
CURRICULUM VITAE

Humberto Bustince

February 14, 2014

PERSONAL DATA

Name: Humberto
DNI : 15829354H

Surname: Bustince Sola
Birth date : 10/01/1958

Professional data

Institution: Universidad Pública de Navarra
Faculty or School: Escuela Técnica Superior de Ingenieros Industriales y de Telecomunicación
Department.: Automática y Computación
Postal Adress: Campus Arrosadia s/n, 31006 Pamplona

Phone number: 00 34 948169253
Fax: 948168924
E-mail: bustince@unavarra.es

Level: Full professor since: 13/09/2011

Dedication: Full time

RESEARCH LINES

- ⤴ Fuzzy logic,
- ⤴ Fuzzy sets extensions,
- ⤴ Aggregation functions,
- ⤴ Image processing,
- ⤴ Classification,
- ⤴ Machine learning,
- ⤴ Biometrics.

ACADEMIC RECORD

Ms.C Degree	Place	Date
Physics	University of Salamanca	July -1983

Outstanding Ms. C. degree award in the Salamanca Faculty of Sciences, academic year 1982-1983.

Ph.D	Place	Date
Mathematics	Universidad Pública de Navarra	March-1994

1. PREVIOUS PROFESSIONAL ACTIVITIES

Position	Institution	Dates
Secondary school teacher	Spanish Ministry of Education and Science	1985-91
Teacher training program	Government of Navarra	1990-91
Service fee	Public University of Navarra	1991-94
Associate Professor	Public University of Navarra	1995-2011
Full professor	Public University of Navarra	2011-

Languages (Q = quite well, W = well, C = correctly)

Language	Spoken	Read	Written
English	W	W	W
French	Q	W	W

R&D PROJECTS WITH PUBLIC FUNDING

Title: RED TEMATICA ESPAÑOLA PARA EL AVANCE Y LA TRANSFERENCIA DE LA INTELIGENCIA COMPUTACIONAL APLICADA

Funding institution: SPANISH GOVERNMENT .REF. TIN2011-14083-E

Participants:

Since: 01/2012 **until:** 12/2013

Main researcher: Ulises Cortés.

BUDGET: 12.000 €

Title: USE OF FUZZY LOGIC IN DIGITAL IMAGE PROCESSING

Funding institution: Government of Navarra, Jerónimo de Ayanz Program

Participants: UPNA

Since: 01/01/2011 **until:** 31/12/2011

Main researcher: Bustince Sola, Humberto

Number of researchers: 10

BUDGET: 17.644 €

Title: TIN2010-15055 - NUEVO MODELO DE REPRESENTACION Y AGREGACION DE LA INFORMACION UTILIZANDO LAS EXTENSIONES DE LOS CONJUNTOS DIFUSOS. APLICACIONES

Funding institution: SPANISH GOVERNMENT

Participants: UPNA

Since: 01/01/2011 **until:** 31/12/2013

Main researcher: Bustince Sola, Humberto

Number of researchers: 8

BUDGET: 30.492 €

Title: TIN2009-05756 - Eurofuse workshop 2009. Preference modelling and decision analysis

Funding institution: SPANISH GOVERNMENT

Participants: UPNA

Since: 16/09/2009 **until:** 18/09/2009

Main researcher: Bustince Sola, Humberto

Number of researchers: 5

BUDGET: 10.000 €

Title: TIN2007-65981 - UNIFICATION, GENERATION AND APPLICATION OF INFORMATION MEASURES TO INTERVAL-VALUED TYPE-2 FUZZY SETS

Funding institution: SPANISH MINISTRY OF EDUCATION AND SCIENCE

Participants: PUBLIC UNIVERSITY OF NAVARRA

Since: 01/10/2007 **until:** 03/08/2010

Main researcher: Bustince Sola, Humberto

Number of researchers: 5

BUDGET: 56.870,00 €

Title: HP2006-0128 - Use of fuzzy logic in digital image segmentation models.
Funding institution: SPANISH MINISTRY OF EDUCATION AND SCIENCE
Participants: PUBLIC UNIVERSITY OF NAVARRA, UNIVERSIDAD DE TRAS OS MONTES E ALTO DOURO
Since: 01/01/2007 **until:** 31/03/2009
Main researcher: Bustince Sola, Humberto
Number of researchers: 5
BUDGET: 8.000 €

Title: Face recognition using type-2 fuzzy sets
Funding institution: Government of Navarra,
Participants: Public University of Navarra
Since: 25/07/2007 **until:** 16/12/2009
Main researcher: Bustince Sola, Humberto
BUDGET: Payment for a predoc student during the project

Title: MTM2005-08982-C04-04 -Application of interval-valued fuzzy sets to the treatment of skin spot images to diagnose melanomes
Funding institution: SPANISH MINISTRY OF EDUCATION AND SCIENCE
Participants: PUBLIC UNIVERSITY OF NAVARRA
Since: 31/12/2005 **until:** 30/12/2006
Main researcher: Bustince Sola, Humberto
Number of researchers: 4
BUDGET: 4.760,00 €

Title: RED NACIONAL DE TOMA DE DECISIONES, MODELADO Y AGREGACIÓN DE PREFERENCIAS (NATIONAL NETWORK IN DECISION MAKING PREFERENCE MODELLING AND AGGREGATION)
Funding institution: SPANISH MINISTRY OF SCIENCE AND TECHNOLOGY.REF. TIC-2002-11942-E
Participants:
Since: 01/2004 **until:** 12/2004
Main researcher: Enrique Herrera-Viedma
BUDGET: 18.000 €

Title: 555/1996 - EXPERT SYSTEM TO MEASURE THE RICE MATURITY. APPLICATION TO NAVARRA RICE CROPS.
Funding institution: Government of Navarra
Participants:
Since: 01/01/1997 **until:** 31/12/1999
Main researcher: Bustince Sola, Humberto
Number of researchers: 3
BUDGET: 1.500.000 pesetas

PUBLICATIONS

PUBLICATIONS IN JOURNAL WITH IMPACT FACTOR (JCR)

Authors. Lopez-Molina, C.; De Baets, B.; Bustince, H.; Indurain E.; Stupnanová, A.; Mesiar, R.;

Title: « **Bimigrativity of binary aggregation functions** »

In: **Information Sciences**

Ref. Journal: Book:

Issue: In Press

Pages, from: final:

Date: 2014

Category COMPUTER SCIENCE, INFORMATION SYSTEMS

Position:6/132

Impact factor 3.643

Citations in ISI:

Scopus:

Google Scholar

Authors: Guerra, C.; Jurio, A.; Bustince, H.; Lopez-Molina, C.;

Title: « **Multichannel generalization of the Upper-Lower Edge Detector using ordered weighted averaging operators** »

In **Journal of Intelligent and Fuzzy Systems**

Ref. Journal: Book:

Issue: Pages, from: to: Date: In press

Category: COMPUTER SCIENCE A.I.

Position: 81/115

Impact factor: 0.788

Citations in:

Scopus:

Google Scholar:

Authors: Bedregal B.; Bustince H.; Santiago, R.; Paternain, D.; Reiser, R.;

Title: « **Hesitant fuzzy negations** »

In **International Journal of Intelligent Systems**

Ref. Journal: Book:

Issue: Pages, from: final: Date: In press

Category: COMPUTER SCIENCE A.I.

Position: 49/115

Impact factor: 1.416

Citations in:

Scopus:

Google Scholar:

Authors. Bustince, H.; Galar, M.; Bedregal, B.; Kolesárová, A.; Mesiar, R.;

Title: « **A new approach to interval-valued Choquet integrals and the problem of ordering in interval-valued fuzzy sets applications** »

In: **IEEE Transactions on Fuzzy Systems**

Ref. Journal: Book:

Issue: 21 Pages, from: 1150 final: 1162

Date: 2013

Category: COMPUTER SCIENCE AI

Position: 1/114

Impact factor 5.484

ENGINEERING, ELECTRICAL & ELECTRONIC

Position: 3/242

Citations in ISI:

Scopus:

Google Scholar:

Authors. Orduna, R.; Jurio, A.; Paternain, D.; Bustince, H.; Melo-Pinto, P.; Barrenechea, E.;

Title: « **Segmentation of color images using a linguistic 2-tuples model** »

In: **Information Sciences**

Ref. Journal: Book:

Issue: 258 Pages, from: 339 final: 352

Date: 2014

Category COMPUTER SCIENCE, INFORMATION SYSTEMS

Position:6/132

Impact factor

3.643Citations in ISI:

Scopus:

Google Scholar

Authors: Jurio, A.; Bustince, H.; Pagola, M.; Couto, P.; Pedrycz, W.;

Title: « **New measures of homogeneity for image processing: an application to fingerprint segmentation** »

In **Soft Computing**

Ref. Journal: Book:

Issue: Pages, from: final:

Date: In press

Category: COMPUTER SCIENCE, A.I.

Position: 63/115

Impact factor: 1.124

Citations in ISI:

Scopus:

Google Scholar:

Authors. González Jaime, L.; Kerre E.E.; Nachtegaele, M.; Bustince, H.;
Title: «**Consensus image method for unknown noise removal** »
In: **Knowledge-Based Systems**
Ref. Journal: Book:
Issue: Pages, from: final: Date: In press
Category: COMPUTER SCIENCE AI Position: 6/114 Impact factor 4.104
Citations in ISI: Scopus: Google Scholar:

Authors. Sanz, J.; Galar, M.; Jurio, A.; Brugos, A.; Pagola, M.; Bustince, H.;
Title: «**Medical Diagnosis of Cardiovascular Diseases using an Interval-Valued Fuzzy Rule-Based Classification System**»
In **Applied Soft Computing**
Ref. Journal: Book:
Issue: Pages, from: final: Date: In press
Category: COMPUTER SCIENCE, A.I. Position: 23/114 Impact factor: 2.140
Citations in ISI: Scopus: Google Scholar:

Authors. Bustince, H.; Campión, M. J. ; Fernandez, F. J. ; Induráin E.; Ugarte, M.D.;
Title: «**New trends on the permutability equation**»
In **Aequationes Mathematicae**
Ref. Journal: Book:
Issue: Pages, from: final: Date: In press
Category: MATHEMATICS Position: 214/295 Impact factor: 0.422
Citations in ISI: Scopus: Google Scholar:

Authors. Bedregal, B.; Pereira Dimuro, G.; Bustince, H.; Barrenechea, E.;
Title: «**New results on overlap and grouping functions**»
In: **Information Sciences**
Ref. Journal: Book:
Issue: 249 Pages, from: 148 final: 170 Date: 2013
Category COMPUTER SCIENCE, INFORMATION SYSTEMS Position:6/132 Impact factor 3.643
Citations in ISI: Scopus:1 Google Scholar: 2

Authors. Bedregal, B.; Reiser, R.; Bustince, H.; Lopez-Molina, C.; Torra, V.
Title: «**Aggregation functions for typical hesitant fuzzy elements and the action of automorphisms** »
In: **Information Sciences**
Ref. Journal: Book:
Issue: 255 Pages, from: 82 final: 99 Date: 2013
Category COMPUTER SCIENCE, INFORMATION SYSTEMS Position:6/132 Impact factor 3.643
Citations in ISI: Scopus: Google Scholar:

Authors . Galar, M.; Fernández, A.; Barrenechea, E.; Bustince, H.; Herrera, F.;
Title: «**Dynamic classifier selection for One-vs-One strategy: Avoiding non-competent classifiers** »
In **Pattern Recognition**
Ref. Journal: Book:
Issue: 46(12) Pages, from: 3412 final: 3424 Date: 2013
Category: COMPUTER SCIENCE AI Position:16/114 Impact factor 2.632
ENGINEERING, ELECTRICAL & ELECTRONIC Position:29/242
Citations in ISI: Scopus: 1 Google Scholar:1

Authors . Lopez-Molina, C.; Mikel, D.; Bustince, H.; De Baets, B. ;
Title: « **On the impact of anisotropic diffusion on edge detection**»

In **Pattern Recognition**

Ref. Journal: Book:

Issue: 47(1) Pages, from: 270 final: 281

Date: 2014

Category: COMPUTER SCIENCE AI

Position:16/114

Impact factor 2.632

ENGINEERING, ELECTRICAL & ELECTRONIC

Position:29/242

Citations in ISI:

Scopus: 1

Google Scholar:1

Authors. Barrenechea, E.; Fernandez, J.; Pagola, M.; Chiclana, F.; Bustince, H.;

Title: «**Construction of interval-valued fuzzy preference relations from ignorance functions and fuzzy preference relations. Application to decision making**»

In: **Knowledge-Based Systems**

Ref. Journal: Book:

Issue: Pages, from: final:

Date: In press

Category: COMPUTER SCIENCE AI

Position: 6/114

Impact factor 4.104

Citations in ISI:

Scopus:

Google Scholar:

Authors. Barrenechea, E.; Bustince, H.; Campión, M.J.; Induráin, E.; Knoblauch, V.;

Title: «**Topological interpretations of fuzzy subsets. A unified approach for fuzzy thresholding algorithms**»

In: **Knowledge-Based Systems**

Ref. Journal: Book:

Issue: 54 Pages, from:163 final: 171

Date: 2013

Category: COMPUTER SCIENCE AI

Position: 6/114

Impact factor 4.104

Citations in ISI:

Scopus:

Google Scholar:1

Authors. Lopez-Molina, C.; De Baets, B.; Bustince, H.; Sanz, J.; Barrenechea. E.

Title: « **Multiscale edge detection based on Gaussian smoothing and edge tracking** »

In: **Knowledge-Based Systems**

Ref. Journal: Book:

Issue: 44 Pages, from:101 final: 111

Date: 2013

Category: COMPUTER SCIENCE AI

Position: 6/114

Impact factor 4.104

Citations in ISI:

Scopus: 1

Google Scholar:1

Authors. J. Sanz; A. Fernández; H. Bustince; F. Herrera

Title: « **IVTURS: A Linguistic Fuzzy Rule-Based Classification System Based on a New Interval-Valued Fuzzy Reasoning Method With Tuning and Rule Selection** »

In: **IEEE Transactions on Fuzzy Systems**

Ref. Journal: Book:

Issue: 21(3) Pages, from: 399 final: 411

Date: 2013

Category: COMPUTER SCIENCE AI

Position: 1/114

Impact factor 5.484

ENGINEERING, ELECTRICAL & ELECTRONIC

Position: 3/242

Citations in ISI:

Scopus:

Google Scholar:

Authors. A. Jurio; H. Bustince; M. Pagola; A. Pradera; R. Yager

Title: « **Some properties of overlap and grouping functions and their application to image thresholding**»

In: **Fuzzy Sets and Systems**

Ref. Journal: Book:

Issue:229(16) Pages, from: 69 final: 90

Date: 2013

Category: COMPUTER SCIENCE, THEORY & METHODS

Position:17/100

Impact factor 1.749

MATHEMATICS, APPLIED

Position:21/247

STATISTICS & PROBABILITY

Position:17/117

Citations in ISI:

Scopus:

Google Scholar:2

Authors . H. Bustince; J. Fernandez; A. Kolesárová, R. Mesiar

Title: « **Generation of linear orders for intervals by means of aggregation functions** »

In: **Fuzzy Sets and Systems**

Ref. Journal: Book:

Issue: 220(1) Pages, from: 69 final: 77

Date: 2013

Category: COMPUTER SCIENCE, THEORY & METHODS

Position:17/100

Impact factor 1.749

MATHEMATICS, APPLIED

Position:21/247

STATISTICS & PROBABILITY

Position:17/117

Citations in ISI:1

Scopus: 1

Google Scholar: 10

Authors . H. Bustince; J. Fernandez; Calvo, T.; Troiano, L.;

Title: « **Aggregation Functions: Introduction to Special Issue**»

In: **Fuzzy Sets and Systems**

Ref. Journal: Book:

Issue: 228 Pages, from: 1 final: 2

Date: 2013

Category: COMPUTER SCIENCE, THEORY & METHODS

Position:17/100

Impact factor 1.749

MATHEMATICS, APPLIED

Position:21/247

STATISTICS & PROBABILITY

Position:17/117

Citations in ISI:

Scopus:

Google Scholar: 2

Authors . Pal, NR; Bustince, H; Pagola, M; Mukherjee, UK ; Goswami, DP; Beliakov, G .

Title: « **Uncertainties with Atanassov's intuitionistic fuzzy sets: Fuzziness and lack of knowledge** »

In: **Information Sciences**

Ref. Journal: Book:

Issue: 228 Pages, from: 61 final: 74

Date: 2013

Category: COMPUTER SCIENCE, INFORMATION SYSTEMS

Position:6/132

Impact factor 3.643

Citations in ISI: 1

Scopus: 1

Google:3 académico:

Authors . Pagola, M.; Lopez-Molina, C.; Fernandez, J.; Barrenechea, E.; Bustince, H.

Title: « **Interval Type-2 Fuzzy Sets Constructed From Several Membership Functions: Application to the Fuzzy Thresholding Algorithm** »

In: **IEEE Transactions on Fuzzy Systems**

Ref. Journal: Book:

Issue: 21(2) Pages, from: 230 final: 244

Date: 2013

Category: COMPUTER SCIENCE AI

Position: 1/114

Impact factor 5.484

ENGINEERING, ELECTRICAL & ELECTRONIC

Position: 3/242

Citations in ISI:

Scopus:

Google Scholar: 5

Authors. Lopez-Molina, C.; De Baets, B. ; Bustince, H.

Title: « **Quantitative error measures for edge detection** »

In: **Pattern Recognition**

Ref. Journal: Book:

Issue: 46(4) Pages, from: 1125 final: 1139

Date: 2013

Category: COMPUTER SCIENCE AI

Position:16/114

Impact factor 2.632

ENGINEERING, ELECTRICAL & ELECTRONIC

Position:29/242

Citations in ISI:1

Scopus: 2

Google Scholar:1

Authors.:Galar M.; Jurio, A., Lopez-Molina, C., Paternain, D., Sanz, J., Bustince H.

