Enrique Frias-Martinez

CONTACT INFORMATION

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RESEARCH INTERESTS

I am a researcher in Computer Science with over 10 years of experience working on Big Data related areas, mainly Big Data Analytics, Data Mining, Social Computing, Behavioral Modeling, Urban and Ubiquitoius Computing, Smart Cities and Big Data for Social Good. I strongly believe that Big Data is the next frontier for innovation and will change the way societies operate from an expert-base approach to a data-driven approach. Apart from research in Big Data I am also very interested in technology transfer and IPR, as the main means of producing a social impact from research results.

CURRENT POSITION

Telefonica Research, Madrid, Spain **April 2008 - present**
Scientific Researcher, Big Data Research Group

Lead research and prototyping in a variety of Big Data areas including mobility, user modelling, big data for social good, visualization of information and urban computing. Big Data evangelist for the Business Units of the Telefonica Group. Transfer of the algorithms and results to the engineering groups of Telefonica for the deployment in business units. Patenting the new methods and technologies developed. Presenting to the media and other third parties (public institutions, international agencies) the results and social benefits of Big Data. Finding and defining collaborations with third parties for Big Data projects and products.

EDUCATION

University of California, Los Angeles (UCLA), Los Angeles, CA **March 2008**

M.Sc. Biomedical Engineering. GPA 4.0. Biomedical Engineering Department.

- Title: "A Comparison Study of JPRESS and COSY for Quantitation of 2D Magnetic Resonance Spectroscopy"

Brunel University, London, UK **November 2006**

Ph.D. Information Systems with Honors. Dep. of Information Systems and Computing.

- Title: "User Modelling for Digital Libraries: A Data Mining Approach"
- Finalist for the Best Ph.D. Thesis Award 2006

Universidad Politecnica de Madrid, Madrid, Spain **December 2001**

Ph.D.(Doctor) in Computer Science, Highest Honours " Cum Laude"

- Title: "High-Speed Fuzzy Systema on Parallel Architectures (in spanish)"
- Best Ph.D. Thesis Award School of Computer Science 2001

Universidad de Valladolid, Valladolid, Spain **May 1996**

M.Sc. in Computer Engineering

Professional Experience

University of California, Los Angeles (UCLA) , CA, USA **Sep 2006 - March 2008**
Graduate Researcher, Biomedical Engineering Department, UCLA Medical Center
Research leader for a personalization tool for medical patients. Keywords: Pattern Recognition and Data Modeling techniques.

Brunel University, London, UK **Sep. 2003 - Sep. 2006**
AHRB Research Fellow, Department of Information Systems and Computing (DISC)
Research leader in a project that studied and evaluated user behavior when interacting with digital libraries and the web. Key words: User Modeling, Machine Learning, Data Mining, Personalization.

New York University (NYU), New York City, NY, USA **Sep. 2001 - Sep 2003**
MEC-Fulbright Postdoctoral Researcher.
Courant Institute of Mathematical Sciences, Department of Computer Science.
Leading research in data mining and user modeling for improving user experience when interacting with the Web. Keywords: Data Mining, Personalization.

Texas A&M University, College Station, TX, USA **Summer 1999**
Visiting Researcher, Center for Fuzzy Logic, Robotics and Intelligent Systems (CFL)
Applications of fuzzy logic and deployement of programmable fuzzy logic processors.

Universidad Politecnica de Madrid, UPM, Madrid, Spain **Sep 1997 - Aug. 2001**
Ph.D. Fellow, School of Computer Science.
Ph.D. Thesis in pattern recognition, fuzzy logic, and fuzzy logic applications.

EADS-ASTRIUM-CRISA, Madrid, Spain **Dec. 1996- Jun. 1997**
Aerospace Technology. Quality Engineer.
Software quality/configuration control, Responsible for the design of a configuration control system.

Publications

Metrics (as of January 2020)
Number of Publications in Jounals: 33
Number of Publications in Proceedings/Workshops:79
Number of Patents: 13
Total number of citations (google schoolar): 3846
h-index: 34 i-10 index: 57

Journal Publications

"Spatial sensitivity Analysis for Urban Hotspots using Cell Phone Traces", J. Wu, E. Frias-Martinez, V. Frias-Martinez, Environment and Planning B: Urban Analytics and City Science

"The inverted U-shaped effect of urban hotspots spatial compactness on urban economic growth", Xu, W., Chen, H., Frias-Martinez, E., Cebrian, M., Li, X. (2019). Royal Society open science, 6(11), 181640.

