

# Francisco Javier Fernandez

## Short Curriculum Vitae

### I. Profesional data

Affiliation: Public University of Navarra

Official address: Dept. Computer Science and Artificial Intelligence, Public University of Navarra, Navarra, Spain

Current position(s): Assistant Lecturer

Contact coordinates

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### II. Education

BS (1999) - University of Zaragoza (Spain) – Mathematics

PhD (2003) - Public University of Navarra (Spain) - Mathematics

### III. Publications

Summary:

No. of SCI journals papers: 8

No. of Book chapters: 2

Ph D theses advising: 0

Last 5 published (SCI) journals papers:

- E. Barrenechea, H. Bustince, M. Pagola, J. Fernandez, “Construction of interval-valued fuzzy entropy invariant by translations and scalings”, *Soft Computing*, DOI 10.1007/s00500-009-0480-7 in press.
- H. Bustince, J. Fernandez, R. Mesiar, J. Montero y R. Orduna, “Overlap functions”, *Nonlinear Analysis, Theory, Methods & Applications*, 72, 1488-1499, (2010).
- H. Bustince, M. Pagola, E. Barrenechea, J. Fernandez, P. Melo-Pinto, P. Couto, H.R. Tizhoosh, J. Montero, “Ignorance functions. An application to the calculation of the threshold in prostate ultrasound images”, *Fuzzy sets and systems*, 161, 20-36, (2009).
- H. Bustince, E. Barrenechea, M. Pagola, J. Fernandez, “Interval-valued fuzzy sets constructed from matrices: Application to edge detection”, *Fuzzy sets and systems*, 160, 1819-1840, (2009).
- H. Bustince, J. Fernandez, R. Mesiar, J. Montero y R. Orduna, “Overlap functions”, *Nonlinear Analysis, Theory, Methods & Applications*, 72, 1488-1499, (2010).

- A. Blanchet, J. Dolbeault, M. Escobedo, J. Fernandez, “Asymptotic behaviour for small mass in the two-dimensional parabolic-elliptic Keller-Segel model”, *Journal of Mathematical Analysis and Applications*, 361, 533-542, (2010).

#### **IV. Research experience**

Projects in which has participated:

- Title: Eurofuse workshop 2009. Preference modelling and decision analysis  
Project: TIN2009-05756  
Period, September 2009
- Title: Harmonic analysis and related problems  
Project: HPRN-CT-2001-00273-HARP  
Period, August 2002 - August 2006
- Title: Hyperbolic and Kinteic Equations  
Project: HPRN-CT # 2002-00282  
Period, August, 2002-July 2005.
- Title: Ecuaciones en derivadas parciales, dispersivas y de difusión  
Project: BFM 2001-0458  
Period: December 2001-December 2004

#### **V. Other scientific activities**

- Member of the organizing committee. Eurofuse 09 Workshop- Preference Modelling and decision analysis, September 16-18, 2009, Pamplona, Spain.

#### **VI. Teaching experience**

- Assistant Lecturer (since 2008-present). Dept. Automatic and Computer Science, E.T.S.I Industriales y de Telecomunicación, Public University of Navarra, Spain
- He has taught many different subjects in the Computer Science short (Bachelor) and long (Master) degrees (recently, Algorithmic, Artificial Intelligence, Computational Mathematics, Introduction to Computer Sciences).

#### **VII. Areas of interest**

Basic concepts of fuzzy sets: Implication operators, aggregation operators, fuzzy measures, fuzzy relations, etc. Extensions of fuzzy sets: Interval-valued fuzzy sets, Atanassov's intuitionistic fuzzy sets, rough fuzzy sets. Approximate reasoning. Fuzzy Image Processing. Applications of soft computing techniques, stability problems, unique continuation problems.