Title: « **Aggregation functions to combine RGB color channels in stereo matching** »

In: **Optics Express**

Ref. Journal: Book:

Issue: 21(1) Pages, from: 1247 final: 1257

Date: 2013

Category: OPTICS

Position: 4/79

Impact factor 3.546

Citations in ISI: Scopus:

Google Scholar:

Authors . Melo-Pinto, Pedro; Couto, Pedro; Bustince, Humberto; Barrenechea, Edurne, Pagola, Miguel; Fernandez, Javier
Title: « **Image segmentation using Atanassov's intuitionistic fuzzy sets** »
In **Expert Systems with Applications**
Ref. Journal: Book:
Issue: 40(1) Pages, from: 15 final: 26 Date: 2013
Category: COMPUTER SCIENCE AI Position:31/114 Impact factor 1.854
ENGINEERING, ELECTRICAL & ELECTRONIC Position:56/242
OPERATIONS RESEARCH & MANAGEMENT SCIENCE Position:13/78
Citations in ISI: Scopus: Google Scholar:3

Authors . Sanz, J.; Bustince, H.; Fernandez, A.; Herrera, F.
Title: « **IIVFDT: Ignorance Functions based interval-valued fuzzy decision tree with genetic** »
In **International Journal of Uncertainty Fuzziness and Knowledge-Based Systems**
Ref. Journal: Book:
Issue: 20 Pages, from: 1 final: 30 Date: 2013
Category: COMPUTER SCIENCE AI Position: 73/114 Impact factor 0.886
Citations in ISI: Scopus: Google Scholar:

Authors . Bustince, J. Fernandez, J. Sanz, M. Baczynski, R. Mesiar
Title: « **Construction of strong equality index from implication operators** »
In **Fuzzy Sets and Systems**
Ref. Journal: Book:
Issue: 211 Pages, from: 15 final: 33 Date: 2013
Category: COMPUTER SCIENCE, THEORY & METHODS Position:17/100 Impact factor 1.749
MATHEMATICS, APPLIED Position:21/247
STATISTICS & PROBABILITY Position:17/117
Citations in ISI: Scopus: Google Scholar: 4

Authors: Jurio C. Lopez-Molina, B. De Baets, M. Galar and H. Bustince
Title: « **A generalization of the Perona-Malik anisotropic diffusion method using restricted dissimilarity functions** »
In **International Journal of Computational Intelligent Systems**
Ref. Journal: Book:
Issue: 6(1) Pages, from: 14 final: 28 Date: 2013
Citations in ISI:1 Scopus:2 Google Scholar:2

Authors: H. Bustince, A. Jurio, A. Pradera, R. Mesiar, G. Beliakov
Title: : « **Generalization of the weighted voting method using penalty functions constructed via faithful restricted dissimilarity function** »
In **European Journal of Operational Research**
Ref. Journal: Book:
Issue: 225(3) Pages, from: 472 final: 478 Date: 2013
Category: OPERATIONS RESEARCH & MANAGEMENT SCIENCE Position: 9/78 Impact factor: 2.038
Citations in ISI: Scopus: Google Scholar:2

Authors: Bustince, H.; De Baets, B.; Fernandez, J.; Mesiar, R.; Montero, J.
Title: : « **A generalization of the migrativity property of aggregation functions** »
In **Information Sciences**
Ref. Journal: Book:
Issue: 191 Pages, from: 76 final: 85 Date: 2012
Category COMPUTER SCIENCE, INFORMATION SYSTEMS Position:6/132 Impact factor 3.643
Citations in ISI: 5 Scopus: 4 Google Scholar:8

Authors: D. Paternain, A. Jurio, E. Barrenechea, H. Bustince, B. Bedregal, E. Szmidt
Title: « **An alternative to fuzzy methods in decision-making problems** »
In **Expert Systems with Applications**
Ref. Journal: Book:
Issue: 39(9) Pages, from: 7729 final: 7735 Date: 2012
Category: COMPUTER SCIENCE AI Position:31/114 Impact factor 1.854
ENGINEERING, ELECTRICAL & ELECTRONIC Position:56/242
OPERATIONS RESEARCH & MANAGEMENT SCIENCE Position:13/78
Citations in ISI:3 Scopus: 2 Google Scholar:6

Authors B. Bedregal, G. Beliakov, H. Bustince, T. Calvo, R. Mesiar, D. Paternain
Title: « **A class of fuzzy multisets with a fixed number of memberships** »
In **Information Sciences**
Ref. Journal: Book:
Issue: 189 Pages, from: 1 final: 17 Date: 2012
Category COMPUTER SCIENCE, INFORMATION SYSTEMS Position:6/132 Impact factor 3.643
Citations in ISI:1 Scopus: 1 Google Scholar:9

Authors G. Beliakov, H. Bustince, S. James, T. Calvo, J. Fernandez
Title: « **Aggregation for Atanassov's Intuitionistic and Interval Valued Fuzzy sets: The Median Operator** »
In **IEEE Transactions on Fuzzy Systems**
Ref. Journal: Book:
Issue: 20(3) Pages, from: 487 final: 498 Date: 2012
Category: COMPUTER SCIENCE AI Position: 1/114 Impact factor 5.484
ENGINEERING, ELECTRICAL & ELECTRONIC Position: 3/242
Citations in ISI:3 Scopus: Google Scholar:11

Authors H. Bustince, M. Pagola, R. Mesiar, E. Hullermeier, F. Herrera
Title: Grouping, Overlap and Generalized Bi-Entropic Functions for Fuzzy Modelling of Pairwise Comparisons
In **IEEE Transactions on Fuzzy Systems**
Ref. Journal: Book:
Issue: 20(3) Pages, from: 405 final: 415 Date: 2012
Category: COMPUTER SCIENCE AI Position: 1/114 Impact factor 5.484
ENGINEERING, ELECTRICAL & ELECTRONIC Position: 3/242
Citations in ISI:1 Scopus: Google Scholar: 12

Authors: H. Bustince, E. Barrenechea, T. Calvo, S. James, G. Beliakov
Title: « **Consensus in multiexpert decision making problems using penalty functions defined over a Cartesian product of lattices** »
In **Information Fusion**
Ref. Journal: Book:
Issue: 17 Pages, from: 56 final: 64 Date: 2014
Category: COMPUTER SCIENCE AI Position: 19/114 Impact factor: 2.262
Category: COMPUTER SCIENCE TM Position: 6/9100
Citations in ISI: 6 Scopus:1 Google Scholar: 5

Authors A. Pradera, G. Beliakov, H. Bustince
Title: « **Aggregation functions and contradictory information** »
In **Fuzzy Sets and Systems**
Ref. Journal: Book:
Issue: 141 Pages, from: 41 final: 61 Date: 2012
Category: COMPUTER SCIENCE, THEORY & METHODS Position:17/100 Impact factor 1.749
MATHEMATICS, APPLIED Position:21/247
STATISTICS & PROBABILITY Position:17/117
Citations in ISI: Scopus: 1 Google Scholar: 1

Authors G. Beliakov, H. Bustince, D. Paternain
Title: « **Image Reduction Using Means on Discrete Product Lattices** »
In **IEEE Transactions on Image Processing**
Ref. Journal: Book:
Issue: 21 Pages, from: 1070 final: 1083 Date: 2012
Category: COMPUTER SCIENCE AI Position: 13/114 Impact factor: 3.199
ENGINEERING, ELECTRICAL & ELECTRONIC Position: 17/242
Citations in ISI: 5 Scopus: 2 Google Scholar:4

Authors: M. Galar, A. Fernández, E. Barrenechea, H. Bustince, F. Herrera
Title: « **A Review on Ensembles for Class Imbalance Problem: Bagging, Boosting and Hybrid Based Approaches** »
In **IEEE Transactions on Systems, Man, and Cybernetics--Part C: Applications and Reviews**
Ref. Journal: Book:
Issue: 42(4) Pages, from: 463 final: 484 Date: 2012
Category: COMPUTER SCIENCE Int App Position: 17/114 Impact factor: 2.548
COMPUTER SCIENCE, CYBERNETICS Position: 2/21
COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS Position: 16/99
Citations in ISI:10 Scopus: 20 Google Scholar: 62

Authors: C. Lopez-Molina, B. De Baets, H. Bustince
Title: « **Generating fuzzy edges images from gradient magnitudes** »
In **Computer Vision and Image Understanding**
Ref. Journal: Book:
Issue: 115(11) Pages, from: 157 final: 1580 Date: 2011
Category: COMPUTER SCIENCE and AI Position: 20/108 Impact factor: 2.404
Category: ENGINEERING, ELECTRICAL & ELECTRONIC Position: 26/247
Citations in ISI:2 Scopus: 4 Google Scholar: 6

Authors: E. Barrenechea, H. Bustince, B. De Baets, C. Lopez-Molina
Title: « **Construction of Interval-valued Fuzzy Relations With Application to the Generation of Fuzzy Edge Images** »
In **IEEE Transactions on Fuzzy Systems**
Ref. Journal: Book:
Issue: 19(5) Pages, from: 819 final: 830 Date: 2011
Category: COMPUTER SCIENCE AI Position: 5/111 Impact factor 4.260
ENGINEERING, ELECTRICAL & ELECTRONIC Position: 8/245
Citations in ISI:7 Scopus: 5 Google Scholar:18

Authors M. Galar, J. Fernandez, G. Beliakov, H. Bustince
Title: « **Interval-valued Fuzzy Sets Applied to Stereo Matching of Color Images** »
In **IEEE Transactions on Image Processing**
Ref. Journal: Book:
Issue: 20(7) Pages, from: 1949 final: 1961 Date: 2011
Category: COMPUTER SCIENCE AI Position: 17/108 Impact factor: 2.606
ENGINEERING, ELECTRICAL & ELECT. Position: 20/247
Citations in ISI: 9 Scopus:13 Google Scholar: 20

Authors A. Jurio, M. Pagola, R. Mesiar, G. Beliakov, H. Bustince
Title: « **Image Magnification Using Interval Information** »
In **IEEE Transactions on Image Processing**
Ref. Journal: Book:
Issue: 20 Pages, from: 3112 final: 3123 Date: 2011
Category: COMPUTER SCIENCE AI Position: 17/108 Impact factor: 2.606
Category: ENGINEERING, ELECTRICAL & ELECT. Position: 20/247
Citations in ISI: 5 Scopus: 9 Google Scholar: 19

Authors J. Sanz, A. Fernández, H. Bustince , F. Herrera

Title: « **A genetic tuning to improve the performance of Fuzzy Rule-Based Classification Systems with Interval-Valued Fuzzy Sets: Degree of ignorance and lateral position**»

In **International Journal of Approximate Reasoning**

Ref. Journal: Book:

Issue: 52(6) Pages, from: 751 final: 766

Date: 2011

Category: COMPUTER SCIENCE AI

Position: 37/108

Impact factor: 1.679

Citations in ISI: 17

Scopus: 21

Google Scholar:31

Authors: M. Galar, A. Fernandez, E. Barrenechea, H. Bustince, F.Herrera

Title: : «**An Overview of Ensemble Methods for Binary Classifiers in Multi-class Problems: Experimental Study on one-vs-one and one-vs-all Schemes**»

In **Pattern Recognition**

Ref. Journal: Book:

Issue: 44 Pages, from: 1761 final: 1776

Date: 2011

Category: COMPUTER SCIENCE AI

Position: 16/108

Impact factor: 2.607

Citations in ISI: 15

Scopus: 31

Google Scholar

Authors: H. Bustince, E. Barrenechea, M. Pagola, J. Fernandez, C. Guerra, P. Couto, P. Melo-Pinto

Title: : « **Generalized Atanassov's Intuitionistic Fuzzy Index. Construction of Atanassov's fuzzy entropy from fuzzy implication operators** »

In **International Journal of Uncertainty Fuzziness and Knowledge-based Systems**

Ref. Journal: Book:

Issue: 19(1) Pages, from: 51 final: 69

Date: 2011

COMPUTER SCIENCE AI

Position: 31/111

Impact factor 1.785

Citations in ISI: 2

Scopus: 7

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Position: 9/126

Impact factor: 2.833

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Authors P. Couto, A. Jurio, A.Vareja, M. Pagola, H. Bustince, P. Melo-Pinto

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Position: 18/97

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Authors E. Barrenechea, H. Bustince, M. Pagola, J. Fernandez
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Authors: H. Bustince, E. Barrenechea, M. Pagola, J. Fernandez, J. Sanz
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Issue: 43 (9) Pages, from: 3188 final: 3192 Date: 2010
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Authors: A. Fernandez, M. Calderon, E. Barrenechea, H. Bustince, F. Herrera
Title: «**Solving multi-class problems with linguistic fuzzy rule based classification systems based on pairwise learning and preference relations**»
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Issue: 161 Pages, from: 3064 final: 3080 Date: 2010
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Citations in ISI: 12 Scopus: 14 Google Scholar: 16

Authors: C. Lopez-Molina, H. Bustince, J. Fernandez, P. Couto, B. De Baets
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Authors: J.A. Sanz, A. Fernandez, H. Bustince, F. Herrera
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Issue: 180 Pages, from: 3674 final: 3685 Date: 2010
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Title: «**Interval-valued fuzzy sets in soft computing**»
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Issue: 3 (2) Pages, from: 215 final: 222 Date: 2010
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Authors: N. Vieira, P. Couto, H. Bustince, P. Melo-Pinto
Title: «**Automatic histogram threshold using fuzzy measures**»
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Issue: 19 Pages, from: 199 final: 204 Date: 2010
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Authors:H. Bustince, R. Mesiar, J. Fernandez,
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Issue: 180 Pages, from: 1967 final: 1976 Date: 2010
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Authors:H. Bustince, E. Barrenechea, J. Fernandez, M. Pagola, J. Montero, C. Guerra
Title: «**Contrast of a fuzzy relation**»
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Citations in ISI: 4 Scopus: 8 Google Scholar: 11

Authors: M. Galar, H. Bustince, J. Fernandez, J. Sanz, G. Beliakov
Title: «**Fuzzy entropy from weak fuzzy subsethood measures**»
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Issue: 20 Pages, from: 139 final: 158 Date: 2010
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Citations in ISI: 1 Scopus:2 Google Scholar: 2

Authors: H. Bustince, J. Fernandez, R. Mesiar, J. Montero, R. Orduna
Title: «**Overlap functions**»
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Issue: 72 (3-4) Pages, from: 1488 final: 1499 Date: 2010
Category: MATHEMATICS Position: 26/277 Impact factor: 1.279
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Citations in ISI: 7 Scopus:7 Google Scholar: 18

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Authors: H. Bustince, J. Montero, R. Mesiar
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Issue: 160 Pages, from: 766 final: 777 Date: 2009
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Authors: Bustince, H.; Montero, J.; Barrenechea, E.; Pagola, M.
Title: «**Semiautoduality in a Restricted Family of Aggregation Operators**»
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Authors: Bustince, H.; Barrenechea, E.; Pagola, M.; Soria, F.
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Authors: Bustince, H., Barrenechea, E., Mohedano V.
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Issue: 134 Pages, from: 209 final: 229 Date: 2003
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Authors: Bustince, H., Burillo, P., Mohedano, V.
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Ref. Journal: Book: 0218-4885
Issue: 9 Pages, from: 81 final: 103 Date: 2001
Category: COMPUTER SCIENCE A.I. Position: 60 Impact factor: 0.270
Citations in ISI: 6 Scopus: 7 Google Scholar: 9

Authors: Bustince, H., Burillo, P.
Title: «**Mathematical analysis of interval-valued fuzzy relations: application to approximate reasoning**»
In **Fuzzy Sets and Systems**
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Issue: 113 Pages, from: 205 final: 221 Date: 2000
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Authors: Bustince, H.

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Authors: Bustince, H., Kacprzyk, J., Mohedano, V.

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Position: 41

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Scopus: 40

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Authors: Bustince, H.

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Issue: 23 Pages, from: 13 final: 209 Date: 2000

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Citations in ISI: 86

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Authors: Bustince H., Calderon M., Mohedano V.

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Position: 84

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Position: 33

Citations in ISI: 2

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Authors: Burillo, P., Bustince H.

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Issue: 84 Pages, from: 271 final: 281 Date: 1996

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Impact factor: 0.346

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Position: 70

Category: STATISTICS & PROBABILITY

Position: 34

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Authors: Bustince H., Burillo, P.
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Ref. Journal: Book: 0165-0114
Issue: 79 Pages, from: 403 final: 405 Date: 1996
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Authors: Bustince H., Burillo, P.
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Authors: Burillo, P., Bustince H.
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Authors: Bustince H., Burillo, P.
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Authors: Agustench, E., Bustince, H., Mohedano, V.

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Authors: Bustince H, Mohedano V.
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Authors: Bustince H, Mohedano V.
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Authors: Bustince H., Burillo, P.
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Authors: Burillo, P., Bustince H.,
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Authors: J. Montero, J. Tinguaro, C. Franco, H. Bustince, E. Barrenechea, D. Gómez
Title: « **Neutrality in Bipolar Structures** »
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Publication place: Berlin Heidelberg (Germany)

Authors: H. Bustince, M. Pagola, E. Barrenechea, C. Lopez-Molina, J. Fernandez
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Book chapter Issue: Pages, from:175 final: 192 Date: 2013
Editorial: Springer-Verlag
Publication place: Berlin Heidelberg (Germany)

Authors: Bustince H.
Title: «**Fuzzy Sets and their Extensions: leitmotive of the Research Group of Artificial Intelligence and Approximate Reasoning**»
In On Fuzziness
Ref. Journal: Book:
Book chapter Issue: 298 Pages, from: 79 final: 85 Date: 2013
Editorial: Springer-Verlag
Publication place: Berlin Heidelberg (Germany)

Authors: Bedregal, B. Beliakov G., Bustince, H., Fernandez J., Pradera A., Reiser R.
Title: «**(S-N)-Implications on Bounded Lattices**»
In Advances in Fuzzy Implication Functions
Ref. Journal: Book:
Book chapter Issue: 300 Pages, from: 101 final: 125 Date: 2013
Editorial: Springer-Verlag
Publication place: Heidelberg (Germany)

Authors: C. Lopez-Molina, B. De Baets, H. Bustince, E. Barrenechea, and M. Galar,
Title: « **Multiscale extension of the gravitational approach to edge detection** »
In Lecture Notes in Computer Science
Ref. Journal: Book: 7023
Book chapter Issue: 107 Pages, from: 283 final: 292 Date: 2012
Editorial:
Publication place:

Authors: C. Lopez-Molina, H. Bustince, J. Fernández, E. Barrenechea, P. Couto, and B. De Baets
Title: « **A t-Norm Based Approach to Edge Detection** »
In Lecture Notes in Computer Science
Ref. Journal: Book: 5517
Book chapter Issue: 107 Pages, from: 302 final: 309 Date: 2012
Editorial:
Publication place:

Authors: Paternain D.; Lopez-Molina C.; Bustince H.; Mesiar R.; Beliakov G.;
Title: « **Image Reduction Using Fuzzy Quantifiers** »
In Advances in Intelligent and Soft Computing, Eurofuse 2011
Ref. Journal: Book:
Book chapter Issue: 107 Pages, from: 351 final: 362 Date: 2011
Editorial: Springer-Verlag
Publication place: Berlin Heidelberg (Germany)

Authors: Lopez-Molina C.; De Baets B.; Barrenechea E.; Bustince H.;
Title: « **Edge Detector on Interval-valued Images** »
In Advances in Intelligent and Soft Computing, Eurofuse 2011
Ref. Journal: Book:
Book chapter Issue: 107 Pages, from: 325 final: 338 Date: 2011
Editorial: Springer-Verlag
Publication place: Berlin Heidelberg (Germany)

Authors: Bustince H.; Fernandez J.; Sanz J.; Galar M.; Mesiar R.; Kolesárová
Title: « **Multicriteria Decision Making by Means of Interval-valued Choquet Integrals** »
In Advances in Intelligent and Soft Computing, Eurofuse 2011
Ref. Journal: Book:
Book chapter Issue: 107 Pages, from: 243 final: 255 Date: 2011
Editorial: Springer-Verlag
Publication place: Berlin Heidelberg (Germany)