"MobInsight: A Framework using Semantiv Neighborhood Features for Localized Interpretations of Urban Mobility", S. Park, J. Serra, E. Frias-Martinez, M. Oliver, IEEE Transactions on Interactive Intelligent Systems, Publication Pending, 2017

"Estimación de la pobreza utilizando datos de teléfonoscelulares: evidencia de Guatemala" , M Hernandez, L Hong, V Frias-Martinez, A Whitby, E Frias-Martinez, Manual sobre utilidades de Big Data para Bienes Publicos (Invited Book Chapter in SPanish), 2017

"Mobile Network Data for Public Health: Opportunities and Challenges", N. Oliver, A. Matic, E. Frias-Martinez, Frontiers in Digital Health 07 August 2015 http://dx.doi.org/10.3389/fpubh.2015.00189

"Exploring the potential of phone call data to characterize the relationship between social network and travel behavior", M. Picornell, T. Ruiz, M. Lenormand, J.J. Ramasco, T. Dubenet, E. Frias-Martinez, Transportation Vol. 42 Issue 4 (2015) Page 647-668 (Impact factor 1.61)

"Uncovering the spatial structure of mobility networks", T. Louail, M. Lenormand, M. Picornell, O. Garcia Cantu, R. Herranz, E. Frias-Martinez, J. Ramasco, and M. Barthelemy, Nature Communications, Volume: 6, Article number: 6007 (impact factor: 10.74)

"Cross-checking different sources of mobility information", M. Lenormand, M. Picornell, O.G. Cantu-Ros, A. Tugores, T. Louail, R. Herranz, M. Barthelemy, E. Frias-Martinez, J.J. Ramasco, PLOS ONE, 2014 (impact factor: 3.73)

"Spectral Clustering for Sensing Urban Land Use using Twitter Activity", V. Frias-Martinez, E. Frias-Martinez, Engineering Applications of Artificial Intelligence, Vol. 35, October 2014, Pages 237–245, 2014 (Impact factor 1.9)

"From mobile phone data to the spatial structures of cities", T. Louail, M. Lenormand, O. García Cantú, M. Picornell, R. Herranz, E. Frias-Martinez, J.J. Ramasco, M. Barthelemy, Nature Scientific Reports 4, Article Number: 5276, 2014 (Impact factor 2.92)

"Consensus Clustering for Urban Land Use Analysis using Cell Phone Network Data", V. Frias-Martinez, V.Soto, A. Sanchez, E. Frias-Martinez, Int. Journal of Ad-Hoc and Ubiquitous Computing, Vol. 17, No. 1 (2014) pp. 39 - 58 (Impact Factor 0.9)

"Adaptive Non-Parametric Identification of Dense Areas Using Cell Phone Records for Urban Analysis", A. Rubio, A. Sanchez, E. Frias-Martinez, Int. J. Engineering Applications of Artificial Intelligence (EAAI), Vol. 26(1), Jan 2013, pp. 551-563 (Impact factor 1.9)

"On the Relation between Socio-Economic Status and Physical Mobility", V. Frias-Martinez, J. Virseda, E. Frias-Martinez, Journal of Information Technology for Development, Special Issue on ICT and Human Mobility: Cases from developing countries and beyond, Feb. 2012 , pp 1-16

"Fermis Sibyl: Mining the gamma-ray sky for dark matter subhaloes", N. Mirabal, V. Frias-Martinez, T. Hassan, E. Frias-Martinez, Monthly Notices Royal Astronomical Society: Letters Volume 424, pages L64-L68, 2012. (Impact factor: 5.1)

"Multi-dimensional MR spectroscopy: towards a better understanding of hepatic encephalopathy", Sarma, Manoj K., Amir Huda, Rajakumar Nagarajan, Charles H. Hinkin, Neil Wilson, Rakesh K. Gupta, Enrique Frias-Martinez et al. Metabolic brain disease 26, no. 3 (2011): 173-184. (Impact factor: 2.39)

"The Role of Telco Companies in Human Mobility Applications", E. Frias-Martinez in Tecnologias para las Comunicaciones del Futuro, ISBN 978-84-9916-948-4, 2010 pp. 126-130

