*
CONGRESS: *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 1999)*
LOCATION: *Phoenix, AZ (USA)* **YEAR:** *March 1999*

4. **AUTHORS:** C. Mosquera, F. Pérez-González, R. López-Valcarce
TITLE: *Hyperstable polyphase adaptive IIR filters*
TYPE OF PRESENTATION: *Contributed paper*
CONGRESS: *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 1999)*
LOCATION: *Phoenix, AZ (USA)* **YEAR:** *March 1999*

1998

3. **AUTHORS:** R. López-Valcarce, S. Dasgupta, R. Tempo, M. Fu
TITLE: *Stability conditions for the time-varying linear predictor*
TYPE OF PRESENTATION: *Contributed paper*
CONGRESS: *IEEE Conference on Decision and Control (CDC 1998)*
LOCATION: *Tampa, FL (USA)* **YEAR:** *December 1998*

1997

2. **AUTHORS:** R. López-Valcarce, S. Dasgupta
TITLE: *Stable estimates in equation error identification*
CONGRESS: *IEEE Conference on Decision and Control (CDC 1997)*
LOCATION: *San Diego (USA)* **YEAR:** *December 1997* **TYPE OF PRESENTATION:** *Contributed paper*

1996

1. **AUTHORS:** R. López-Valcarce, F. Pérez-González
TITLE: *The Master-Slave family of system identification algorithms: theoretical results and new structures*
CONGRESS: *13th International Federation of Adaptive Control World Congress (IFAC 96)*
LOCATION: *San Francisco (USA)* **YEAR:** *June 1996* **TYPE:** *Contributed paper*

DOCTORAL THESES SUPERVISED

3. TITLE: Estimation, detection, and learning for dynamic spectrum access

Ph.D. STUDENT: Daniel Romero González

INSTITUTION: University of Vigo

DATE: May 2015

GRADE: Cum Laude

2. TITLE: Interference and Network Management in Cognitive Communication Systems

Ph.D. STUDENT: Gonzalo Vázquez Vilar

INSTITUTION: University of Vigo

DATE: June 2011

GRADE: Cum Laude

1. TITLE: Design of nonlinear precoding and estimation schemes for advanced communication systems

Ph.D. STUDENT: Marcos Álvarez-Díaz

INSTITUTION: University of Vigo

DATE: July 2010

GRADE: Cum Laude

ORGANIZATION OF R&D ACTIVITIES

TITLE:8th IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM 2014)
ACTIVITY: Local Arrangements Chair
SCOPE: International Congress
DATE: June 2014

TITLE:3rd International Workshop on Cognitive Information Processing (CIP 2012)
ACTIVITY: Finance Chair
SCOPE: International Congress
DATE: May 2012

TITLE:19th European Signal Processing Conference (EUSIPCO 2011)
ACTIVITY: Area Chair in the field of Signal Processing Theory, Detection and Estimation
SCOPE: International Congress
DATE: August 2011

TITLE: IEEE Communications Society Distinguished Lecturer Tour
ACTIVITY: Organization of a series of four talks by Prof. Zhi Ding, from University of California - Davis, at four different Spanish institutions – University of Vigo, University of A Coruña, University of Cantabria and Centro Tecnológico de Telecomunicaciones de Cataluña
DATE: June 2009

TITLE:6th Baiona Workshop on Signal Processing in Communications
ACTIVITY: Member of the Organizing Committee
SCOPE: International Congress
DATE: September 2003

EXPERIENCE IN R&D MANAGEMENT

TITLE: Sectorial Program for Information and Communication Technologies (ICT). Galician Plan for Research, Development and Innovation, Galician Regional Government (Xunta de Galicia)

ACTIVITY: Program Manager DATES: August 2010 - December 2013

TITLE: Technical Committee, National Program for Research, Development and Innovation for Societal Challenges 2014, Track 1: "Research Challenges". Evaluation and selection of grant applications. Thematic area: Electronics and Communication Technologies

ACTIVITY: Expert Reviewer DATES: January- February 2015

TITLE: Technical reviewer, Netherlands Research Council for Applied and Technical Sciences (STW). "Perspectief Program".

ACTIVITY: Expert Reviewer DATES: April 2012

TITLE: Technical Committee, Follow-up and evaluation of projects. National R&D Plan. Ministry of Science and Innovation. Thematic area: Electronics and Communication Technologies. Call: 2008.

ACTIVITY: Expert Reviewer DATES: March 2011

INTERNATIONAL COMMITTEE MEMBERSHIP

COMMITTEE: IEEE Transactions on Signal Processing Editorial Board

ORGANIZATION: IEEE Signal Processing Society

POST: Associate Editor and member of Editorial Board

DATES: 2007 - 2011

COMMITTEE: Signal Processing for Communications and Networking Technical Committee

ORGANIZATION: IEEE Signal Processing Society

POST: Elected Member

DATES: January 2011 – December 2013

OTHER ACHIEVEMENTS

- ◆ **2007 Galicia Regional Research Award**, Young Researcher track. Galician Regional Government (Xunta de Galicia).

- ◆ **2005 Best Paper Award of the IEEE Signal Processing Society**, for the article entitled "Realizable Linear and Decision Feedback Equalizers: Properties and Connections," published in the IEEE Trans. on Signal Processing, vol. 52 no. 3, pp. 757-773, March 2004.

- ◆ **Member of the Academic Commission in two PhD programs:**
 - *Marine Science, Technology and Management (DO*MAR)*, International Graduate College, "Campus of the Sea" ("Campus do Mar"), since 2011.
 - *Information and Communications Technology (Doc_TIC)*, University of Vigo, since 2012.

- ◆ **Ph. D. Special Honorific Mention**, University of Vigo, 2001

- ◆ **B.S. Special Honorific Mention**, University of Vigo, 1995

- ◆ **Recipient of a *Pedro Barrié de la Maza* Foundation Fellowship** (no. 340056) for continuation of studies abroad, 1996-1998.

- ◆ Regular reviewer for several of the most prestigious international journals on signal processing & communications, including:
 - IEEE Transactions on Signal Processing
 - IEEE Transactions on Communications
 - IEEE Transactions on Wireless Communications
 - IEEE Communications Letters
 - IEEE Signal Processing Letters
 - IEEE Transactions on Circuits and Systems II
 - EURASIP Journal on Applied Signal Processing
 - Elsevier Signal Processing
 - IEE Electronics Letters