Authors: Barrenechea E.; Fernandez A.; Herrera F.; Bustince H.;
Title: « **Construction of Interval-valued Fuzzy Preference relations Using Ignorance Functions: Interval-valued Non Dominance Criterion** »
In Advances in Intelligent and Soft Computing, Eurofuse 2011
Ref. Journal: Book:
Book chapter Issue: 107 Pages, from: 243 final: 255 Date: 2011
Editorial: Springer-Verlag
Publication place: Berlin Heidelberg (Germany)

Authors: Bedregal B.; Beliakov G.; Bustince H.; Calvo T.; Fernandez J.; Mesiar R.;
Title: «**A Characterization Theorem for t-Representables n-Dimensional Triangular Norms**»
In Advances in Intelligent and Soft Computing, Eurofuse 2011
Ref. Journal: Book:
Book chapter Issue: 107 Pages, from: 103 final: 112 Date: 2011
Editorial: Springer-Verlag
Publication place: Berlin Heidelberg (Germany)

Authors: Bustince, H.; Pagola,.; Barrenechea, E.; Fernandez J
Title: «**The need to use fuzzy extetnsions in fuzzy thresholding algorithms**»
In 35 Years of fuzzy sets theory de la Serie Studies in Computational Intelligence
Ref. Journal: Book:
Book chapter Issue: 261 Pages, from: 219 final: 237 Date: 2010
Editorial: Springer-Verlag
Publication place: Heidelberg (Germany)

Authors: Bustince, H.; Pagola, M.; Jurio, A.; Barrenechea, E.; Couto, P., Melo-Pinto, P.
Title: «**A survey of applications of the extensions of the fuzzy sets to image processing**»
In Bio-inspired Hybrid Intelligent Systems for Image Analysis and Pattern Recognition de la Serie Studies in Computational Intelligence
Ref. Journal: Book:
Book chapter Issue: 1 Pages, from: 3 final: 32 Date: 2009
Editorial: Springer-Verlag
Publication place: Heidelberg (Germany)

Authors: Bustince, H.; Paternain, D., De Baets, B. , Calvo, C., Fodor, J., Mesiar, R., Montero, J., Pradera, A.
Title: «**Two methods for image compression/reconstruction using OWA operators**»
In Recent Developments in the Ordered Weighted Averaging Operators: Theory and Practice
Ref. Journal: Book: In press
Book chapter Issue: 1 Pages, from: final: Date: 2009
Editorial: Springer-Verlag
Publication place: Heidelberg (Germany)

Authors: Bustince H., Pagola M., Melo-Pinto P., Barrenechea E., and Couto P.
Title: : «**Image threshold computation by modeling knowledge/unknowledge by means of A-IFS**»
In Fuzzy Sets and their Extensions: Representation, Aggregation and Models. Intelligent Systems from Decision Making to Data Dining, Web Intelligence and Computer Vision, Studies in Fuzziness and Soft Computing
Ref. Journal: Book:
Clave: CL Issue: 1 Pages, from: 627 final: 644 Date: 2008
Editorial: : Springer-Verlag
Publication place: Heidelberg (Germany)

Authors: Bustince H., Montero J., Orduna R. , Barrenechea E., Pagola M.
Title: : «**A survey of Atanassov's Intuitionistic Fuzzy Relations**»
In Intuitionistic Fuzzy Sets: Recent Advances
Ref. Journal: Book:
Clave: CL Issue: 1 Pages, from: final: Date: 2008
Editorial: Studies in Fuzziness and Soft Computing – Springer, Ioannis K. Vlachos, George D. Sergiadis, Krassimir Atanassov (Eds.).
Publication place: Heidelberg (Germany)

Authors: Couto P., Bustince H., Barrenechea E., Pagola M., Melo-Pinto P.
Title: «**Colour image segmentation using A-IFSs**»
In Advances in Fuzzy Sets, Intuitionistic Fuzzy Sets, Generalized Sets and Related Topics. Foundations
Ref. Journal: Book: 01/01/2009
Book chapter Issue: 1 Pages, from: 49 final: 56 Date: 2009
Editorial: Academic Publishing House Exit
Publication place: Warsaw (Poland)

Authors: Bustince H., Fernandez J., Guerra C., Sanz J., Pagola M., Barrenechea E.
Title: «**A study of Atanassov's operator**»
In Advances in Fuzzy Sets, Intuitionistic Fuzzy Sets, Generalized Sets and Related Topics. Foundations
Ref. Journal: Book: 01/01/2009
Book chapter Issue: 1 Pages, from: 91 final: 96 Date: 2009
Editorial: Academic Publishing House Exit
Publication place: Warsaw (Poland)

Authors: Bustince, H.; Barrenechea, E.; Pagola, M.; Orduna, R.; Montero, J.
Title: «**Special Construction of Atanassov's Intuitionistic Fuzzy S-Implications that Maintains the Atanassov's Intuitionistic Index**»
In Developments in Fuzzy Sets, Intuitionistic Fuzzy Sets, Generalized Sets and Related Topics. Foundation
Ref. Journal: Book: 01/01/2008
Book chapter Issue: 1 Pages, from: 23 final: 32 Date: 2008
Editorial: Academic Publishing House Exit
Publication place: Warsaw (Poland)

Authors: Montero, J.; Gómez, D.; Bustince, H.; Barrenechea, E.
Title: «**The Underlying Structure in Atanassov's IFS**»
In Developments in Fuzzy Sets, Intuitionistic Fuzzy Sets, Generalized Sets and Related Topics. Foundation
Ref. Journal: Book: 01/01/2008
Book chapter Issue: 1 Pages, from: 243 final: 252 Date: 2008
Editorial: Academic Publishing House Exit
Publication place: Warsaw (Poland)

Authors: Bustince, H.; Barrenechea, E.; Pagola, M.
Title: «**A Method for Constructing V. Young's Fuzzy Subsethood Measures and Fuzzy Entropies**»
In Intelligent Techniques and Tools for Novel System Architectures
Ref. Journal: Book: 01/01/2008
Book chapter Issue: 1 Pages, from: 123 final: 138 Date: 2008
Editorial: Springer-Verlag
Publication place: Amsterdam (Holland)

Authors: Bustince, H.; Barrenechea, E.; Pagola, M.; Montero, J.; Gómez, D.
Title: «**A Survey of Interval-valued Fuzzy Sets**»
In Handbook of Granular Computing
Ref. Journal: Book: 01/01/2008
Book chapter Issue: 1 Pages, from: 494 final: 515 Date: 2008
Editorial: John Wiley & Sons
Publication place: Hoboken (USA)

Authors: Bustince, H., Mohedano, V., Barrenechea, E., Pagola, M.

Title: **«Aggregation Operations with Special Properties. Construction from other Aggregation Operators and Proximity Functions. Generalized Distances»**

In Procesos de Toma de Decisiones, Modelado y Agregación de preferencias

Ref. Journal: Book: 01/01/2005

Book chapter Issue: 1 Pages, from: 125 final: 140 Date: 2005

Editorial: E. Herrera-Viedma. COPICENTRO GRANADA S.L.

Publication place: Spain

Authors: H. Bustince, V. Mohedano, E. Barrenechea, M. Pagola

Title: **«A Study of the Intuitionistic Fuzzy S-implications. First Properties»**

In Procesos de Toma de Decisiones, Modelado y Agregación de preferencias

Ref. Journal: Book: 01/01/2005

Book chapter Issue: 1 Pages, from: 141 final: 150 Date: 2005

Editorial: E. Herrera-Viedma. COPICENTRO GRANADA S.L.

Publication place: Spain

Authors: H. Bustince

Title: **«Developments in Fuzzy Sets, Intuitionistic Fuzzy Sets, Generalized Nets and Related Topics. Foundations».**

Ref. Journal: Book: 01/01/2008

Editor Issue: 1 Pages, from: 1 final: 385 Date: 2008

Editorial: ACADEMIC PUBLISHING HOUSE EXIT

Publication place: Poland

Authors: Bustince, H.; Barrenechea, E.; Pagola, M.

Title: **«Fuzzy Sets and Their Extensions: Representation, Aggregation and Models».**

In Intelligent Systems from Decision Making to Data Mining, Web Intelligence and Computer Vision

Ref. Journal: Book: 01/01/2008

Editor Issue: 1 Pages, from: 1 final: 674 Date: 2008

Editorial: Springer-Verlag

Publication place: Heidelberg (Germany)

PARTICIPATION IN R&D PROJECTS WITH PRIVATE COMPANIES

Title: **HMS-DAMICI-PDR: Health Monitoring System for a Wind Turbine based on Data Mining and Computational Intelligence: Phase PDR**

Main researcher: Humberto Bustince Sola; Miguel Pagola Barrio

Number of researchers: 4

Participants: Universidad Pública de Navarra

Funding companies: GAMESA INNOVATION AND TECHNOLOGY, S.L., UNIPERSONAL

Date from: 15/11/2012 , 4 months - 22 days

BUDGET: 35.000 Euros

Title **Biometric autentication center.**

Type of contract: R&D

Funding entity: INCITA (financiado CDTI)

Since: 01/10/2011 until: 01/10/2013

Main researcher: H. Bustince

Number of researchers: 9

BUDGET: 80.000 €

Title **Formalization, validation and optimization of the methodology used for economic groups control.**

Type of contract: Enterprise-Public University of Navarra (OTRI)

Funding entity: CAJA DE AHORROS Y MONTE DE PIEDAD DE NAVARRA (CAN)

Since: 28/07/2009 until: 28/07/2010

Main researcher: H. BUSTINCE

BUDGET: 6000 €

Title **Data mining and soft computing techniques for improving the quality of data included in scoring** Type of

contract: Enterprise-Public University of Navarra (OTRI)

Funding entity: CAJA DE AHORROS Y MONTE DE PIEDAD DE NAVARRA (CAN)

Since: 18/03/2009 until: 30/01/2010

Main researcher: H. BUSTINCE

BUDGET: 10.000 €

Title **Real state valuation using artificial intelligence based techniques.**

Type of contract: Enterprise-Public University of Navarra (OTRI)

Funding entity: Trabajos Catastrales S.A

Since: 28/12/2005 until: 28/12/2006

Main researcher: H. BUSTINCE

BUDGET: 64.097 €

Title **Real state valuation using artificial intelligence based techniques (following)**

Type of contract: Enterprise-Public University of Navarra (OTRI)

Funding entity: Trabajos Catastrales S.A

Since: 22/12/2006 until: 31/12/2007

Main researcher: H. BUSTINCE

BUDGET: 86.666 €

KNOWLEDGE TRANSFER TO THE PRIVATE SECTOR

1.- One of the results of the project " Real state valuation using artificial intelligence based techniques" made in collaboration with "TRABAJOS CATASTRALES S.A." (TRACASA, NAVARRA), is a software based on the use of neural networks. This project is one of the most relevant ones for the TRACASA company. The software is now sold by the company to its costumers.

2.- In the project " Data mining and soft computing techniques for improving the quality of data included in scoring " made for CAN some of the most recent data mining and rule generating algorithms have been used to analyze the quality of data about the customers of the bank.

3.- In the project "Formalization, validation and optimization of the methodology used for economic groups control " we have created a model for economic groups control. We have also developed a software to optimize the creation of such groups. We have included this software in an application already in use in CAN.

OTHER RELEVANT MERITS REGARDING KNOWLEDGE TRANSFER

1.- I have given a course to TRACASA workers to explain the use of the software we have created for them.

2.- I have given a course to TRACASA workers to explain the use of the software we have created for them.

VISITING POSITIONS ABROAD

Place: Sciences Department
Localidad: Natal Country Brasil Date: 01/09/2012 Weeks: 3
Topic: Hesitant fuzzy sets study.

Place: CENTRE OF BIOMEDICAL ENGINEERING PRF. IVAN DASKALOV (BULGARIAN ACADEMY OF SCIENCES)
City: Sofia Country Bulgaria Date: 29/09/2009 Weeks: 4
Topic: Analysis of recent research about Atanassov's intuitionistic fuzzy sets.

Place: University of Trás-os-Montes and Alto Douro
City: Vila Real Country Portugal Date: 30/08/2009 Weeks: 6
Topic: Development of an algorithm to follow the movement of signalled points.

Place: University of Trás-os-Montes and Alto Douro
City: Vila Real Country Portugal Date: 08/02/2008 Weeks: 4
Topic: Image processing using fuzzy sets extensions

Place: University of Trás-os-Montes and Alto Douro
City: Vila Real Country Portugal Date: 16/06/2007 Weeks: 10
Topic: Image processing using fuzzy sets extensions

Place: CENTRE FOR BIOMEDICAL ENGINEERING OF BULGARIAN ACADEMY OF SCIENCES
City: Sofia Country Bulgaria Date: 01/06/2002 Weeks: 14
Topic: Study of the applicability of A-IFS to medical image processing..

Place: Systems Research Institute, Polish Academy of Sciences
City: Warsaw Country Poland Date: 2000 Weeks: 24
Topic: Classification of interval entropy measures.

Place: BULGARIAN ACADEMY OF SCIENCES, (CENTRAL LABORATORY ENGINEERING)
City: Sofia Country Bulgaria Date: 1994 Weeks: 12
Topic: Analysis of interval-valued entropies

Place: BRISTOL UNIVERSITY
City: Bristol Country UK Date: 1998 Weeks: 8
Tema: Study of fuzzy sets and their extensions.

OTHER MERITS RELATED WITH MOVILITY

1.- Staying of 17 days: 10/09/2007 al 26/09/2007 at the UNIVERSITY OF TRAS-OS-MONTES E ALTO DOURO, PORTUGAL. To follow the work started in my previous visit there, and in the frame of the project ACCIONES INTEGRADAS CON REFERENCIA HP2006-0128.

1.2 One week visit (4-9 November, 2009) to Warsaw (Poland) to giving a course of 15 hours about "Atanassov's intuitionistic fuzzy sets in image processing".

CONFERENCE CONTRIBUTIONS

Authors: Bustince H., Fernandez J., Kolesárová A., Mesiar R.

Title: : Fusion functions and their directional monotonicity

Conference: FSTA 2014, THE TWELFTH INTERNATIONAL CONFERENCE ON FUZZY SET THEORY AND APPLICATIONS

Place: Liptovský Ján, Slovak Republic, Date: January 26 - January 31, 2014

Authors: Paternain D., Bustince H., Fernandez J., Mesiar R., Kolesárová A..

Title: : A class of internal aggregation functions for image reduction

Conference: FSTA 2014, THE TWELFTH INTERNATIONAL CONFERENCE ON FUZZY SET THEORY AND APPLICATIONS

Place: Liptovský Ján, Slovak Republic, Date: January 26 - January 31, 2014

Authors: C. Lopez-Molina, E. Barrenechea, H. Bustince, B. De Baets

Title: : Multichannel gradient fusion based on ordered weighted aggregation operators

Conference: EUROFUSE 2014

Place: Oviedo, Spain Date: December 2-4, 2013

Authors: H. Bustince, J. Fernández, D. Paternain, L. De Miguel, A. Prader

Title: : Aggregation functions, implication operators and similarity

Conference: EUROFUSE 2014

Place: Oviedo, Spain Date: December 2-4, 2013

Authors: H. Bustince, D. Paternain, L. De Miguel, R. Mesiar

Title: : Some notions of internal operators

Conference: EUROFUSE 2014

Place: Oviedo, Spain Date: December 2-4, 2013

Authors: A. Jurio, D. Paternain, R. Mesiar, A. Kolesárová, R. Mesiar

Title: : Construction of weak homogeneity from interval homogeneity. Application to image segmentation

Conference: (FUZZ), 2013 IEEE International Conference on Fuzzy Systems

Place: Hyderabad (India) Date: July, 7-10, 2013

D.O.I.: 10.1109/FUZZ-IEEE.2013.6622336

Authors: H. Bustince, N. Madrid, M. Ojeda-Aciego

Title: : A measure of contradiction based on the notion of N-weak-contradiction

Conference: (FUZZ), 2013 IEEE International Conference on Fuzzy Systems

Place: Hyderabad (India) Date: July, 7-10, 2013

D.O.I.: 10.1109/FUZZ-IEEE.2013.6622563

Authors: J. Montero, H. Bustince, C. Franco, D. Gómez, J.T. Tinguaro, C. Guerra, D. Paternain

Title: : Bipolarity and Intuitionistic Fuzzy Sets

Conference: IWIFSGN' 2013 The 11 th International Workshop on Intuitionistic Fuzzy Sets and Generalized Nets,

Place: Warsaw Date: October 11-12, 2013

Authors: H. Bustince, J. Fernandez, R. Mesiar, A. Kolesarova
Title: : Overlap indices and fuzzy measures
Conference: 34th Linz Seminar on Fuzzy Set Theory,
Place: Linz (Austria) Date: February 26-March 2, 2013

Authors: E. Palmeira, M. Pagola, D. Paternain, N. Madrid, H. Bustince
Title: : A Generalization of a Characterization Theorem of Restricted Equivalence Functions
Conference: AGOP 2013,
Place: Pamplona, Spain Date: July 16-19, 2013

Authors: D. Paternain, A. Jurio, R. Mesiar, G. Beliakov, H. Bustince
Title: : Image reduction operators as aggregation functions. Fuzzy transform and undersampling
Conference: AGOP 2013,
Place: Pamplona, Spain Date: July 16-19, 2013

Authors: N. Madrid, E. Barrenechea, H. Bustince, J. Fernandez, I. Perfilieva
Title: : Upper bounding Overlaps by Groupings
Conference: AGOP 2013,
Place: Pamplona, Spain Date: July 16-19, 2013

Authors: A. Jurio, M. Pagola, D. Paternain, N. Madrid, H. Bustince
Title: Convex combination of grouping functions for image thresholding. Selection of weighting vectors
Conference: EUSFLAT 2013
Place: Milán (Italia) Date: September 11-13, 2013

Authors: J.A Sanz, C. Loperz-Molina, J. Cerrón, R. Mesiar, H. Bustince
Title: A new fuzzy reasoning method based on the use of the Choquet integral
Conference: EUSFLAT 2013
Place: Milán (Italy) Date: September 11-13, 2013

Authors: G. Beliakov, H. Bustince, J. Fernandez, R. Mesiar, A. Pradera
Title: On the use of restricted dissimilarity and dissimilarity-like functions for defining penalty functions
Conference: EUSFLAT 2013
Place: Milán (Italy) Date: September 11-13, 2013

Authors: B. Bedregal, H. Bustince, J. Fernandez, A. Jurio, M.J. Asiain, L. De Miguel
Title: Interval-valued overlap functions
Conference: CEDI 2013
Place: Madrid (Spain) Date: September 17-20, 2013