"Evaluation of a Personalized Digital Library based on Cognitive Styles: Adaptivity vs. Adaptability, E. Frias-Martinez, S. Chen, X. Liu in International Journal of Information Management, 29(1), 48-56, 2009. (Impact factor 2.2)

"Three-Dimensional Facial Surface Modeling Applied to Recognition ", A.B. Moreno, A. Sanchez, E. Frias-Martinez, Int. Journal Engineering Applications of Artificial Intelligence 22, 1233-1244, 2009. (Impact factor 1.9)

"Understanding Web Site Redesigns in Small and Medium-Sized Enterprises (SMEs): A UK based study on the applicability of e-commerce stage Models", F. Alonso, G. Fitzgerald, E. Frias-Martinez in European Journal of Information Systems (2009) 18, 264-279 (Impact factor: 1.55)

"Investigation of Behavior and Perception of Digital Library Users: A cognitive Style Perspective", E. Frias-Martinez, S. Chen, X. Liu in International Journal of Information Management, Vol. 28(5),Pages 355-365, 2008 (Impact factor 2.2)

"Automatic Generation of Cognitive Theories using Genetic Programming", E. Frias-Martinez, F. Gobet, in Minds and Machines: Journal of Artificial Intelligence, Philosophy and Cognitive Science, 17(3), 287-309, 2007 (Impact factor: 0.57)

"The Role of Human Factors in Stereotyping Behaviour and Perception of Digital Library Users: A Robust Clustering Approach", E. Frias-Martinez, S. Chen, X. Liu, R. Macreadie in User Modeling and User Adapted Interaction 17(3), 2006, 305-337 (Impact factor: 1.48)

"Automatic Cognitive Style Identification of Digital Library Users for Personalization", E. Frias-Martinez, S. Chen, X. Liu, in Journal of the American Society for Information Science and Technology 58(2), 237-251, 2006 (Impact factor 2.23)

"Automated User Modeling for Personalized Digital Libraries", E. Frias-Martinez, G. Magoulas, S. Chen, R. Macredie, in International Journal of Information Management 26 (3), pp.234-248, 2006 (Impact factor 2.23)

"Survey of Data Mining Approaches to User Modeling for Adaptive Hypermedia", E. Frias-Martinez, S. Chen, X. Liu, in IEEE Transactions in System, Man and Cybernetics Part C 36(6), 734-749, 2006.

"Robust Representation of 3D Faces for Recognition", A.B. Moreno, A. Sanchez, E. Frias-Martinez, in International Journal of Pattern Recognition and Artificial Intelligence Vol. 20(8), 2006.

"Support Vector Machines versus Multi-Layer Perceptrons for Efficient Off-Line Signature Recognition", E. Frias-Martinez, A. Sanchez, J. Velez, in Engineering Applications of Artificial Intelligence Vol. 19 (6), pp. 693-704, 2006

"Modeling Human Behavior in User-Adaptive Systems: Recent Advances Using Soft Computing Techniques", Frias-Martinez E., Magoulas G., Chen S., Macredie R., in Expert Systems with Applications, vol. 29(2), 2005, pp. 320-329

"Efficient Fuzzy Compiler for SIMD Architectures", E. Frias-Martinez, J. Gutirrez-Ros, F. Fernandez, in International Journal of Applied Soft Computing, Vol. 4(3), 2004, pp. 287-30.

"Design of a Lukasiewicz Rule-Driven Fuzzy Processor", E. Frias-Martinez, in Soft Computing , a Fusion of Foundations, Methodologies and Applications, Vol. 7(2002), no.1,pp. 65-71

"Design of a Rule-Driven Architecture for a Generic T-norm", E. Frias-Martinez, J. Gutierrez-Ros, F. Fernandez, in Mathware and Soft Computing, Vol. VII, no. 3,Dec. 2000

Peer-Reviewed Conference Proceedings

"Addressing Under-Reporting to Enhance Fairness and Accuracy in Mobility-based Crime Prediction", J. Wu, E. Frias-Martinez, V. Frias-Martinez, ACM SIGSPATIAL 2020

"Predicción del Número de Infectados por Enfermedades víricas usando Modelos SIR y Movilidad generada a Partir de la red de telefonia móvi", E. Frias-Martinez, Book Chapter of 'El Mito del Algoritmo: cuentos y cuentas de la Inteligencia Artificial' (editorial Anaya Multimedia

"Characterization of the COVID-19 Pandemic Impact on a Mobile Network Operator Traffic. Lutu, A., Perino, D., Bagnulo, M., Frias-Martinez, E., Khangosstar, J. (2020, October). A In ACM IMC.

"Actionable forecasting for emerging infectious diseases: a case study of the 2015-2017 Zika epidemic in Colombia, Oidtman, R. J., Omodei, E., Kraemer, M. U., Castaŋeda-Orjuela, C. A., Rivera, E. C., Misnaza-Castrillón, S., E. Frias-Martinez, García-Herranz, M., In 2020 ESA Annual Meeting

"Harnessing Cell Phone Traces to Model the Spread of Zika in Colombia", D. Perrota, E. Frias-Martinez, M. Luengo-Oroz, D. Paolotti, M. Tizzioni, A. Vespigniani, NetSciX 2020, Tokio, Japan

"Characterization of Internal Migrant Behavior in the Immediate Post-Migration Period using Cell Phone Traces", L. Hong, J. Wu, E. Frias-Martinez, A. Villarreal, V. Frias-Martinez, 10th ACM Int. Conf.Information and Communication Technologies and Development (ICTD)

"Modelling the Epidemics Spread of Zika Using Mobile Phone Data in Colombia". D. Perrotta, E. Frias-Martinez, M. Luengo-Oroz, D. Paolotti, M. Tizzoni, A. Vespignani, Conference on Complex Systems 2018

"Accuracy and Bias in the Identification of Internal Migrants using Cell Phone Data", L. Hong, J. Wu, E. Frias-Martinez, A. Villareal, V. Frias-Martinez, AAAI ICWSM Workshop on Making Sense of Online Data for Population Research, 2018

"Climate Change Induced Migrations from a Cell Phone Perspective", S. Isaacman, V. Frias-Martinez, L. Hong, E. Frias-Martinez, NetMob 2017

"LDA Mapping of Regional Socioeconomic Status", L. Hong, E. Frias-Martinez, V. Frias-Martinez, NetMob 2017

"Estimating poverty using cell phone data: evidence from Guatemala", M Hernandez, L Hong, V Frias-Martinez, A Whitby, E Frias-Martinez, World Bank Group Policy Research Paper, 2017

"Topic Models to Infer Socio-Economic Maps", L Hong, E Frias-Martinez, V Frias-Martinez, 13th AAAI Conference on Artificial Intelligence, AAAI 2016

"Understanding Lending Behaviors on Online Microlending Platforms: The Case for Kiva", Gaurav Paruthi, Enrique Frias-Martinez and Vanessa Frias-Martinez, 2015 AAAI Conference on Web and Social Media (ICWSM)

"Studying Human Behavior through the Lens of Mobile Phones during Floods", A.J. Morales, D. Pastor-Escuredo, Y. Torres, V. Frias-Martinez, E. Frias-Martinez, N. Oliver, A. Rutherford, T. Logar, R. Clausen-Nielsen, O. de Backer, M.A. Luengo-Oroz, NetMob 2015, MIT Media Lab

"Flooding through the lens of mobile phone activity", D. Pastor, A. Morales, Y. Torres, J. Bauer, A. Wadhwa, C. Castro-Correa, A. Calderón-Mariscal, L. Romanoff , J. Lee, A. Rutherford, V. Frias-Martinez, N. Oliver, E. Frias-Martinez, M. Luengo-Oroz, IEEE Global Humanitarian Technology Conference (GHTC), 2014

"To Call, or To Tweet? Understanding 3-1-1 Citizen Complaint Behaviors", V. Frias-Martinez, A. Sae-Tang, E. Frias-Martinez, Sixth Int. Conf. on Social Computing, SocialCom 2014, Stanford, CA, USA

"Assessing the Potential of Ride-Sharing Using Mobile and Social Data", B. Cici, A. Markopoulou, E. Frias-Martinez, N. Laoutaris, 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), 2014

"Can Cell Phone Traces Measure Social Development?", V. Frias-Martinez, V. Soto, J. Virseda, E. Frias-Martinez, Third Conference on the Analysis of Mobile Phone Datasets, NetMob 2013, Boston, MA

"Simulation of Epidemic Spread using Cell-Phone Call Data: H1N1 Case Study", E. Frias-Martinez, G. Williamson, V. Frias-Martinez, Third conference on the Analysis of Mobile Phone Datasets, NetMob 2013, Boston, MA