Authors: M. Galar, A. Fernández, E. Barrenechea, H. Bustince, F. Herrera
Title: Selección dinámica de clasificadores para la estrategia Uno-contra-Uno: Evitando los clasificadores no competentes
Conference: CEDI 2013
Place: Madrid (Spain) Date: September 17-20, 2013

Authors: H. Bustince, J. Fernandez, J. Sanz, D. Paternain, M. Baczynski, G. Beliakov, R. Mesiar
Title: Construction of strong equality index from implication operators.
Conference: 10th International FLINS conference on uncertainty modeling in knowledge engineering and decision making
Place: Istanbul, (Turkey)
Date: 26/08/2012 29/08/2012

Authors: R.H.S. Reiser, B. Bedregal, H. Bustince, and J. Fernandez
Title: Generation of Interval-Valued Intuitionistic Fuzzy Implications from K-Operators, Fuzzy Implications and Fuzzy Coimplications
Conference: IPMU 2012
Place: Catania, Italy **Date:** July 9-13, 2012

Authors: B. Bedregal, G. Beliakov, H. Bustince, J. Fernandez, A. Pradera, and R.H.S. Reiser
Title: : Negations Generated by Bounded Lattices t-Norms
Conference: IPMU 2012
Place: Catania, Italy **Date:** July 9-13, 2012

Authors: J. Montero, J. Tinguaro, C. Franco, H. Bustince, E. Barrenechea, D. Gómez
Title: : Neutrality in bipolar structures
Conference: ISKE, Intelligenet Systems and Knowledge Engineering,
Place: Beijing, China **Date:** Dec 15-17, 2012

Authors: Luis González Jaime, Mike Nachtegael, Etienne Kerre y Humberto Bustince.
Title: : Use of idempotent functions in the aggregation of different filters for noise removal
Conference: ISKE, Intelligenet Systems and Knowledge Engineering,
Place: Beijing, China **Date:** Dec 15-17, 2012

Authors: D. Paternain, A. Jurio, J. Fernandez, H. Bustince
Title: : Interval-valued fuzzy preference relations and ignorance functions. Application to decision making
Conference: Second World Conference on Soft Computing
Place: Bakú (Azerbaijan), **Date:** 2012

Authors: A. Jurio, D. paternain, M. Pagola, H. Bustince
Title: : Image thresholding by grouping functions. Application to MRI images
Conference: International Student Conference on Applied Mathematics and Informatics
Place: Bakú (Azerbaijan), **Date:** 2012

Authors: D. Paternain, A. Jurio, J. Fernandez, H. Bustince, G. Beliakov
Title: : Color Image Reduction by Minimizing Penalty Functions
Conference: IEEE International Conference on Fuzzy Systems (FUZZ-IEEE),
Place: Brisbane (Australia), **Date:** 2012

Authors: Fernandez J., Bustince H., Paternain D., Beliakov G
Title: : Internal operators. Application to image fusion
Conference: Eleventh International Conference on Fuzzy Sets Theory and Applications (FSTA 2012)
Place: Liptovsky Jan, (Eslovaquia) **Date:** 30/01-02/02- 2012

Authors: A. Jurio, M. Pagola, L. Gonzalez-Jaime, H. Bustince, A. Pradera
Title: : Umbralización de imagines utilizando funciones de agrupamiento
Conference: XVI ESTYLF
Place: Valladolid (España) **Date:** 1-3 February, 2012

Authors: H. Bustince, J. Fernandez, A. Jurio, R. Mesiar, A. Kolesarova, B. Bedregal
Title: : Toma de decisión multicriterio usando integrales Choquet intervalo-valoradas
Conference: XVI ESTYLF
Place: Valladolid (Spain) **Date:** 1-3 February, 2012

Authors: C. Lopez-Molina, B. De Baets, E. Barrenechea, H. Bustince
Title: : Detección de bordes en imágenes intervalares
Conference: XVI ESTYLF
Place: Valladolid (Spain) **Date:** 1-3 February, 2012

Authors: H. Bustince, J. Fernandez, M. Galar, R. Mesiar, A. Pradera, G. Beliakov
Title: : Funciones de disimilaridad restringidas y funciones penalty
Conference: XVI ESTYLF
Place: Valladolid (Spain) **Date:** 1-3 February, 2012

Authors: J. Sanz, A. Fernández, H. Bustince, F. Herrera
Title: : Una propuesta cooperativa entre conjuntos difusos intervalo-valorados y ajuste evolutivo para mejorar el rendimiento de árboles de decisión difusos
Conference: XVI ESTYLF
Place: Valladolid (Spain) **Date:** 1-3 February, 2012

Authors: A. Jurio, D. Paternain, M. Pagola, H. Bustince
Title: : Image thresholding by grouping functions. Application to MRI images.
Conference: Second World Conference on Soft Computing
Place: Bakú (Azerbaijan), **Date:** 2012

Authors: A. Jurio, JA Sanz, D. Paternain, J. Fernandez, H. Bustince
Title: - Interval-Valued Fuzzy Sets for Color Image Super-Resolution
Conference: CAEPIA 2011
Place: La Laguna (Spain).**Date:** 7-11 November 2011

Authors: M. Galar, M. Pagola, H. Bustince, T. Belzunegui, D. Reyero,
Title: - A Preliminary Study on Car Crash Patient Injury Severity Prediction for Emergency Call Centers
Conference: CAEPIA 2011
Place: La Laguna (Spain).**Date:** 7-11 November 2011

Authors: D. Paternain, M. Pagola, R. Mesiar, B. Bedregal, H. Bustince
Title: : Interval valued overlap functions. Application to image processing
Conference: *International Student Conference on Applied Mathematics and Informatics*
Place: Malenovice (Czech Republic),
Date: 2011

Authors: D. Paternain, C. Lopez-Molina, H. Bustince, R. Mesiar, G. Beliakov
Title: Image Reduction Using Fuzzy Quantifiers
Conference: *Eurofuse Workshop on Fuzzy Methods for Knowledge-Based Systems*
Place: Regua (Portugal),
Date: 2011

Authors: A. Jurio, M. Pagola, H. Bustince, G. Beliakov
Title: Color Image Magnification with Interval-Valued Fuzzy Sets
Conference: EUROFUSE 2011,
Place: Regua (Portugal).**Date:** 21-23 September 2011

Authors: H. Bustince, J. Fernandez, R. Mesiar, A. Pradera and G. Beliakov
Title: : Restricted dissimilarity functions and penalty functions
Conference: 2011 EUSFLAT-LFA,
Place: Aix-Les-Bains (France) **Date:** 18-22 July 2011

Authors: Daniel Paternain, Aranzazu Jurio, Edurne Barrenechea, Humberto Bustince, Benjamin Bedregal and Eulalia Szmidt.
Title: : Weighted Voting Method Using Atanassov's Intuitionistic Fuzzy Preference Relations and Ignorance Functions.
Conference: 2011 EUSFLAT-LFA,
Place: Aix-Les-Bains France **Date:** 18-22 July 2011

Authors: Daniel Paternain, Aranzazu Jurio, Miguel Pagola, Humberto Bustince and Gleb Beliakov
Title: : Image Reduction Algorithm for RGB Color Images.
Conference: 2011 EUSFLAT-LFA,
Place: Aix-Les-Bains France **Date:** 18-22 July 2011

Authors: D. Paternain, M. Pagola, J. Fernandez, R. Mesiar, G. Beliakov, H. Bustince
Title: Brain MRI Thresholding using Incomparability and Overlap Functions
Conference: *11th International Conference on Intelligent Systems Design and Applications* Publicación: Actas
Place: Córdoba (Spain),
Date: 2011

Authors: Carlos Lopez-Molina, Humberto Bustince, Javier Fernandez and Bernard De Baets
Title: : Generation of fuzzy edge images using trapezoidal membership functions.
Conference: 2011 EUSFLAT-LFA,
Place: Aix-Les-Bains France **Date:** 18-22 July 2011

Authors: Jose Antonio Sanz, Alberto Fernandez, Humberto Bustince and Francisco Herrera
Title: : On the Cooperation of Interval-Valued Fuzzy Sets and Genetic Tuning to Improve the Performance of Fuzzy Decision Trees
Conference: 2011 IEEE International Conference on Fuzzy Systems,
Place: Taipei, Taiwan **Date:** 27-30 June 2011

Authors: Humberto Bustince, Javier Fernandez, Radko Mesiar, Radko Mesiar
Title: : Penalty functions over cartesian product of lattices
Conference: AGOP 2011,
Place: Benevento, Italy **Date:** 11-15 July 2011

Authors: Humberto Bustince, Javier Fernandez, Radko Mesiar, Gleb Beliakov, Tomasa Calvo
Title : Discrete interval-values choquet integrals Discrete interval-values choquet integrals
Conference: AGOP 2011,
Place: Benevento, Italy **Date:** 11-15 July 2011

Authors: Ana Pradera, Gleb Beliakov, Humberto Bustince, Javier Fernandez
Title : On (TS,N)-fuzzy implications
Conference: AGOP 2011,
Place: Benevento, Italy **Date:** 11-15 July 2011

Authors: Galar, M.; Barrenechea, E.; Fernandez, J.; Bustince, H.; Beliakov, G.
Title : Representing Images by Means of Interval-valued Fuzzy Sets. Application to Stereo Matching
Conference: IEEE SSCI, T2FUZZY
Place: París France **Date:** 11-15 April 2011

Authors: Jurío, A.; Paternain, D.; López-Molina, C.; Bustince, H.; Mesiar, R.; Beliakov, G.
Title : A Construction Method of Interval-Valued Fuzzy Sets for Image Processing
Conference: IEEE SSCI, T2FUZZY
Place: París France **Date:** 11-15 April 2011

Authors: Sanz, J.; Pagola, M.; Bustince, H.; Brugos, A.; Fernández, A.; Herrera F.
Title : A Case Study on Medical Diagnosis of Cardiovascular Diseases Using a Genetic Algorithm for Tuning Fuzzy Rule-Based Classification Systems with Interval-Valued Fuzzy Sets
Conference: IEEE SSCI, T2FUZZY
Place: París France **Date:** 11-15 April 2011

Authors: Bedregal, B.; Bustince, H.; Fernandez, J., et al.
Title : Interval-valued contractive fuzzy negations
Conference: IEEE International Conference on Fuzzy Systems
Place: Barcelona Spain **Date:** 18-25 July 2010

Authors: Paternain, D.; Bustince, H.; Fernandez, J., et al
Title : Image Reduction With Local Reduction Operators
Conference: IEEE International Conference on Fuzzy Systems
Place: Barcelona Spain **Date:** 18-25 July 2010

Authors: Couto, P.; Lopes, N.V.; Bustince, H., et al
Title : Fuzzy dynamic model for feature tracking
Conference: IEEE International Conference on Fuzzy Systems
Place: Barcelona Spain **Date:** 18-25 July 2010

Authors: Sanz, J.; Fernandez, A.; Bustince, H., et al.
Title : A Genetic Algorithm for Tuning Fuzzy Rule-Based Classification Systems with Interval-Valued Fuzzy Sets
Conference: IEEE International Conference on Fuzzy Systems
Place: Barcelona Spain **Date:** 18-25 July 2010

Authors: Couto, P; Bustince, H; Pagola, M, et al.
Title : A-IFSs Entropy Based Image Multi-thresholding
Conference: IEEE International Conference on Fuzzy Systems
Place: Barcelona Spain **Date:** 18-25 July 2010

Authors: Galar M; Barrenechea, E, et al

Title : Aggregation of Color Information in Stereo Matching Problem: A Comparison Study

Conference : 23rd International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems

Place: Córdoba, Spain **Date:** 01-04 June 2010

Authors: Paternain, D; Bustince, H; Fernandez, J, et al..

Title : Some Averaging Functions in Image Reduction

Conference : 23rd International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems

Place: Córdoba Spain **Date:** 01-04 June 2010

Authors: Couto, P.; Bustince, H.; Jurio, A., et al.

Title : A-IFSs Based Iterative Thresholding In Gait Analysis

Conference: 2010 5th IEEE International Conference Intelligent Systems (IS) Systems

Place: London UK **Date:** June 2010

Authors: Jurio, A.; Paternain, D.; Bustince, H., et al.

Title : A construction method of Atanassov's Intuitionistic Fuzzy Sets for image processing

Conference: 2010 5th IEEE International Conference Intelligent Systems (IS) Systems

Place: London UK **Date:** June 2010

Authors: Espinilla, M.; Palomares, I.; Bustince, H.

Title : Design and development of online educational games based on questions

Conference: 2010 : CSEDU 2010. 2nd International Conference on Computer Supported Education

Place: Valencia, Spain **Date:** 2010

Authors: Beliakov, G.; Bustince, H.; Fernandez, J.

Title : On the Median and Its Extensions

Conference: Computational Intelligence for Knowledge-Based Systems Design. 13th International Conference on Information Processing and Management of Uncertainty, IPMU 2010

Place: Dortmund Germany **Date:** 2010

Authors: Bedregal, B.; Bustince, H.; Fernandez, J. ; Deschrijver G; Mesiar R

Title : Atanassov's Intuitionistic Contractive Fuzzy Negations

Conference: Computational Intelligence for Knowledge-Based Systems Design. 13th International Conference on Information Processing and Management of Uncertainty, IPMU 2010

Place: Dortmund Germany **Date:** 2010

Authors: Galar, M; Bustince, H; Fernandez, J, et al.

Title : Entropy from weak fuzzy subhood measures

Conference: Computational 10th International Student Conference on Applied Mathematics and Informatics

Place: Ostrava CZECH REPUBLIC **Date:** 2010

Authors: H. Bustince, J. Fernández, B. De Baets, J. Montero, R. Mesiar

Title : Una generalización de la migratividad

Conference: XV Conference Español sobre Tecnologías y Lógica Fuzzy

Place: Punta Umbría (Spain) **Date:** 03/02/2010 - 05/02/2010

Authors: G. Beliakov, H. Bustince, J. Fernández, D. Paternain
Title: : Means on discrete product lattices
Conference: XV ESTYLF
Place: Punta Umbría (Spain) **Date:** 03/02/2010 - 05/02/2010

Authors: A. Fernández, M. Calderón, E. Barrenechea, H. Bustince, F. Herrera
Title: : Resolución de problemas multi-clase con sistemas de clasificación basados en reglas difusas lingüísticos basados en aprendizaje por parejas y relaciones de preferencia
Conference: XV ESTYLF
Place: Punta Umbría (Spain) **Date:** 03/02/2010 - 05/02/2010

Authors: J.A. Sanz, A. Fernández, H. Bustince, F. Herrera
Title: : Un algoritmo genético para el ajuste de sistemas de clasificación basados en reglas difusas con conjuntos intervalo-valorados difusos
Conference: XV ESTYLF
Place: Punta Umbría (Spain) **Date:** 03/02/2010 - 05/02/2010

Authors: M. Galar, J. Sanz, M. Pagola, G. Beliakov y H. Bustince
Title: On the use of interval-valued fuzzy sets in stereo matching problem
Conference: ISCAMI
Place: Bratislava, (Eslovaquia)
Date: 20/05/2010 - 23/05/2010

Authors: D. Paternain, H. Bustince, G. Beliakov, M. Galar
Title: : Reducción de imagen utilizando operadores OWA de dimensión 2
Conference: XV ESTYLF
Place: Punta Umbría (Spain) **Date:** 03/02/2010 - 05/02/2010

Authors: A. Jurio, M. Pagola, D. Paternain, E. Barrenechea, H. Bustince
Title: Ignorance-based fuzzy clustering algorithm
Conference: 9th International Conference on Intelligent Systems Design and Applications
Place: Pisa, (Italy) **Date:** 30/11/2009 - 2/12/2009

Authors: C. Lopez-Molina, H. Bustince, M. Pagola, J. Fernandez, B. De Baets
Title: On the use of t-conorms in the gravity-based approach to edge detection
Conference: 9th International Conference on Intelligent Systems Design and Applications
Place: Pisa, (Italy) **Date:** 30/11/2009 - 2/12/2009

Authors: P. Couto, H. Bustince, E. Barrenechea, V. Filipe, P. Melo-Pinto
Title: A-IFSs Based Image Segmentation Methodology for Gait Analysis
Conference: 9th International Conference on Intelligent Systems Design and Applications
Place: Pisa, (Italy) **Date:** 30/11/2009 - 2/12/2009

Authors: A. Fernández, M. Calderón, E. Barrenechea, H. Bustince, F. Herrera
Title: : Enhancing Fuzzy Rule Based Systems in Multi-Classification Using Pairwise Coupling with Preference Relations
Conference: EUROFUSE, Preference Modelling and Decision Analysis
Place: Pamplona, (Spain) **Date:** 16/09/2009 - 18/09/2009

Authors: J. Sanz, M. Pagola, H. Bustince, A. Fernández, F. Herrera
Title: Construction of ignorance functions from overlap functions
Conference: EUROFUSE, Preference Modelling and Decision Analysis
Place: Pamplona, (Spain) **Date:** 16/09/2009 - 18/09/2009

Authors: N. Lopes, P. Couto, H. Bustince, P. Melo-Pinto
Title: : Fuzzy dynamic matching approach for multi-feature tracking
Conference: EUROFUSE, Preference Modelling and Decision Analysis
Place: Pamplona, (Spain) **Date:** 16/09/2009 - 18/09/2009

Authors: D. Paternain, H. Bustince, J. Sanz, M. Galar, C. Guerra
Title: Image Reduction with Interval-Valued Fuzzy Sets and OWA Operators
Conference: IFSA, EUSFLAT
Place: Lisboa, (Portugal) **Date:** 20/07/2009 - 24/7/2009

Authors: P. Couto, P. Melo-Pinto, H. Bustince, E. Barrenechea, M. Pagola
Title: Colour Image Segmentation using A-IFSs
Conference: IFSA, EUSFLAT
Place: Lisboa, (Portugal) **Date:** 20/07/2009 - 24/7/2009

Authors: E. Barrenechea, H. Bustince, M. Pagola, J. Fernandez, J. Sanz
Title: Generalized Atanassov's Intuitionistic Fuzzy Index. Construction Method
Conference: IFSA, EUSFLAT
Place: Lisboa, (Portugal) **Date:** 20/07/2009 - 24/7/2009

Authors: H. Bustince, J. Fernandez, R. Mesiar, J. Montero, R. Orduna
Title: Overlap Index, Overlap Functions and Migrativity
Conference: IFSA, EUSFLAT
Place: Lisboa, (Portugal) **Date:** 20/07/2009 - 24/7/2009

Authors: H. Bustince, R. Mesiar, J. Montero, J. Fernandez
Title: : Overlap functions and homogeneity
Conference: 5th International Summer School on Aggregation Operators
Place: Palma de Mallorca, (Spain) **Date:** 6/07/2009 - 10/7/2009

Authors: J. Montero, J.T. Rodriguez, D. Gómez, H. Bustince, J. Fernandez
Title: : Spatial aggregation of structured information
Conference: 5th International Summer School on Aggregation Operators
Place: Palma de Mallorca, (Spain) **Date:** 6/07/2009 - 10/7/2009