"Exploiting Foursquare and Cellular Data to Infer User Activity in Urban Environments", A. Noulas, C. Mascolo and E. Frias-Martinez, IEEE Mobile Data Management 2013 (MDM 2013)

"Forecasting Socioeconomic Trends With Cell Phone Records", V. Frias-Martinez, C. Soguero, M. Josephidou and E. Frias-Martinez, 3rd ACM Symposium on Computing for Development (DEV'13), Bangalore, India, 2013

"Characterizing Urban Landscapes using Geolocated Tweets", V. Frias-Martinez, V. Soto, H. Hohwald, E. Frias-Martinez, 2012 Int. Conference on Social Computing (SocialCom), Amsterdam, The Nederlands, 2012

"An Agent-Based Model of Epidemic Spread using Human Mobility and Social Network Information", E. Frias-Martinez, G. Williamson, V. Frias-Martinez, The 3rd IEEE Int. Conf. on Social Computing (SocialCom 2011), Boston, MA, USA

"Urban Analysis for the XXI Century: Using Pervasive Infrastructures for Modeling Urban Dynamics", E. Frias-Martinez, XXI Jornadas Telecom: Las TIC en las Ciudades del Futuro, Santander, 2011

"Prediction of Socioeconomic Levels using Cell Phone Records", V. Soto, V. Frias-Martinez, J. Virseda and E. Frias-Martinez, International Conference on User Modeling, Adaptation and Personalization (UMAP), Industrial Track, Girona, Spain, 2011

"Querying Spatio-Temporal Patterns in Mobile Phone-Call Databases", M. Vieira , E. Frias-Martinez, P. Bakalov, V. Frias-Martinez, V. Tsotras, 11th Int. Conf. On Mobile Data Management MDM2010, Kansas City, Missouri

"Characterizing Dense Urban Areas from Mobile Phone-Call Data: Discovery and Social Dynamics", M. Vieira, V. Frias-Martinez, N. Oliver, E. Frias-Martinez, 2nd Int. Conference on Social Computing (SocialCom2010), Minneapolis, Minnesota, USA

"The Anatomy of Mobile Handsets: On the development of effective cell phone services", V. Frias-Martinez, J. Virseda, E. Frias-Martinez, 2nd International Conference on M4D - Mobile Communication Technology for Development,Kampala, Uganda, November 2010

"Towards Large Scale Technology Impact Analyses: Automatic Residential Localization from Mobile Phone-Call Data", V. Frias-Martinez, J. Virsena, A. Rubio, E. Frias-Martinez, International Conference on Information and Communication Technologies and Development ICTD 2010, London,

UK

"Human Mobility in Advanced and Developing Economies: A Comparative Analysis", A. Rubio, V. Frias-Martinez, E. Frias-Martinez and N. Oliver, AAAI 2010 Spring Symposia Artificial Intelligence for Development, AI-D 2010, Stanford, USA

"A Gender-centric Analysis of Calling Behavior in a Developing Economy Using Call Detail Records", V. Frias-Martinez, E. Frias-Martinez and N. Oliver, AAAI 2010 Spring Symposia Artificial Intelligence for Development, AI-D 2010, Stanford, USA

"Analyzing the Role of Dimension Arrangement for Data Visualization in Radviz", L. di Caro, V. Frias-Martinez, E. Frias-Martinez, PAKDD 2010, Hyderabad, India

"User Modeling for Telecommunication Applications: Experiences and Practical Implications", H. Hohwald, E. Frias-Martinez, UMAP 2010 - Industrial Track, Hawaii, USA

"Mobile Web Profiling: A Study of Surfing Habits of Mobile Users", D. Olmedilla, E. Frias-Martinez, R. Lara, UMAP 2010-Industrial Track, Hawaii, USA

"How did you get to know that? A traceable word-of-mouth algorithm", M. Cebrian, E.Frias-Martinez, H. Hohwald, R. Lara, N. Oliver, Symposium on Social Intelligence and Networking (SIN09), August 2009, Vancouver, Canada

"Tracking medication information accross medical records", J. E. Iglesias, K. Rocks, N. Jadahanshad, E. Frias-Martinez, A.T. Bui, American Medical Informatics Asociation (AMIA) 2009 Anual Symposium

"Improved Spectral resolution in 2D Localized Correlated Spectroscopy Using Enhanced Covariance NMR", N. Wilson, E. Frias-Martinez, M.A. Thomas, Proc. Int. Society for Margnetic Resonance in Medicine 2009 (ISMRM).

"A Study on the Granularity of User Modeling for Tag Prediction", E. Frias-Martinez, M. Cebrian, A. Jaimes, 2008 IEEE/ACM/WIC International Conference on Web Intelligence, 9-12Dec., Sydney, 2008

"ProFit-based Quantitation of Cerebral Metabolites using 2D L-COSY at 3T Magnetic Resonance", E. Frias-Martinez, N. Rajakumar, X. Liu, et al., ISMRM 2008 Proc. Internacion Society for Magnetic Resonance in Medicine, Toronto, Canada May 2008

"A Pilot Comparison of 2D and 1D MR Spectroscopic Quantitation of Metabolites in Healthy Human Brain at 3T Magnetic Resonance", E. Frias-Martinez, N. Rajakumar, S. Ramadan, et al., ISMRM 2008 Proc. International Society for Magnetic Resonance in Medicine, Toronto, Canada May 2008

"Profit-Based Two-dimensional 1H MR Spectroscopic Quantitation of metabolies in healthy Human Brain using 3T and 1.5T MRI scanners, M.A.Thomas, E. Frias-Martinez, S. Liu, et al., RSNA 2007 Proc. of the Radiological Society of North America, Chicago, USA, Nov. 2007

"Mining User Preferences of Multimedia Interfaces with K-modes", K.A. Chrysostomou, E. Frias-Martinez, S. Y. Chen, X. Liu, in 2006 IEEE International Conference on Systems, Man, and Cybernetics, Oct. 2006, Taipei, Taiwan

"Recent Soft Computing Approaches to User Modeling in Adaptive Hypermedia, Frias-Martinez E., Magoulas G.D., Chen S., and Macredie R., In Paul De Bra, Wolfgang Nejdl (eds), Adaptive Hypermedia and adaptive web-based systems, Eindhoven, The Netherlands, Aug. 2004, LNCS

3137, Springer, 104-113

"A Customizable Behavior Model for Temporal Prediction of Web User Access Sequences", E. Frias-Martinez, Vijay Karamchety in O.R. Zaiane, J. Srivastava, M. Spiliopolou and B Masand (Eds.), LNAI 2703, 2003, ISBN:3-540-20304-4

"Design of a Fuzzy Distance for a CBIR System", Oscar D. Robles Snchez, E. Frias-Martinez in Proceedings of the Second European Symposium on Intelligent Technologies, Hybrid Systems and their implementation on Smart Adaptive Systems, 19-21 September 2002, Albufeira, Portugal

"Universal Fuzzy System to Takagi-Sugeno Fuzzy System Compiler", E. Frias-Martinez, in Proc. 2002 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2002), Honolulu, Hawaii, USA, May 12-17, 2002, pp. 305-309

"Design of a fuzzy positioning controller for a robot (in Spanish), V. Frias-Martinez, E. Frias-Martinez, in Proceedings of the 9th Conference of the Spanish Association of Artificial Intelligence, Gijn, Spain, Nov. 2001, pp. 705-714.

"Real-Time Fuzzy Controller on a HC12 Microcontroller (in Spanish), E. Frias-Martinez, V. Frias-Martinez, in Proceedings of the 9th Conference of the Spanish Association of Artificial Intelligence, Gijn, Spain, Nov. 2001, pp. 1167-1176.

"Real-Time Fuzzy Processor on a DSP, E. Frias-Martinez, in 8th IEEE International Conference on Emerging Technologies and Factory Automation, Antibes, Juan-les-pins, France, Oct. 2001, pp. 403-408.

"Real-Time Full-Programmable Fuzzy Processor on an Intel Pentium III, E. Frias-Martinez, J. Gutirrez Ros, F. Fernndez, in The 2ndEuro. Soc. for Fuzzy Logic and Technology Conference, Leicester (England), Sep. 2001, pp. 67-70.

"High-Speed Full-Programmable Fuzzy Controller (in Spanish), E. Frias-Martinez, J. Gutirrez Ros, F. Fernndez, in X Spanish Congress on Fuzzy Logic, ESTYLF 2000, Seville, Sep. 2000, pp. 273-278.