Authors: H. Bustince, M. Pagola, E. Barrenechea, J. Fernandez, J. Sanz
Title: : Extensiones de los conjuntos difusos aplicados a imagen
Conference: Conference de la Real Sociedad Matemática Española
Place: Oviedo, (Spain) **Date:** 4/2/2009 - 7/2/2009

Authors: M. Galar, H. Bustince, E. Barrenechea, M. Pagola, J. Fernandez
Title: A property of implication operators to construct special fuzzy subsethood measures
Conference: ISCAMI
Place: Ostrava, (Czech Republic) **Date:** 13/5/2009 - 15/5/2009

Authors: H. Bustince, E. Barrenechea, J. Sanz, M. Baczynski
Title: Strong equality index. Construction from implication operators
Conference: ISCAMI
Place: Ostrava, (Czech Republic) **Date:** 13/5/2009 - 15/5/2009

Authors: J. Sanz, A. Fernández, H. Bustince, F. Herrera
Title: A First Study on the Use of Interval-valued Fuzzy Sets with Genetic Tuning for Classification with Imbalanced Data-sets
Conference: 4th International Workshop on Hybrid Artificial Intelligence Systems
Place: Salamanca, (Spain) **Date:** 10/6/2009 - 12/6/2009

Authors: C. Lopez-Molina, E. Barrenechea, H. Bustince, P. Couto, B. De Baets, J. Fernández
Title: A t-norm based approach to Edge detection
Conference: 10th International Work-conference on Artificial Neural Networks
Place: Salamanca, (Spain) **Date:** 10/6/2009 - 12/6/2009

Authors: H. Bustince, J. Fernandez
Title: A study about Atanassov's operators
Conference: Seventh International Workshop on Intuitionistic Fuzzy Sets and Generalized Nets
Place: Varsovia, (Polonia) **Date:** 17/10/2008 - 17/10/2008

Authors: H. Bustince, E. Barrenechea, M. Pagola J. Fernández, J. Olagoitia, P. Melo-Pinto, P. Couto
Title: Contrast Computing Using Atanassov's Intuitionistic Fuzzy
Conference: The 8th international FLINS conference on computational intelligence in decision and control
Place: Madrid, (Spain) **Date:** 21/09/2008 - 24/09/2008

Authors: H. Bustince, R. Orduna, J. Fernandez, J. Olagoitia, M. Pagola, E. Barrenechea
Title: : Relation between Owa Operator of Dimension Two and Atanassov's Operators. Construction
Conference: The 8th International FLINS Conference on Computational Intelligence in Decision and Control
Place: Madrid **Date:** September 2008

Authors: H. Bustince, D. Villanueva, M. Pagola, E. Barrenechea, R. Orduna, J. Fernandez, J. Olagoitia, P. Melo-Pinto, P. Couto
Title: : Stereo Matching Algorithm Using Interval Valued Fuzzy Similarity
Conference: The 8th International FLINS Conference on Computational Intelligence in Decision and Control
Place: Madrid **Date:** September 2008

Authors: H. Bustince, J. Sanz, J. Olagoitia
Title: Umbralización de Imágenes Utilizando Conjuntos Intervalo-Valorados Difusos. Importancia del Algoritmo de Tizhoosh
Conference: XIV ESTYLF
Place: Mieres, (Spain) **Date:** 17/09/2008 - 19/09/2008

Authors: H. Bustince, J. Fernández, J. Montero
Title: Índices de Solapamiento entre Conjuntos Difusos. Construcción a partir de Grados de Solapamiento
Conference: XIV ESTYLF
Place: Mieres, (Spain) **Date:** 17/09/2008 - 19/09/2008

Authors: P. Couto , M. Pagola, H. Bustince, E. Barrenechea, P. Melo-Pinto,
Title: Image Segmentation using A-IFSs
Conference: 12 Th Conference Information Processing and Management of Uncertainty in Knowledge-Based Systems
Place: Málaga, (Spain) **Date:** 22/06/2008 - 27/06/2008

Authors: P. Couto, M. Pagola, H. Bustince, E. Barrenechea, P. Melo-Pinto
Title: Uncertainty in Multilevel Thresholding using Atanassov's Intuitionistic Fuzzy Sets
Conference: IEEE World Congress on Computational Intelligence
Place: Hong-Kong, (China (Taiwan)) **Date:** 01/06/2008 - 06/06/2008

Authors: H. Bustince, J. Montero, E. Barrenechea, M. Pagola
Title: Laws for Conjunctions and Disjunctions in Interval Type 2 Fuzzy Sets
Conference: IEEE World Congress on Computational Intelligence
Place: Hong-Kong, (China (Taiwan)) **Date:** 01/06/2008 - 06/06/2008

Authors: Montero, J.; Gómez, D.; Bustince, H.
Title: «Atanassov's intuitionistic fuzzy sets as a classification model»
En **Lecture Notes in Computer Science**
Ref. Journal: Book: 0302-9743
Issue: 4529 Pages, from: 69 final: 75 Date: 2007

Authors (p. o.de firma):Couto, P.; Bustince, H.; Filipe, V.; Barrenechea, E.; Pagola, M.; Melo-Pinto, P.
Title: «Image threshold using A-IFSs based on bounded histograms»
In **Lecture Notes in Computer Science**
Ref. Journal: Book: 0302-9743
Issue: 4529 Pages, from: 96 final: 103 Date: 2007

Authors: Vieira Lopes, N.; Bustince, H.; Felipe, V.; Melo Pinto, P.
Title: Fuzziness measure approach to automatic histogram threshold
Conference: VIPIMAGE - ECCOMAS Thematic Conference on Computational Vision and Medical Image Processing
Place: Oporto, (Portugal) **Date:** 17/10/2007 - 19/10/2007

Authors: Montero, J.; Gómez, D.; Bustince, H.; Barrenechea, E.
Title: The underlying structure in Atanassov's IFS
TYPE OF PARTICIPATION: Invitado
Conference: Sixth International Workshop on Intuitionistic Fuzzy Sets and Generalized Nets
Place: Warsaw (Poland) **Date:** 05/10/2007 - 05/10/2007

Authors: Bustince, H.; Barrenechea, E.; Pagola, M.; Orduna, R.; Montero J.
Title: Special construction of Atanassov's intuitionistic fuzzy S-implications that maintain the Atanassov's intuitionistic index
TYPE OF PARTICIPATION: Invitado
Conference: Sixth International Workshop on Intuitionistic Fuzzy Sets and Generalized Nets
Place: Warsaw (Poland) **Date:** 05/10/2007 - 05/10/2007

Authors: Bustince, H., Barrenechea, E., Pagola, M., Orduna R.
Title: Construcción de S-implicaciones intuicionistas fuzzy de Atanassov que conservan el índice intuicionista fuzzy de Atanassov
Conference: II CEDI
Place: Zaragoza, (Spain) **Date:** 11/09/2007 - 14/09/2007

Authors: Bustince, H.; Barrenechea, E.; Pagola, M.; Orduna, R.
Title: Construction of interval Type 2 Fuzzy Images to represent images in grayscale. False edges
Conference: International Conference on Fuzzy Systems. IEEE 2007
Place: Imperial College, London (UK) **Date:** 23/07/2007 - 26/07/2007

Authors: Couto, P.; Bustince, H.; Filipe, V.; Barrenechea, E.; Pagola, M.; Melo-Pinto P.

Title: Image Threshold Using A-IFSs Based on Bounded Histograms
Conference: IFSA 2007, Theory and Applications of Fuzzy Logic and Soft Computing
Place: Cancún, (Méjico) **Date:** 18/06/2007 - 21/06/2007

Authors: Montero, J.; Gómez, D.; Bustince, H.
Title: Atanassov's intuitionistic fuzzy sets as a classification model
Conference: IFSA 2007, Theory and Applications of Fuzzy Logic and Soft Computing
Place: Cancún, (Méjico) **Date:** 18/06/2007 - 21/06/2007

Authors: Bustince, H.; Pagola, M.; Melo-Pinto, P.; Barrenechea, E.; Couto, P.; Orduna, R.
Title: representation of uncertainty associated with the fuzzification of an image by means of interval type 2 fuzzy sets. application to threshold computing
Conference: Eurofuse workshop: new trends in fuzzy preference modeling
Place: Jaén, (Spain) **Date:** 11/04/2007 - 13/04/2007

Authors: Zabalza, I.; Martí, J.M.; Prieto, E.; Gómez, M.; Lecumberri, P.; Bustince, H.; Arbizu, J.
Title: Image quality assessment of different iterative reconstructions on PET images: A phantom study
Conference: EANM'06 Annual Congress of the European Associations of Nuclear Medicine
Place: Athens (Greece) **Date:** 01/10/2006 - 03/10/2006

Authors: Prieto, E.; Martí-Climent, J.M.; Gómez, M.; Lecumberri, P.; Bustince, H.; Arbizu, J.
Title: Partial Issue correction in brain PET_FDG studies
Conference: EANM'06 Annual Congress of the European Associations of Nuclear Medicine
Place: Athens (Greece) **Date:** 01/10/2006 - 03/10/2006

Authors: Gómez, D.; Montero, J.; Bustince, H.
Title: Sobre los conjuntos Intuicionistas de Atanassov
Conference: XIII ESTYLF
Place: Ciudad Real (Spain) **Date:** 20/09/2006 - 22/09/2006

Authors: Bustince, H.; Mohedano V.; Barrenechea, E.; Pagola, M.
Title: Relación entre las funciones de disimilaridad Restringida y las funciones de Equivalencia restringida
Conference: XIII ESTYLF
Place: Ciudad Real (Spain) **Date:** 20/09/2006 - 22/09/2006

Authors: Prieto, E.; Gómez, M.; Martí, J.M.; Lecumberri, P.; Bustince, H.
Title: Aplicación del algoritmo difuso de C-Medias a la Segmentación de Imágenes de Resonancia Magnética cerebral
Conference: XIII ESTYLF
Place: Ciudad Real (Spain) **Date:** 20/09/2006 - 22/09/2006

Authors: Bustince, H., Mohedano, V., Barrenechea, E., Pagola, M.
Title: Construcción de índices fuzzy a partir de di-medidas de inclusión fuzzy. Aplicación a la comparación global de imágenes.
Conference: I Conference Nacional de Informática
Place: Granada, (Spain) **Date:** 16/09/2006 - 16/09/2006

Authors: Bustince, H.; Mohedano, V.; Barrenechea, E.; Pagola, M.
Title: A method for constructing v. young's fuzzy subbsethood measures AND FUZZY ENTROPIES
Conference: 3rd IEEE International Conference on Intelligent Systems
Place: London (UK) **Date:** 04/09/2006 - 06/09/2006

Authors: Bustince, H.; Mohedano, V.; Barrenechea, E.; Pagola, M.

Title: : An algorithm for calculating the Threshold of an image representing uncertainty Through A-IFSs
Conference: 11th Information Processing and Management of Uncertainty International Conference (IPMU'06)
Place: Paris, (France) **Date:** 02/07/2006 - 07/07/2006

Authors: H.Bustince, V. Mohedano, E. Barrenechea, M. Pagola
Title: Image thresholding using intuitionistic fuzzy sets
Conference: 5th internacional workshop on intuitionistic fuzzy sets and generalizad nets
Place: Warsaw (Poland) **Date:** 16/09/2005 - 18/09/2005

Authors: Bustince, H.; Mohedano, V.; Barrenechea, E.; Pagola, M.
Title: Construcción de índices fuzzy a partir de di-medidas de inclusión fuzzy. Aplicación a la comparación global de imágenes
Conference: I CEDI 2005
Place: Granada, (Spain) **Date:** 13/09/2005 - 16/09/2005

Authors: Bustince, H.; Mohedano, V.; Barrenechea, E.; Pagola, M.
Title: Proximity functions. Application to fuzzy thresholding
Conference: 4th EUSFLAT and 11th LFA Conference
Place: Universidad Politécnica de Calaluña, (Spain) **Date:** 07/09/2005 - 09/09/2005

Authors: Bustince, H., Barrenechea, N., Pagola, M., Mohedano, V.
Title: Función de equivalencia intervalo valorado Fuzzy. Una aplicación en la segmentación de imágenes.
Conference: XII ESTYLF
Place: Jaén, (Spain) **Date:** 15/09/2004 - 17/09/2004

Authors: Bustince, H., Mohedano, V., Soria, F.
Title: Construcción de medidas Fuzzy de inclusión fuerte.
Conference: XII ESTYLF
Place: Jaén, (Spain) **Date:** 15/09/2004 - 17/09/2004

Authors: H.Bustince, E.Barrenechea, V.Mohedano
Title: Operador de Implicación Intervalo-valorado Fuzzy. Una expresión y primeras propiedades
Conference: XI ESTYLF
Place: León, (Spain) **Date:** 17/09/2002 - 20/09/2002

Authors: Bustince H.
Title: About Intuitionistic fuzzy implication operators
Conference: 6th Joint Conference of information Science
Place: Universidad de Duke, Detroit (EEUU) **Date:** 08/03/2002 - 13/03/2002

Authors: H.Bustince, E.Barrenechea, V.Mohedano
Title: Intuitionistic Fuzzy S- Implications
Conference: IPMU
Place: Annecy, France **Date:** 01/07/2002 - 05/07/2002

Authors: H.Bustince, V.Mohedano, F.Soria
Title: : Algunas consideraciones sobre S-implicaciones
Conference: X ESTYLF
Place: Sevilla, Spain **Date:** 2000

Authors: Bustince H., Agustench E., Mohedano V.

Title: Método de los mínimos cuadrados aplicado al GMP con conjuntos intervalo-valorados fuzzy
Conference: VIII ESTYLF
Place: Universidad Pública de Navarra, Pamplona (Spain) **Date:** 08/09/1998 - 10/09/1998

Authors: H.Bustince, M. Calderón, V.Mohedano
Title: : Método de los mínimos cuadrados aplicado a la inferencia fuzzy
Conference: ESTYLF **Place:** Asturias, Spain **Date:** 1996

Authors: H.Bustince, M. Calderón, V.Mohedano
Title: : About a least squares model for fuzzy rules of inference
Conference: FUBEST
Place: Sofia, Bulgary, **Date:** 1996

Authors: H.Bustince, M. Calderón, V.Mohedano
Title: : About a least squares model for fuzzy rules of inference with intuitionistic fuzzy sets
Conference: SC'96
Place: Kazan, Rusia **Date:** 1996

Authors: H.Bustince, P.Burillo
Title: : Interval-valued Fuzzy ordering relation
Conference: ISFL
Place: Zurich, Switzerland **Date:** 1995

Authors: K. Atanassov, H. Bustince, P.Burillo, V.Mohedano
Title: A method for inference in approximate reasoning for the one-dimensional case based on normal intuitionistic fuzzy sets
Conference: IFSA
Place: Sao Paulo, Brazil **Date:** 1995

Authors: P.Burillo, H.Bustince, V.Mohedano
Title: : Métodos intuicionistas de inferencia: comparación por compatibilidades
Conference: Conference Español sobre Tecnologías y Lógica Fuzzy
Place: Murcia, Spain **Date:** 1995

Authors: M. Daskalov, K. Atanassov, H. Bustince
Title: : Generalized Net model of diagnostic decisión making in neurology
Conference: The twelfth I. C. On MCDM
Place: Hagen, Germany **Date:** 1995

Authors: L. Kuncheva , H. Bustince , P. Burillo, V.Mohedano
Title: : Aggregation of múltiple criteria through intuitionistic fuzzy connectives
Conference: The twelfth I. C. On MCDM
Place: Hagen, Germany **Date:** 1995

Authors: P. Burillo, H.Bustince, V.Mohedano
Title: : Números intuicionistas Fuzzy
Conference: ESTYLF
Place: Blanes, Spain **Date:** 1994

Authors: P.Burillo, H.Bustince

Title: : Isoentropic methods for the construction of IVFS
Conference: CIFT(FOUR CURRENT ISSUES IN FUZZY TECNOLOGIES)
Place: Trento, Italy Date: 1994

Authors: P.Burillo, H.Bustince
Title: : Informational energy on intuitionistic fuzzy sets and on interval-valued fuzzy sets. Relationship between measures of information
Conference: FUBEST (FIRST WORKSHOP ON FUZZY BASED EXPERT SYSTEM)
Place: Sofia, Bulgary, Date: 1994

Authors: H.Bustince
Title: : Numerical information measurements in interval-valued intuitionistic fuzzy sets
Conference: FUBEST (FIRST WORKSHOP ON FUZZY BASED EXPERT SYSTEM)
Place: Sofia, Bulgary Date: 1994

Authors: P.Burillo, H.Bustince, V.Mohedano
Title: : Some definitions of intuitionistic fuzzy numbers
Conference: FUBEST (FIRST WORKSHOP ON FUZZY BASED EXPERT SYSTEM)
Place: Sofia, Bulgary Date: 1994

Authors: P.Burillo, H.Bustince
Title: : Relaciones intervalo-valoradas fuzzy
Conference: ESTYLF
Place: Santiago de Compostela, Spain Date: 1993

Authors: P.Burillo, H.Bustince
Title: : Estructuras algebraicas para conjuntos intuicionistas fuzzy
Conference: ESTYLF
Place: Boadilla del Monte, Spain Date: 1992

ADVISED Ph.D. THESIS

TITLE: AXIOMATIZATION OF V. YOUNG'S FUZZY SUBSETHOOD MEASURES.
CONSTRUCTION FROM AGGREGATION AND IMPLICATION OPERATORS. OTHER INDEXES.