"9 MFLIPs Serial-Parallel Full-Programmable Fuzzy Controller on a TI TMS 320C6201", E. Frias-Martinez, J. Gutirrez Ros, F. Fernndez, in The Third European Texas Instruments DSP Conference, Paris, Sep. 2000.

"Rule-Driven Architecture for a Lukasiewicz T-norm", E. Frias-Martinez, J. Gutirrez Ros, F. Fernndez, in Eight International Conference on Information Processing and Management of Uncertainty in Knowledge-based Systems(IPMU 2000), Madrid, Spain, Jul. 2000, pp. 25-29.

"High-Speed Full-Programmable Fuzzy Controller on a DSP", E. Frias-Martinez, J. Gutirrez Ros, F. Fernndez, in Second International ICSC Symposium on Engineering of Intelligent Systems, EIS'2000, Scotland, Jun. 2000, pp. 599-603.

"Pseudo Rule-Driven Model for a Programmable T-norm", E. Frias-Martinez, J. Gutirrez Ros, F. Fernndez, in The Ninth IEEE Int. Conf. Fuzzy Systems, FUZZ-IEEE 2000, San Antonio, TX, USA, May. 2000, pp. 324-327.

Workshops and Posters

"Crowdsourcing Land Use Maps via Twitter", E. Frias-Martinez, V. Frias-Martinez, KDD 2014 Workshop in Data Science for Social Good, 2014

"Estimation of traffic flow using passive cell-phone data", V. Frias-Martinez, B. Moumny, E. Frias-Martinez, ACM SIGCOM Workshop of Data Science for Macro-Modeling, 2014

"Characterizing Social Response to Urban Earthquakes using Cell-Phone Network Data: The 2012 Oaxaca Earthquake", B. Moumny, V. Frias-Martinez, E. Frias-Martinez, Pervasive Urban Applications -PURBA 2013, Zurich,Switzerland 2013

"Quantifying the Potential of Ride-Sharing using Call Description Records", B. Cici, A. Markopoulou, E. Frias-Martinez, N. Laoutaris, Int. Workshop on Mobile Computing Systems and Applications - ACM HotMobile, 2013

"Uncovering the Spatio-Temporal Structure of Social Networks using Cell Phone Records", Luis G. Moyano, Oscar Rocardo Moll Thomae, E. Frias-Martinez, 2012 IEEE ICDM International Workshop on Data Mining Networks (DaMNet 2012), Brussels, Belgium, 2012

"Estimation of Urban Commuting Patterns Using Cellphone Network Data", V. Frias-Martinez, C. Soguero, E. Frias-Martinez, ACM SIGKDD Int. Workshop on Urban Computing (UrbComp), Beijin, China, 2012

"Computing Cost-Effective Census Maps From Cell Phone Traces", Vanessa Frias-Martinez, Victor Soto, Jesus Virseda and Enrique Frias-Martinez, Pervasive Urban Applications -PURBA 2012, Newscastle, UK, 2012

"Measuring the Impact of Epidemic Alerts on Human Mobility using Cell-Phone Network Data", Vanessa Frias-Martinez, Alberto Rubio and Enrique Frias-Martinez,Pervasive Urban Applications -PURBA 2012, Newscastle, UK, 2012

"Automated Land Use Identification using Cell-phone Records", V. Soto, E. Frias-Martinez, 3rd ACM Int. Workshop on Hot Topics in Planet-Scale Measurement, in conjuntion with ACM MobiSys2011, Washington DC, 2011

"Socio-Economic Levels and Human Mobility", Vanessa Frias-Martinez, Jess Virseda and Enrique Fras-Martnez, Qual Meets Quant Workshop - QMQ 2010 (at the International Conference on Information and Communication Technologies and Development, ICTD 2010), London, UK

"ARBUD: A Reusable Architecture for Building User Models from Massive Datasets", H. Hohwald, E. Frias-Martinez, N. Oliver, Workshop on Pervasive User Modeling and Personalization (PUMP), UMAP 2010, Hawaii, USA

"Explicit vs. Implicit Tagging for User Modelling", E.Frias-Martinez, M. Cebrian, M. Pascual, N. Oliver, Workshop in Personalization in Mobile and Pervasive Computing, UMAP 2009, Trento, Italy

"Introducing Causality and Traceability in Word-of-Mouth Algorithms", H. Hohwald, E. Frias-Martinez, M. Cebrian, N. Oliver, Workshop on Information in Networks (WIN), September 25-26, NYU, NYC, USA, 2009

"Reduction of User Perceived Latency for a Dynamic and Personalized Site Using Web-Mining Techniques",Enrique Frias-Martinez, Vijay Karamcheti, WEBKDD2003 Workshop, The Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, July 2003, Washington D.C.