AUTHOR: Fernando Soria de Diego

ADVISOR: Humberto Bustince

DATE: 26/04/2004

UNIVERSITY: Universidad Pública de Navarra

GRADE: Sobresaliente Cum Laude

TITLE: IMAGE PROCESSING WITH INTERVAL-VALUED FUZZY SETS. EDGE DETECTION.
CONTRAST

AUTHOR: M^a de las Nieves Barrenechea Tartas

ADVISOR: Humberto Bustince

DATE: 30/11/2005

UNIVERSITY: Universidad Pública de Navarra

GRADE: Sobresaliente Cum Laude

TITLE: REPRESENTATION OF UNCERTAINTY BY INTERVAL-VALUED FUZZY SETS.
APPLICATION

AUTHOR: Miguel Pagola Barrio

ADVISOR: Humberto Bustince

DATE: 28/07/2008

UNIVERSITY: Universidad Pública de Navarra

GRADE: Sobresaliente Cum Laude

EUROPEAN DOCTORATE: YES

TITLE: FUNCIONES DE SOLAPAMIENTO Y SU APLICACION A SEGMENTACION DE
IMAGENES

AUTHOR: Raúl Orduna Urrutia

ADVISORS: Edurne Barrenechea, Humberto Bustince

DATE: 15/04/2010

UNIVERSITY: Universidad Pública de Navarra

GRADE: Sobresaliente Cum Laude

TITLE: SISTEMAS DE CLASIFICACIÓN BASADOS EN REGLAS DIFUSAS LINGÜÍSTICAS
UTILIZANDO CONJUNTOS DIFUSOS INTERVALO-VALORADOS Y AJUSTE DE LA
IGNORANCIA

AUTHOR: José Antonio Sanz

ADVISORS: Humberto Bustince, Alberto Fenández, Francisco Herrera

DATE: 15/07/2011

UNIVERSITY: Universidad Pública de Navarra

GRADE: Sobresaliente Cum Laude

TITLE: THE BREAKDOWN STRUCTURE OF EDGE DETECTION: ANALYSIS OF INDIVIDUAL COMPONENTS AND REVISIT OF THE OVERALL STRUCTURE

AUTHOR: Carlos López Molina

ADVISORS: Humberto Bustince, Bernard De Baets

DATE: 31/07/2012

UNIVERSITY: Universidad Pública de Navarra

GRADE: Sobresaliente Cum Laude

TITLE: NUMERICAL INFORMATION MEASURES FOR IMAGE PROCESSING. MAGNIFICATION AND THRESHOLDING

AUTHOR: Aránzazu Jurio Munárriz

ADVISORS: Humberto Bustince, Miguel Pagola Barrio

DATE: 23/05/2013

UNIVERSITY: Universidad Pública de Navarra

GRADE: Apto Cum Laude

TITLE: OPTIMIZATION OF IMAGE REDUCTION AND RESTORATION ALGORITHMS BASED ON PENALTY FUNCTIONS AND AGGREGATION TECHNIQUES

AUTHOR: Daniel Paternain Dallo

ADVISORS: Humberto Bustince, Francisco Javier Fernández, Gleb Beliakov

DATE: 31/05/2013

UNIVERSITY: Universidad Pública de Navarra

GRADE: Apto Cum Laude

MASTER THESIS

TITLE: Generalización de la ley de gravitación universal con t-normas para la detección de bordes

STUDENT: Darlos López-Molina

GRADE: Matrícula de Honor, 10,

DATE: 10, 2009/2010

TITLE: A class of aggregating functions encompassing 2-dimensional owa operators,

STUDENT: Daniel Paternain

GRADE: Matrícula de Honor, 10,

DATE: 2009/2010

TITLE: Improving the performance of fuzzy rule based classification systems with interval-valued fuzzy sets and genetic amplitude,

STUDENT: José Antonio Sanz

GRADE: Matrícula de Honor, 10,

DATE: 2009/2010

TITLE: Intuitionistic Fuzzy Implication Operators. An Expresión and Main Properties,

STUDENT: E. Barrenechea_

GRADE: Sobresaliente, 10,

DATE: 2003/2004

TITLE: Función de Equivalencia Intervalo-Valorada Fuzzy. Una Aplicación a la Segmentación de Imágenes,

STUDENT: M. Pagola

GRADE: Sobresaliente, 10,

DATE: 2003/2004

TITLE: Neuro Difuso Intervalo-Valorado aplicado a la Segmentación de Imágenes de Ultrasonidos,
STUDENT: G. Artola
GRADE: Sobresaliente, 10,
DATE: 2007/2008

MEMBERSHIP IN COMMITTEES AND INTERNATIONAL REPRESENTATIONS

GIVEN CONFERENCES AND SEMINARS

Title: PENALTY FUNCTIONS AND INTERVAL-VALUED FUZZY SETS IN GROUP DECISION MAKING PROBLEMS

Conference: THE TWELFTH INTERNATIONAL CONFERENCE ON FUZZY SET THEORY AND APPLICATIONS (FSTA 2014)

GUEST PLENARY TALK

Date: 31/01/2014

Place: Liptovský Ján, Slovak Republic

Title: DECISION MAKING IN AN INTERVAL-VALUED SETTING

Conference: The 10th International Conference on Modeling Decisions for Artificial Intelligence

GUEST PLENARY TALK

Date: 21/11/2013

Place: Barcelona, Spain

Title: IMAGE PROCESSING AND CLASSIFICATION USING EXTENSIONS OF FUZZY SETS. FIRST SUCCESSES

Conference: EUSFLAT 2013, Universidad de Milán, Italy

GUEST PLENARY TALK

Date: 12/09/2013

Place: Milán, Italy

Title: EXTENSIONS OF FUZZY SETS IN KNOWLEDGE REPRESENTATION

Conference: Slovak University of Technology

GUEST PLENARY TALK

Date: 30/01/2012

Place: Liptovský Ján, Slovak Republic

Title: IMAGE PROCESSING WITH FUZZY SETS AND THEIR EXTENSIONS: THRESHOLDING, EDGE DETECTION, MAGNIFICATION AND REDUCTION

Conference: Congresso Brasileiro de Sistemas Fuzzy, Universidad de Natal, Brasil

GUEST PLENARY TALK

Date: 06/09/2012

Place: Natal, Brasil

Title: ¿QUÉ ES LA INTELIGENCIA ARTIFICIAL?

Conference: Semana de la Ciencia. Ateneo Navarra

INVITED CONFERENCE

Date: 13/11/2012

Place: Pamplona, Spain

Title: EXTENSIONS OF FUZZY SETS IN KNOWLEDGE REPRESENTATION

Conference: Departamento de Estadística de la Universidad de Oviedo

GUEST PLENARY TALK

Date: 09/11/2012

Place: Oviedo, Spain

Title: FUZZY LOGIC AND IMAGE PROCESSING
Conference: CITAB Research Centre- UTAD University
INVITED TALK
Date: 20/09/2011
Place: Regua, Portugal

Title: IMAGE PROCESSING WITH FUZZY SETS AND THEIR EXTENSIONS: THRESHOLDING, EDGE DETECTION, MAGNIFICATION AND REDUCTION
Conference: EUROPEAN CENTER OF SOFT COMPUTING
INVITED TALK
Date: 05/07/2011
Place: Mieres, Spain

Title: EXTENSIONES DE LOS CONJUNTOS DIFUSOS EN LA REPRESENTACIÓN DE CONOCIMIENTO
Conference: CEDI 2010, III CONGRESO ESPAÑOL DE INFORMÁTICA
GUEST PLENARY TALK
Date: 08/09/2010
Place: Valencia, Spain

Title: COMPUTATIONAL INTELLIGENCE IN COMPUTER VISION (MESA REDONDA)
Conference: IEEE WCCI
INVITED TALK
Date: 18/07/2010
Place: Barcelona, Spain,

Title: PRESENT AND FUTURE OF TYPE 2 FUZZY SETS
Conference: DE MONTFORT University/ IMPERIAL COLLEGE
Seminari: Type 2 Fuzzy Sets
INVITED TALK
Date: 20/06/2010
Place: London, UK

Title: PROCESAMIENTO DE IMAGENES. UTILIZACION DE TECNICAS DE TOMA DE DECISION Y APRENDIZAJE
Conference: ITAGRA.CT/RUENA: Red de uso eficiente del nitrógeno en
Seminar: Nuevas Tecnologías en la aplicación de fertilizantes nitrogenados. IX REUNION DE LA RED RUENA
INVITED TALK
Date: 03/06/2010
Place: Palencia, Spain

Title: ALGEBRAIC EXTENSIONS OF FUZZY SETS
Conference: CITAB: Centro de investigación y tecnologías agro-ambientales y biológicas
Seminar: Theory of Fuzzy Sets
Date: 24/07/2009-30/07/2009
Place: Vila Real, Portugal

Title: SEGMENTACIÓN DE IMÁGENES MEDIANTE EXTENSIONES DE CONJUNTOS DIFUSOS
Conference: Universidad Complutense de Madrid
Seminar: Departamento de Estadística e Investigación Operativa
INVITED TALK
Date: 07/11/2007
Place: Madrid

Title: ALGEBRAIC STRUCTURES FOR INTUITIONISTIC FUZZY SETS
Conference: Mathematical Research Laboratory, Bulgaria
Seminar: Fifth Scientific Session of the Mathematical Foundations of Artificial Intelligence
INVITED TALK
Date: 05/10/1994
Place: Sofia, Bulgaria

SPECIAL SESSION ORGANIZATION

Title : Theory and Applications of Interval-Valued Fuzzy Sets
Activity type: Special session in FLINS
Date: September 2008

Title : Soft Computing and Image Processing
Activity type: Special session in ISDA
Date: December 2009

Title : Aggregation Operators
Activity type: Special session in FSA
Date: July 2009

Title : Soft Computing in Computer Vision/Image Processing
Activity type: Special session in Conference IEA/AIE
Date: June 2010

Title : Aggregation functions
Activity type: Special session in Conference IPMU
Date: June-July 2010

Title : Aggregation functions
Activity type: Special session in ESTYLF
Date: February 2010

Title : Soft Computing en Visión Artificial
Activity type: Special session in ESTYLF
Date: February 2010

Title : Aggregation functions in Image Processing
Activity type: Special session in Conference WCCI (FUZZ IEEE)
Date: July 2010

Title : Aggregation functions: theory and practice
Activity type: Special session in Conference WCCI
Date: July 2010

Title: : Image processing
Activity type: Special session in Eurofuse 2011
Date: September 2011

Title: : Agregation functions
Activity type: Special session in Eusflat 2011
Date: July 2011

Title: : Soft Computing in Computer Vision&Image Processing
Activity type: Special session in ISDA 2011
Date: Diciembre 2011

Title: : Aggregation operators in image processing
Activity type: Special session in FUZZ-IEEE 2012
Date: June 2012

Title: : Aggregation Functions.
Activity type: Special session in IPMU 2012
Date: July 2012

Title: : Aggregation Functions.
Activity type: Special session in IPMU 2012
Date: July 2012

Title: : Funciones de agregación
Activity type: Special session in Estylf 2012
Date: February 2012

Title: : Image processing using aggregation functions and Soft Computing techniques.
Activity type: Special session in FUZZ IEEE 2013
Date: July 2013

Title: : Advanced Techniques for Imaging Classification.
Activity type: Special session in XVI Brazilian Remote Sensing Symposium
Date: April 2013

MEMBERSHIP IN COMMITTEES

CONFERENCE: THE 13th INTERNATIONAL CONFERENCE ON INTUITIONISTIC FUZZY SETS,
PLACE: SOFIA, BULGARIA: MAY 10-11, YEAR: 2014

CONFERENCE: THE 9th INTERNATIONAL CONFERENCE ON SOFT COMPUTING MODELS IN INDUSTRIAL
AND ENVIROMENTAL APPLICATIONS, SOCO 2014,
PLACE: BILBAO, SPAIN: JUNE 25-27, YEAR: 2014

CONFERENCE: THE 13th INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND SOFT
COMPUTING, ICAIS 2014,
PLACE: ZAKOPANE, POLAND: JUNE 1-5, YEAR: 2014

CONFERENCE: THE 27th INTERNATIONAL CONFERENCE ON INDUSTRIAL, ENGINEERING & OTHER
APPLICATIONS OF APPLIED INTELLIGENT SYSTEMS,
PLACE: KAOHSIUNG, TAIWAN, JUNE 3-6, , YEAR: 2014

CONFERENCE: EUROFUSE 2014,
PLACE: OVIEDO, SPAIN, DECEMBER 2-4, , YEAR: 2013

CONFERENCE: IEEE SSCI 2013, IEEE SYMPOSIUM SERIES ON ADVANCES IN TYPE-2 FUZZY LOGIC
SYSTEMS.
PLACE: SINGAPORE, 16-19 APRIL, YEAR: 2013

CONFERENCE: NAFIPS 2013. NORTH AMERICAN FUZZY INFORMATIONS PROCESSING SOCIETY.
PLACE: EDMONTON, CANADA, JUNE 24-28 YEAR: 2013

CONFERENCE: THE 10th INTERNATIONAL WORKSHOP ON FUZZY LOGIC AND APPLICATIONS (WILF
2013).
PLACE: GENOA (ITALY), 12-22 NOVEMBER YEAR: 2013

CONFERENCE: IV SIMPOSIO SOBRE LÓGICA FUZZY AND SOFT COMPUTING. CEDI 2013
PLACE: UCM MADRID, 17-20 SEPTEMBER, 2013.

CONFERENCE: FUZZ IEEE 2013, 15th The 2013 IEEE International Conference on Fuzzy Systems PLACE DE
CELEBRACION: HYDERABAD, INDIA, July 7-10, YEAR: 2013

CONFERENCE: NAFIPS 2013, 15th IFSA WORLD CONGRESS AND 32nd ANNUAL MEETING OF NAFIPS
PLACE: EDMONTON, CANADA, June 24-28, YEAR: 2013

CONFERENCE: WILF 2013, 10th International Workshop on Fuzzy Logic and Applications
PLACE: CASA PAGANINI- GENOA, ITALY, November 19-22, YEAR: 2013

CONFERENCE: SOCO 2013, 8th International Conference on Soft Computing Models in Industrial and Environmental
Applications
PLACE: SALAMANCA, SPAIN, September 11-13, YEAR: 2013

CONFERENCE: EUROFUSE 2013, Fuzzy Methods for Knowledge-Based Systems
PLACE: OVIEDO, SPAIN 2nd to 4th DECEMBER, YEAR: 2013

CONFERENCE: IV SIMPOSIO SOBRE LOGICA FUZZY Y SOFT COMPUTING, LFSC 2013
PLACE: MADRID, SPAIN 17-20 September, YEAR: 2013

CONFERENCE: WSC17 2012, ON LINE CONFERENCE ON SOFT COMPUTING IN INDUSTRIAL
APPLICATIONS ANYWHERE ON EARTH
PLACE: ON LINE, December 10-21, YEAR: 2012

CONFERENCE: FLINS 2012, The 10th International FLINS Conference on Uncertainty Modeling in Knowledge
Engineering and Decision Making (FLINS 2012)
PLACE: ESTAMBUL, TURQUÍA 27-29 AGOSTO, YEAR: 2012

CONFERENCE: ESTYLF 2012,

PLACE: VALLADOLID, ESPAÑA 1-3 FEBRUARY, YEAR: 2012

CONFERENCE: IPMU 2012, 14th INTERNATIONAL CONFERENCE ON INFORMATION PROCESSING AND MANAGEMENT OF UNCERTAINTY IN KNOWLEDGE-BASED SYSTEMS

PLACE: CATANIA, ITALY, July 9-13, YEAR: 2012

CONFERENCE: IEEE WORLD CONGRESS ON COMPUTATIONAL INTELLIGENCE,

PLACE: BRISBANE, AUSTRALIA JUNE 10-15, YEAR: 2012

CONFERENCE: ELEVENTH INTERNATIONAL CONFERENCE ON FUZZY SET THEORY AND APPLICATIONS

PLACE: LIPTOVSKY JAN, THE SLOVAK REPUBLIC, January 30-February 3 YEAR: 2012

CONFERENCE: IWIFSGN 2011, Tenth International Workshop on Intuitionistic Fuzzy Sets and Generalized Nets,

PLACE: Warsav, POLAND 30 SEPTEMBER, YEAR: 2011

CONFERENCE: THE TWENTY-FOUR INTERNATIONAL CONFERENCE ON INDUSTRIAL, ENGINEERING AND OTHER APPLICATIONS OF APPLIED INTELLIGENCE (IEA/AIE 2011)

PLACE: NUEVA YOR, EEUU, 28-01 JUNE, YEAR: 2011

CONFERENCE: ISDA 2011, 11th INTERNATIONAL CONFERENCE ON INTELLIGENT SYSTEMS DESIGN AND APPLICATIONS

PLACE: CORDOBA, SPAIN, November 22-24, YEAR: 2011

CONFERENCE: EUSFLAT 2011

PLACE: AIX-LES-BAINS, FRANCIA, 18-22 JULY, YEAR: 2011

CONFERENCE: EUROFUSE 2011, Fuzzy Methods for Knowledge-Based Systems

PLACE: REGUA, PORTUGAL 21-23 SEPTEMBER, YEAR: 2011

CONFERENCE: IEEE SSCI 2011/ SYMPOSIUM ON ADVANCES IN TYPE-2FUZZY LOGIC SYSTEMS

PLACE: PARIS, FRANCE, 11-14 APRIL, YEAR: 2011

CONFERENCE: 9TH INTERNATIONAL FLINS CONFERENCE ON FOUNDATIONS AND APPLICATIONS OF COMPUTATIONAL INTELLIGENCE

PLACE: CHENGDU, CHINA YEAR: 2010

CONFERENCE: INTERNATIONAL CONFERENCE ON INFORMATION PROCESSING AND MANAGEMENT OF UNCERTAINTY IN KNOWLEDGE-BASED SYSTEMS

PLACE: DORTMUND, ALEMANIA YEAR: 2010

CONFERENCE: 23RD INTERNATIONAL CONFERENCE ON INDUSTRIAL, ENGINEERING & OTHER APPLICATIONS OF APPLIED INTELLIGENT SYSTEMS

PLACE: CÓRDOBA YEAR: 2009

CONFERENCE: XV ESTYLF

PLACE: HUELVA YEAR: 2010

CONFERENCE: 9TH INTERNATIONAL CONFERENCE ON INTELLIGENT SYSTEMS DESIGN AND APPLICATIONS

PLACE: PISA, ITALIA YEAR: 2009

CONFERENCE: 8TH INTERNATIONAL FLINS CONFERENCE ON FOUNDATIONS AND APPLICATIONS OF COMPUTATIONAL INTELLIGENCE

PLACE: MADRID YEAR: 2008

CONFERENCE: II SIMPOSIO SOBRE LÓGICA FUZZY Y SOFT COMPUTING

PLACE: ZARAGOZA YEAR: 2007

CONFERENCE: 3RD INTERNATIONAL IEEE CONFERENCE ON INTELLIGENT SYSTEMS

PLACE: LONDON, UK YEAR: 2006

CONFERENCE: XIII ESTYLF

PLACE: CIUDAD REAL YEAR: 2006

CONFERENCE: I SIMPOSIO SOBRE LÓGICA FUZZY Y SOFT COMPUTING
PLACE: GRANADA YEAR: 2005

CONFERENCE: XII ESTYLF
PLACE: JAEN YEAR: 2004

CONFERENCE: XI ESTYLF
PLACE: LEON YEAR: 2002

CONFERENCE: X ESTYLF
PLACE: SEVILLA YEAR: 2000

CONFERENCE: VIII ESTYLF
PLACE: PAMPLONA YEAR: 1998

CONFERENCE: FIRST INTERNATIONAL CONFERENCE ON INTUITIONISTIC FUZZY SETS
PLACE: SOFIA, BULGARIA YEAR: 1997

R&D ACTIVITIES ORGANIZATION

CONFERENCE AND SCIENTIFIC MEETING ORGANIZATION

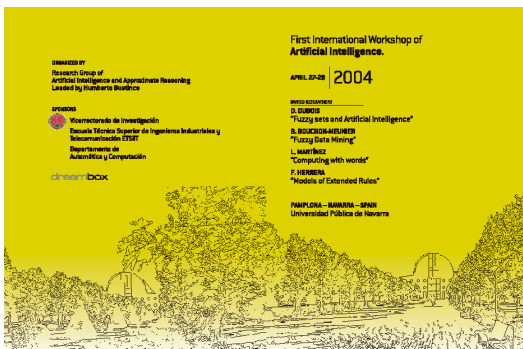


2013

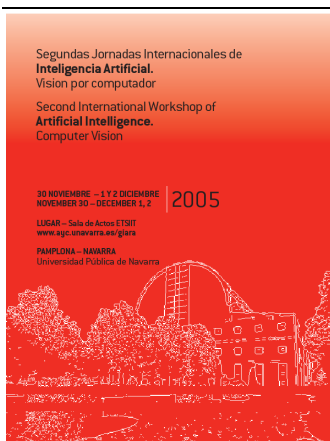
Title : 7 Th International Summer School on Aggregation Operators, 2013
Activity type: Summer School and Conference
Date: 16/07/2013-20/07/2013



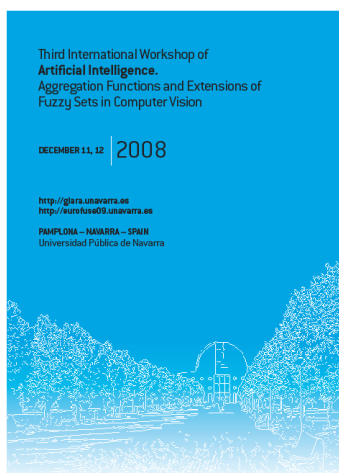
Title : EUROFUSE Workshop on Preference Modelling and Decision Analysis
Activity type: Conference
Date: september 2009



Title : I Workshop on Artificial Intelligence and Approximate Reasoning
Activity type: Workshop
Date: April 2004



Title : II Workshop in Artificial Intelligence with interval-valued fuzzy sets. Applications to Computer Vision.
Activity type: Workshop
Date: December 2005



Title : Third International Workshop of Artificial Intelligence. Aggregation Functions and extensions of Fuzzy Sets in Computer Vision
Activity type: Workshop
Date: December 2008



Title: The 16th Online World Conference on Soft Computing in Industrial Applications (WSC16)
Activity type: On-line conference
Date: Diciembre 2011

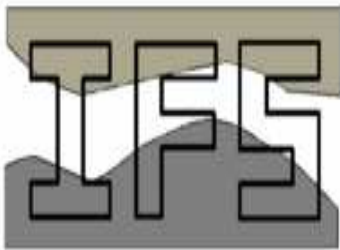
DIRECTION OF SCIENTIFIC INSTITUTIONS

Member of the directive council of the Spanish Network for the improvement and transfer of applied Computational Intelligence (ATICA), since its birth in 2010.

EDITOR ACTIVITIES

NOTES

ON



Journal: **NOTES ON IFS**

Editor-in-Chief: Janusz Kacprzyk, Krassimi Atanassov, Humberto Bustince

ISSN: 1310-4926



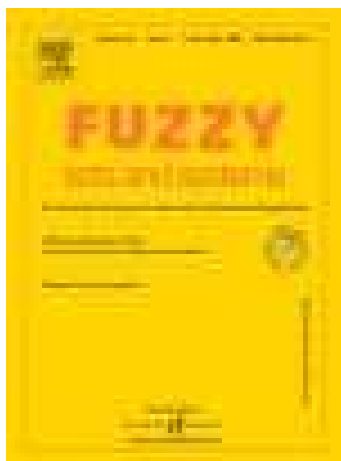
Journal: **MATHWARE AND SOFT COMPUTING MAGAZINE**

Editor-in-Chief: Humberto Bustince

Official Journal of EUSFLAT, European Society for Fuzzy Logic and Technology

ISSN: 1134-5632

SPECIAL ISSUES EDITOR



Editors H. Bustince, T. Calvo, J. Fernández, L. Troiano

Title: « EUSFLAT 2011 and AGOP 2011 »

In **Fuzzy Sets and Systems**

Issue: Pages, from: final: Date:

In press

Category: COMPUTER SCIENCE, T.M.

Position:

Impact factor:

Category: MATHEMATICS, APPLIED

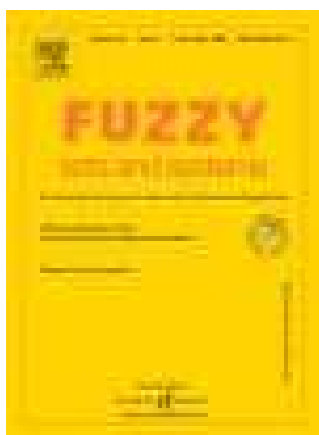
Position:

Impact factor:

Category: STATISTICS & PROBABILITY

Position:

Impact factor:



Editors H. Bustince, B. De Baets, J. Fodor

Title: « Eurofuse09. Preference modelling and decision analysis »

In **Fuzzy Sets and Systems**

Issue: 184 (1) Date: 2011

Category: COMPUTER SCIENCE, T.M.

Position: 14/92

Impact factor: 2.138

Category: MATHEMATICS, APPLIED

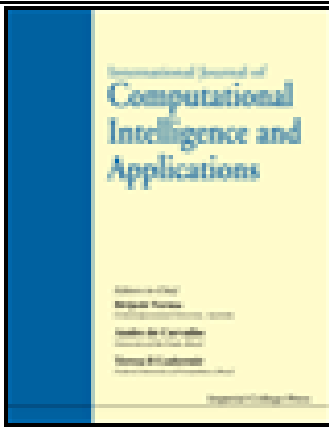
Position: 8/204

Impact factor: 2.138

Category: STATISTICS & PROBABILITY

Position: 13/100

Impact factor: 2.138



Editors H. Bustince, B. Lazzerini

Title: « **Applications of Computational Intelligence in Computer Vision** »
In **International Journal of Computational Intelligence and Applications**

Issue: 9 (3) Pages, from: final: Date: 2010

DOI: 10.1142/S1469026810002896

MEMBERSHIP TO EDITORIAL BOARDS



Journal: **IEEE Transactions on Fuzzy Systems**

Editor-in-Chief: Chin-Teng Lin

ISSN: 1063-6706

Impact Factor: 5.484



Journal: **Fuzzy Sets and Systems**

Editor-in-Chief: B. De Baets, D. Dubois, E. Hüllermeier

ISSN: 0165-0114

Impact Factor: 1.749



Journal **Information Fusion**

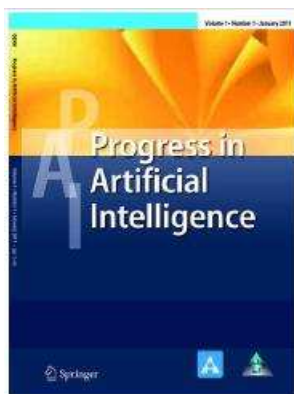
Editor-in-Chief: F. Herrera

ISSN: 1566-2535

Impact Factor: 2.262



Journal: Journal of Intelligent and Fuzzy Systems
Editor-in-Chief: Reza Langari
ISSN: 1064-1246
Impact Factor: 0.787



Journal: **Progress in Artificial Intelligence**
Editor-in-Chief: F. Herrera
ISSN: 0974-1259



Journal: **International Journal of Computational Intelligence Research**
Editor-in-Chief: J.M. Benítez
ISSN: 0974-1259



Journal: **Axioms**
Editor-in-Chief: Angel Garrido
ISSN: 2075-1680



Journal: **Journal Iberoamericana de Inteligencia Artificial**
Editor-in-Chief: J.C. Riquelme
ISSN: 1137-360



Journal: **Archives for the Philosophy and History of Soft Computing**
Editors-in-Chief: Rudolf Seising, Alejandro Sobrino

RESEARCH BOOK EDITOR



Editors: Michal Baczyński, Gleb Beliakov, Humberto Bustince, Ana Pradera.
Title: *Advances in Fuzzy Implication Functions*
Series: STUDIES IN FUZZINESS AND SOFT COMPUTING
Editorial: SPRINGER
YEAR: 2013
ISBN: 978-3-642-35676-6
Place: Heidelberg (Germany)



Editors: H. Bustince, F. Herrera, J. Montero

Title: *Fuzzy Sets and their Extensions: Representation, Aggregation and Models. Intelligent Systems from Decision Making to Data Mining, Web Intelligence and Computer Vision, Studies in Fuzziness and Soft Computing*

Series: STUDIES IN FUZZINESS AND SOFT COMPUTING

Editorial: SPRINGER

YEAR: 2007

ISBN: 978-3-540-73722-3

Place: Heidelberg (Germany)



Editors: Editores: K. Atanassov, P. Chountas, J. Kacprzyk, M. Krawczak, P. Melo-Pinto, E. Szmidt, S. Zadrozny

Title: *Developments in fuzzy sets, intuitionistic fuzzy sets, generalized nets and related topics. foundations. Volume I*

Series: CHALLENGING PROBLEMS OF SCIENCE. COMPUTER SCIENCE

Editorial: ACADEMIC PUBLISHING HOUSE EXIT

YEAR:2008

ISBN: 978-83-60434-52-9

Place: Warsaw (Poland)



Editors: Editores: K. Atanassov, P. Chountas, J. Kacprzyk, M. Krawczak, P. Melo-Pinto, E. Szmidt, S. Zadrozny

Title: *Developments in fuzzy sets, intuitionistic fuzzy sets, generalized nets and related topics. foundations. Volume II*

Series: CHALLENGING PROBLEMS OF SCIENCE. COMPUTER SCIENCE

Editorial: ACADEMIC PUBLISHING HOUSE EXIT

YEAR 2009

ISBN: 978-83-60434-52-9

Place: Warsaw (Poland)

R&D MANAGEMENT

- 1.- Responsible of the refoundation of Mathware & Soft Computing Magazine in 2011.
- 2.- Member of the executive council of the ATICA Society since 2010.
- 3.- Member since 2011 of the Board of the EUSFLAT association.
- 4.- Member of the Reviewing Committee in Artificial Intelligence of the Spanish Ministry of Science and Innovation in 2011.
- 5.- Member of the Research Council of the Public University of Navarra since april, 2010.
- 6.- Coordinator for Foreing Affairs of the Technical Computer Science degree from 01/01/2003 until 13/10/2003 (9 months).
- 7.- Coordinator of Computer Science in the Public University of Navarra since 2003 until 2008.
- 8.- Leader of the research group on Artificial Intelligence and Approximate Resoning of the Public University of Navarra since 2004.
- 9.- Spanish leader in the project HP2006-0128 titled "Use of fuzzy logic in digital image segmentation models".
- 10.- Leader in 1997/1999 of the Research Project "Sistema Experto para la Medición del Grado de Elaboración del Arroz. Aplicación a las Cosechas de Arroz de Navarra". Orden Foral 557/1996 del Government of Navarra.
- 11.- Leader in 2006 and 2007 of the research project "Valoración de Bienes Inmuebles Mediante Técnicas Basadas en Inteligencia Artificial". Made for the TRACASA Company in Navarra.
- 12.- Leader for the Public University of Navarra in the project MTM2005-08982-C04-04.
- 13.-Leader, from october 2007 until 2010, of the project "Unificación, Generación y Aplicación de Medidas de Información en Conjuntos Intervalares Difusos de Tipo 2" from the Spanish Ministry of Science: Plan Nacional de I+D+I. (TIN2007-65981)
- 14.-Leader, since october 2011 until 2013 of the research project "Nuevo modelo de representación y agregación de la información utilizando las extensiones de los conjuntos difusos. Aplicaciones" from the Spanish Ministry of Science and Education: Plan Nacional de I+D+I. (TIN2010-15055)
- 15.- Leader in 2009 y 2010 of the research project "Técnicas de minería de datos y Soft Computing para la mejora de calidad de datos introducidos en Scoring". Made for CAN.
- 16.- Leader in 2009 y 2010 of the research project "Formalización, validación y optimización de la metodología utilizada para el control de grupos económicos". Made for CAN.
- 17.- Leader of the project TIN2009-05756-E/TIN titled: Eurofuse workshop 2009. Preference modelling and decision analysis.
- 18.- Member of (European Society for Fuzzy Logic and Technology) since the foundation of FLAT in 1997.
- 19.- Member of IEEE (The institute of electrical and electronics engineers) since 1997.
- 20.- Member of the Committee for Ph.D. Studies in the Public Univeristy of Navarra since Octubre, 30, 2013.

OTHER MERITS RELATED TO R&D MANAGEMENT

1.- **Member of the selection Committee of the Spanish Agency for the Evaluation of Research Projects** in Artificial Intelligence in 2011 and 2012.

2.- **Research projects evaluator** for the Spanish Agency of evaluation:
2006: 1 evaluation, 2007: 1 evaluation, 2008: 2 evaluations, 2009: 6 evaluations
2010: 1 evaluation.

3.- **Research projects evaluator** for the Andalusi Agency of Evaluation, during 2007, 2008, 2009, 2010 and 2012.

4.- **Research project evaluator for the "DEPARTMENT OF RESEARCH AFFAIRS" of the "UNIVERSITEIT GENT" in BELGIUM.**

5.- **Research project evaluator** for the **CZECH** Science Foundation in 2012.

6.- Three research terms recognized: 1993/1998, 1999/2004 y 2004/2010.

7.- **Reviewer of International Conferences:**

IPMU 2011, FUZZ-IEEE 2013, EUROFUSE 2013, EUROFUSE 2011, NAFIPS 2013, AGOP 2011, EUSFLAT 2011, ESTYLF 2011, IEEE International Conference on Fuzzy Systems (Londres, 2007), Conference on Intelligent Computing (ICIC China, 2008), IEEE World Congress on Computational Intelligence (Hong Kong, WCCI 2008), Conference on Computational Intelligence in Decision and Control (Madrid, FLINS 2008), The 22nd International Conference on Industrial, Rngineering and Other Applications of Applied Intelligent Systems IEA/AIE, Tainana, Taiwan, 2009, IFSA/EUSFLAT 2009 Lisboa, International Conference on Information processing and management of uncertainty in knowledge-based systems (IPMU 2010), FUZZY-IEEE 2010, FUZZY-IEEE (WCCI 2010), IEEE Intelligence Systems 2010 (London), IEEE-SSCI-2011(Paris), EUROFUSE 2011, Fuzzy methods for Knowledge-Based Systems, Regua, Portugal, etc ...

8.- **Reviewer for the following journals in JCR:**

Information Sciences, Fuzzy Sets and Systems, IEEE Transaction on Fuzzy Systems, International Journal of Approximate Reasoning, International Journal of Uncertainty, Fuzziness and Knowledge Based Systems, International Journal of Pattern Recognition and Artificial Intelligence, IEEE/Systems, Man and Cybernetics, Mathware and Soft Computing, Mathematical and Computer Modelling, Information Fusion, IEEE Transactions on Image Processing, Optic Express, Soft Computing, Pattern Recognition, Iranian Journal of Fuzzy Systems, Pattern recognition Letters, International Journal of Information Technology & Decision Making, Computers & Operations Research, Applied Soft Computing, Engineering Applications of Artificial Intelligence, Nonlinear Analysis: Theory, Methods & Applications, International Journal of Computational Intelligent Systems, etc...

SOME OTHER REMARKABLE POINTS

1.- In Fuzzy Sets and Systems (impact factor 1.759, Position 11 from 245 in Applied Mathematics) the paper "Vague sets are intuitionistic fuzzy sets" is at the 25 place among the 6930 papers published by the journal in its whole history, according to the number of citations.

2.- In Information Sciences (impact factor 2.833, Position 9 from 135) the paper

Title: On averaging operators for Atanassov's intuitionistic fuzzy sets

Author(s): Beliakov, G.; Bustince, H.; Goswami, D. P.; et al.

Source: INFORMATION SCIENCES Volume: 181 Issue: 6 Pages: 1116-1124 DOI:
10.1016/j.ins.2010.11.024 Published: MAR 15 2011

Is the fifth most cited among the 1382 papers published by the journal during the last two years.

This paper can be found in: HIGHLY CITED PAPERS FOR (BUSTINCE) in Web of Sciences

3.- On February 17, 2014 in Web of Knowledge I have 1918 citations and my h-index is 22; that is

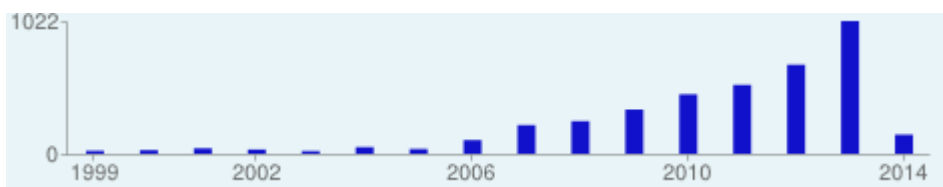
Results found: 132	
Sum of the Times Cited	1918
Sum of Times Cited without self-citations	1532
Citing Articles	4238
Citing Articles without self-citations	4136
Average Citations per Item	14.53
h-index	22

4.- In **Scopus database**, February 17, 2014, I have 2251 citations and my h-index is 26.

5.- In **Google Scholar**, February 17, 2014, I have:

Cites		
	Total	Desde 2009
Citas	4057	3185
Índice h	31	30
Índice i10	59	54

Citations on my papers



Address: <http://scholar.google.es/citations?user=9SI4W2kAAAAJ&hl=es&oi=ao>

6.- From 2006 until 10/01/2007 I have been at the tenth place at De Mnfort Univeristy database of authors publishing about type-2 fuzzy sets.

7.- The international recognition to my work was clear when I was invited the Imperial College workshop with other key researchers in the type-2 field.

8.- I was chosen by the Scientific Committee of FLINS 2008, with other 9 researchers to write a special issue of the **Int. J. Computational Intelligent Systems** as one of the most important reserachers in type-2 fuzzy sets .

9.- The following papers have been in:TOP 25 HOTTEST ARTICLES of "Fuzzy Sets and Systems".

1. Image thresholding using restricted equivalence functions and maximizing the measures of similarity. 25/25 from January to March 2007.
2. On the relevance of some families of fuzzy sets. 21/25 from July to September and 25/25 from October to December, 2007.

3. Interval-valued fuzzy sets constructed from matrices: Application to edge detection. 2/25 from April to June and 16/25 from July to September, 2009.
4. Solving multi-class problems with linguistic fuzzy rule based classification systems based on pairwise learning and preference relations. 8/25 from October to December 2010.

10.- The paper: On the relevance of some families of fuzzy sets has been for 3 years among the 25 most referenced papers Fuzzy Sets and Systems.

15.- The paper: Interval-valued fuzzy sets constructed from matrices: Application to edge detection has been among the most cited ones in Fuzzy Sets and Systems since 2011..

PUBLIC PROJECTION

1.- The public Basque TV, ETB, made a progema focused on my research Works in the Public University of Navarra as well as on those by Prof. Mario Sorolla. In this program I explained my results in projects : MTM2005-08982-C04-04, TIN2007-65981 y HP2006-0128.

The video can be found at

http://toknopolis.elhuyar.org/ikusi.asp?Multi_Kodea=316&atala=erroreportajeak&lang=ES

2.- In the newspapers: EL ECONOMISTA (15 of June, 2006), CINCO DIAS (19 of May, 2007) and DIARIO DE NAVARRA (7 of December, 2006) have been published articles covering a whole page and explaining the collaboration between my research group and the Company TRACASA in the research projects: OTRI 2005001134 and OTRI 2006001142.

3.- In September 19, 2009 DIARIO DE NAVARRA, published an article about EUROFUSE 2009. Which was organized by my research group.

AWARDS

1.-Paper: A-IFSs Entropy based image theresholding **Best paper ward in:** TWENTY THIRD INTERNATIONAL CONFERENCE ON INDUSTRIAL, ENGINEERING AND APPLICATIONS OF APPLIED INTELLIGENT SYSTEMS (IEA/AIE-2010). Córdoba, Spain, June 1-4

2.-Detección de Bordes en imágenes intervalares
C. López-Molina, B. De Baets, E. Barrenechea and H. Bustince
Best Young researcher work (applications) in ESTYLF 2012.

3.-Paper: Construction of Strong Equality Index from Impliaction Operators, **Best paper at:** FLINS 2012: the 10th international FLINS Conference on Uncertainty Modelling in Knowledge Engeniering and Decision making. Istanbul, Turkey, August (27-29) 2012.

4.-Convex combination of grouping functions for image theresholding. Selection of weighting vectors
A. Jurio, M. Pagola, D. Paternain, N. Madrid, H. Bustince
Best student work at the European Society for Fuzzy Logic and Technology (EUSFLAT) Conference, Milano, September, 2013.

5.- **Best scientific contribution in the Public Univeristy of Navarra** in 2011 in the area os Science and Technology, for the work:
On averaging operators for Atanassov's intuitionistic fuzzy sets,
Information Sciences, Volume 181, Issue 6, 15 March 2011, Pages 1116-1124

RESEARCH GROUP (GIARA)

(A) I am the founder, in 2003, and the main researcher of the research group “Inteligencia Artificial y Razonamiento Aproximado” (GIARA) of the Public University of Navarra.

(B) Main research lines:

- Fuzzy sets. Aggregation operators, Fuzzy implication operators..
- Extensions: Type-2 fuzzy sets, interval-valued fuzzy sets, Atanassov's intuitionistic fuzzy sets
- Approximate reasoning
- Image processing
- Pattern recognition
- Decision making
- Classification
- Learning

(C) The Public University of Navarra states that the GIARA group is an **EXCELLENT** research group, which means that, after an external evaluation, it is between the best 10% of the groups in the Public University of Navarra. E

(D) In 2013 the group was again graded as EXCELLENT and was included in the Competitivity Plan of the University.

ADMINISTRATIVE POSITIONS

Position: Vicedirector of the Automation and Computing Department

Place: Universidad Pública de Navarra

Dates: 03/05/1996- 17/02/1997

Position: Vicedirector of the Automation and Computing Department

Place: Universidad Pública de Navarra

Dates: 25/03/1998- 14/05/1999

Position: Organizer for the Computer Science degree in the University (equivalent to director of a Computer Science Engineering School).

Place: Universidad Pública de Navarra

Dates: 26/05/2003- 25/05/2004

Position: Vicedirector for the Computer Science degree in the High School for Industrial and Telecommunications Engineering in the University (equivalent to director of a Computer Science Engineering School).

Place: Universidad Pública de Navarra

Dates: 31/03/2004- 11/01/2010

Position: Member of the undergraduate studies commission

Place: Universidad Pública de Navarra

Dates: 09/06/2011-

Position: Member of the Research Committee

Place: Universidad Pública de Navarra

Dates: 12/05/2010-

Position: Member of the Academic Committee for the Ph.D Program in Science and Technology

Place: Universidad Pública de Navarra

Dates: 30/10/2013-

TEACHING ACTIVITIES

UNDERGRADUATE STUDIES

YEAR 1991-1992

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE",

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Technical Industrial Engineering (Mechanics and Electrical)

YEAR 1992-1993

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE",

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Technical Industrial Engineering (Mechanics and Electrical)

YEAR 1993-1994

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE",

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Technical Industrial Engineering (Mechanics and Electrical)

YEAR 1994-1995

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE"

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

SUBJECT: "FUNDAMENTOS DE LA PROGRAMMING",

CREDITS: 6

TYPE: Theory and practise

CAREER: First year Telecommunications Engineering

YEAR 1995-1996

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE",

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

YEAR 1996-1997

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE",

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

YEAR 1997-1998

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE",

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

YEAR 1998-1999

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE"

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

YEAR 1999-2000

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE"

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

YEAR 2000-2001

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE",

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

YEAR 2001-2002

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE"

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

SUBJECT: "PROGRAMMING"

CREDITS: 6

TYPE: Theory and practise

CAREER: First year Technical Telecommunication Engineering (Sound and Image)

YEAR 2002-2003

SUBJECT: "FOUNDATIONS OF COMPUTER SCIENCE"

CREDITS: 12

TYPE: Theory and practise

CAREER: First year Industrial Engineering

SUBJECT: "ARTIFICIAL INTELLIGENCE"

CREDITS: 6

TYPE: Theory and practise

CAREER: Second year Technical Computer Science for Management

YEAR 2003-2004

SUBJECT: "ARTIFICIAL INTELLIGENCE"

CREDITS: 6

TYPE: Theory and practise

CAREER: Second year Technical Computer Science for Management

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory and practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "ARTIFICIAL INTELLIGENCE LAB"

CREDITS: 6

TYPE: Theory and practise

CAREER: Third year Technical Computer Science for Management

YEAR 2004-2005

SUBJECT: "ARTIFICIAL INTELLIGENCE"

CREDITS: 6

TYPE: Theory

CAREER: Second year Technical Computer Science for Management

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "ARTIFICIAL INTELLIGENCE LAB"

CREDITS: 6

TYPE: Theory

CAREER: Third year Technical Computer Science for Management

SUBJECT: "COMPUTER VISION"

CREDITS: 6

TYPE: Theory

CAREER: Second year second cycle Computer Science Engineering (equivalent to fifth year)

SUBJECT: "ARTIFICIAL INTELLIGENCE SYSTEMS"

CREDITS: 6

TYPE: Theory and practise

CAREER: Second year second cycle Computer Science Engineering (equivalent to fifth year) _

YEAR 2005-2006

SUBJECT: "ARTIFICIAL INTELLIGENCE",

CREDITS: 6

TYPE: Theory

CAREER: Second year Technical Computer Science for Management

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "ARTIFICIAL INTELLIGENCE SYSTEMS"

CREDITS: 6

TYPE: Theory and practise

CAREER: Second year second cycle Computer Science Engineering (equivalent to fifth year)

YEAR 2006-2007

SUBJECT: "ARTIFICIAL INTELLIGENCE"

CREDITS: 6

TYPE: Theory

CAREER: Second year Technical Computer Science for Management

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "ARTIFICIAL INTELLIGENCE SYSTEMS"

CREDITS: 6

TYPE: Theory and practise

CAREER: Second year second cycle Computer Science Engineering (equivalent to fifth year)

YEAR 2007-2008

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

YEAR 2008-2009

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

YEAR 2009-2010

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory and practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

YEAR 2010-2011

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory and practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "ARTIFICIAL INTELLIGENCE SYSTEMS"

CREDITS: 6

TYPE: Theory and practise

CAREER: Second year second cycle Computer Science Engineering (equivalent to fifth year)

YEAR 2011-2012

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory and practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "SCIENTIFIC COMPUTING I", Troncal

CREDITS: 6

TYPE: Theory and practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "ARTIFICIAL INTELLIGENCE", Obligatoria

CREDITS: 6

TYPE: Theory and practise

CAREER: 2º Grado en Ingeniería Informática

YEAR 2012-2013

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING", Troncal

CREDITS: 9

TYPE: Theory and practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "SCIENTIFIC COMPUTING I"

CREDITS: 6

TYPE: Practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

YEAR 2013-2014

SUBJECT: "ARTIFICIAL INTELLIGENCE AND KNOWLEDGE ENGINEERING"

CREDITS: 9

TYPE: Theory and practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

SUBJECT: "ARTIFICIAL INTELLIGENCE"

CREDITS: 6

TYPE: Theory

CAREER: Second year Computer Science Degree

SUBJECT: "SCIENTIFIC COMPUTING I"

CREDITS: 6

TYPE: Practise

CAREER: First year second cycle Computer Science Engineering (equivalent to fourth year)

POSTGRADUATE STUDIES

YEAR 1996-1997

SUBJECT: "FUZZY EXPERT SYSTEMS"

CREDITS: 3

TYPE: Theory and practise

YEAR 1997-1998

SUBJECT: "IMPRECISION MEASURES IN APPROXIMATE REASONING"

CREDITS: 3

TYPE: Theory and practise

YEAR 1998-1999

SUBJECT: "OTHER TYPES OF FUZZY SETS"

CREDITS: 3

TYPE: Theory and practise

YEAR 1999-2000

SUBJECT: "OTHER TYPES OF FUZZY SETS"

CREDITS: 3

TYPE: Theory and practise

YEAR 2007-2008

SUBJECT: "INTELLIGENT SYSTEMS IN COMPUTER VISION"

CREDITS: 3

TYPE: Theory and practise

SUBJECT: "FUZZY SETS AND THEIR EXTENSIONS"

CREDITS: 3

TYPE: Theory and practise

UNIVERSIDAD: UNIVERSIDADE DE TRAS-OS-MONTES E ALTO DOURO

COUNTRY: Portugal

YEAR 2008-2009

SUBJECT: "INTELLIGENT SYSTEMS IN COMPUTER VISION"

CREDITS: 3

TYPE: Theory and practise

YEAR 2009-2010

SUBJECT: "ADVANCED TOPICS IN ARTIFICIAL INTELLIGENCE "

CREDITS: 4

TYPE: Theory and practise

SUBJECT: "INTELLIGENT TECHNIQUES AND THEIR APPLICATIONS"

CREDITS: 4

TYPE: Theory and practise

YEAR 2010-2011

SUBJECT: "ADVANCED TOPICS IN ARTIFICIAL INTELLIGENCE"

CREDITS: 4

TYPE: Theory and practise

SUBJECT: "INTELLIGENT TECHNIQUES AND THEIR APPLICATIONS"

CREDITS: 4

TYPE: Theory and practise

Advisor of more than 25 degree thesis.

OTHER TEACHING RELATED MERITS

- I have given a course of 15 hours in the "Systems Research Institute" of the Polish Academy of Sciences (Warsaw, Poland) in November 4-12 , 2009, about the use of fuzzy extensions and Matlab for image processing.
- I have given a Ph. D. course of 18 hours in the Universidad de Trás-os-Montes e Alto Douro, Vila real, september, 2007, Portugal, in the frame of the Electrical and Computer Engineering Ph.D. Program. My course was entitled: Fuzzy Sets and Their Extensions.

- I have given a course "Computer Science for beginners", of 50 hours, between 26/02/1991 and 31/05/1991. This course was organized by the Education Department of the Government of Navarra.
- 4.- Advisor, since 1998 until now, of external practises of around 20 students. . The companies these practical works were carried out include:: Gamesa Eólica SL, Ega Informática, GM Vending, S21SEC Informations Security Labs, etc...
- Member of the Ph.D. Jury of D. Pedro Alexandre Mogadouro Do Couto in Universidad de Tras-Os-Montes e Alto Douro, Portugal, September 19, 2007.
- Member of the Ph.D. Jury of D. Pedro José Sánchez Sánchez in the Department of Computer Science and Artificial Intelligence of the E.T.S. de Ingeniería Informática of the Granada University, November 14, 2007.
- Member of the Ph.D. Jury of D. Francisco Mata Mata, in the Computer Science Department of the Escuela Politécnica Superior de la Universidad de Jaén, in June, 2006.
- Member of the Ph.D. Jury of D. Francisco Chiclana Parrilla in the Department of Computer Science and Artificial Intelligence of the E.T.S. de Ingeniería Informática of the Granada University, , in February, 2000.
- Member of the Ph.D. Jury of Dña. Susana Alcalde in the Electric and Electronic Engineering Department of the Public University of Navarra in September, 2009.
- Member of the Ph.D. Jury of Dña. Macarena Espinilla Estévez in the University of Jaén in March 2009.
- Member of the Ph.D. Jury of D. T. Mélange in The Faculty of Sciences of Ghent University in May, 2010.
- Member of the Ph.D. Jury of D. Juan Tinguaro Redríguez González in the Universidad Complutense de Madrid in September, 2010.
- Member of the Ph.D. Jury of D. Simon James in Deakin University, Australia in January, 2011.
- Member of the Ph.D. Jury of Dña. Cristina Moreno Chocarro in the Public University of Navarra in September, 2011.
- Secondary School adjoint teacher (Ministry order 20-10-1985)
- Member during the academic year 2009/2010 of the tuition program of the Public University of Navarra for students of the Escuela Técnica Superior de Ingenieros Industriales y de Telecomunicación.
- I have mae a course on "Communication and management habilities to easy the work of teachers" of the Public University of Navarra in May, 2010.

QUALITY OF THE TEACHING ACTIVITIES

POSITIVE EVALUATIONS OF TEACHING ACTIVITIES

I have four five-years-terms and seven three-years-terms recognized. In all the five-years-terms I have been graded as POSITIVE.

To evaluate teaching activities, the Public University of Navarra make surveys among the students since 1996. Results have always been good.

During the periods 2005-2009 and 2009 my teaching activity in the University has been graded by the University itself as EXCELLENT, which means I am among the best 10% of all the teachers in all studies in this University.

INNOVATIVE TEACHING PROJECTS

TITLE: : LITERARY READINGS IN SECONDARY SCHOOL. DIDACTICAL PROFIT

DATE: 01/01/1989- 31/12/1992

TYPE OF PROJECT: Regional

COLABORATION: .In charge of the computing part of the project. Elaboration of a database manager.

TYPE OF PARTICIPATION: Collaborator

TITLE: : STARTING THE SECOND CYCLE FOR THE COMPUTER SCIENCE GRADE IN THE PUBLIC UNIVERSITY OF NAVARRA

DATE: 01/01/2002- 30/10/2008

TYPE OF PROJECT: Others

COLABORATION: To organize teaching activities for the teachers, to coordinate subjects, to tutorize students during the pass from the Technical Engineering grade to the Engineering grade.

TYPE OF PARTICIPATION: In charge

TITLE: : REFLEXION FORUM ON THE EDUCATIVE MODEL AT THE PUBLIC UNIVERSITY OF NAVARRA IN THE EUROPEAN SPACE OF HIGHER EDUCATION

DATE: 17/09/2008- 14/10/2008

TYPE OF PROJECT: Regional

COLABORATION: To establish criteria for the Computer Science grade.

TYPE OF PARTICIPATION: Collaborator

TITLE: WORKING GROUP ON THE GRADE OF COMPUTER SCIENCE ENGINEERING IN THE EUROPEAN SPACE OF HIGHER EDUCATION

DATE: 10/03/2009-

TYPE OF PROJECT: Regional

COLABORATION: To design new subjects in the new grade and to elaborate documents to get approval from the Spanish Quality Evaluation Agency.

TYPE OF PARTICIPATION: Collaborator

TEACHING DEVOTED BOOKS

TITLE: : A Practical Introduction to Pascal Programming Language

AUTHORS: C. Lopez-Molina, H. Bustince, J. Fernández

ISBN-10: 84-695-7278-4

ISBN-13: 978-84-695-7278-8

PLACE: Pamplona, March, 2013

OTHER TEACHING MERITS

1.- Teaching material. Lecture notes, solved problems, etc, of: Artificial Intelligence and Knowledge Engineering

2.-The quality of the thesis I have directed is clear from the number of publications in high-ranked journals:

A) 13 papers in journals with very high impact factor, almost all of them in the first quartile.

B) 17 contributions to international conferences and 13 to national conferences.

QUALITY OF MY TEACHER BACKGROUND

CONTRIBUTIONS TO TEACHING ORIENTED CONFERENCES

TITLE: : DESIGN AND DEVELOPMENT OF ONLINE EDUCATIONAL GAMES BASED ON QUESTIONS

PLACE: INSTICC: INSTITUTE FOR SYSTEMS AND TECHNOLOGIES OF INFORMATION, CONTROL AND COMMUNICATIONS

PARTICIPATION: CONTRIBUTED TALK

DATES: 07/04/2010- 10/04/2010

PLACE: Valencia

PUBLICACIÓN (ISBN/ISSN): 978-989-674-024-5

TITLE: : DESARROLLO Y EMPLEO DE JUEGOS EDUCATIVOS ON-LINE DESTINADOS AL AUTO-ENTRETENIMIENTO Y AUTO-EVALUACION

PLACE: UNIVERSIDA DE SANTIAGO DE COMPOSTELA

PARTICIPATION: CONTRIBUTED TALK

DATES: 07/07/2010- 09/07/2010

PLACE: Santiago de Compostela

STAYING IN OTHER CENTERS TEACHING-RELATED

CENTER: Pedagogical area of exact, natural and technological sciences (Vila real, Portugal)

INSTITUTION: Universidad de Tras-os-Montes e Alto

PROGRAM: Computer Science education under Bologna Process

GOAL: To analyze the structure of the Computer Science grades in the European Space of Higher Education.

DATES: 23/01/2008- 24/01/2008

CHARACTER: Representative of the Public University of Navarra as subdirector

CENTER: Systems research institute (Varsovia, Polonia)

INSTITUTION: Polish Academy of Sciences

GOAL: To give a course of 15 hours about the use of fuzzy extensions and Matlab for image processing.

DATES: 02/11/2009- 12/11/2009

CHARACTER: Guest.

OTHER TEACHING-RELATED MERITS

1.- I took part in the course "LAS COMPETENCIAS EN LOS PLANES DE ESTUDIO DE LAS INGENIERIAS. UN CASO PRACTICO", in Pamplona, November 2008

2.- I took part in the course "USO DE MI AULARIO PARA EL APOYO A LA DOCENCIA", in the Public University of Navarra Universidad Pública de Navarra in June, 2009.

3.- Adjoint secondary school teacher 1985-1989.

4.- First cycle of the pedagogical attitude course in the Education Sciences Institute of the Univeristy of Salamanca in 1982-83.

5.- Second cycle of the pedagogical attitude course in the Education Sciences Institute of the University of Salamanca in 1984-85.

OTHER MERITS

1.- Member of the Recruiting committee of postdoctoral researchers at CITAB, UTAD, Vila real, Portugal.

2.- I took part in different forums to explain the educational offer of the Public University of Navarra. In 2008/09

3.- I took part in different forums to explain the educational offer of the Public University of Navarra. In 2008/09
2009/2010.

4.- Researcher in charge of three Technological Formation grants of the Industry and Technology Department of the Government of Navarra in 2007/8, 2008/9 Y 2009/10.