"Machine Learning Techniques for Automatic Image Processing", E. Frias-Martinez, First Workshop on Intelligent Image Processing and Biometric Recognition, Universidad Rey Juan Carlos, Madrid, Spain, December 2003 (ISBN 84-9772-660-X).

"A Prediction Model for User Access Sequences", E. Frias-Martinez, V. Karamcheti, in Proc. 4th WEBKDD Web Mining for Usage Patterns and User Profiles Workshop part of The Eighth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, 23-26 July 2002, Edmonton, Canada, pp. 53-62

Opinion Pieces

"The Future Role of Social Networks in Urban Planning", ThinkBig.com, March 13th 2015

"Urban Analysis for the XXI Century: Using Pervasive Infrastructures for Modeling Urban Dynamics", ThinkBig Blog, January 2015

"The Role of Telco Companies in Human Mobility Applications", E. Frias-Martinez in Tecnologias para las Comunicaciones del Futuro, ISBN 978-84-9916-948-4, 2010 pp. 126-130

Patents

"Method for Gender Identification of a Cell Phone Subscriber", US Patent US8457605 B2

"Content Recommendation Method and System based on Psychological factors from a use profile", US Patent US8560486 B2

"A method for Residential Localization of Cell Phone Users", US20130316741 A1

"Method for Preparing an Optimal Alternative Billing Plan for Mobile Telephony Users Managed Through a Call Center", US8738482 B2

"Method for automatic characterization of telephony users through labels", US Patent Application 2012-0041944A1

"Method for the automatic Identification of Urban Dense Ares from cell phone records", Pub. No: US 2012/US8577380 B2

"Method, computer programs and a use for automatic identification and classification of land uses", United States Patent US8639213 B1

"Method, computer programs and a use for the prediction of the socioeconomic level of a region", US20140032448 A1

"Method and computer programs for the construction of communting matrices using call detail records and a use for providing user's mobility information", US8838134 B2

"METHOD AND COMPUTER SYSTEM TO FORECAST ECONOMIC TIME SERIES OF A REGION AND COMPUTER PROGRAM THEREOF ", United States Patent Application 20140372172 A1

"Method, system and computer-readable storage mediums for estimating a route", European Patent EP2822325 A1, US Patent US20150012213 A1

Advising

Supervision of PhD students internships

Chris Smith-Clark, PhD student at **University College London**, UK, *Fall 2014*
Malvina Josephidou, PhD student at **Cambridge University**, UK, *Summer 2012*

Daniel Ricketts, PhD student at **University of California San Diego**, USA, *Summer 2011*
Anastasios Noulas, PhD student at **Cambridge University**, UK, *Fall 2011*
Fergal Walsh, PhD Student at **National University of Ireland, Maynooth**, *Autum 2011*
Michael Paik, PhD student at **New York University**, USA, *Summer 2010*
Marcos Vieira, PhD student at **University of California at Irvine**, USA,*Summer 2009*
Mayank Lahiri, PhD student at **University of Chicago**, USA, *Summer 2009*

Supervision of MSc and Undergraduate Students
Carlos Gutierrez, Master student at **Rey Juan Carlos University**, Spain, *Fall 2013 - Fall 2014*
Ana Montoro, Master student at **Rey Juan Carlos University**, Spain, *Fall 2013 - Fall 2014*
Younes Moumni, Master student at **EPFL**, Switzerland, *Summer 2013,2012*
Cristina Soguero, Master student at **Rey Juan Carlos University**, Spain, *Fall 2010 - Fall 2012*
Jesus Virseda, Master student at **Rey Juan Carlos University**, Spain, *Fall 2010 - Fall 2012*
Victor Soto, Master student at **Autonoma University**, Spain, *Fall 2009 - Fall 2011*
Alberto Rubio, Master student at **Rey Juan Carlos University**, Spain, *Fall 2009 - Fall 2011*

Master Theses (directed or co-directed)
Marc Bourqui, **Combining Location-Based Social Media and Cell Phone Traces for urban Characterization** at EPFL, Switzerland, *February - August 2016*
Benoit Cathiard, **Generation of Synthetic Cell Phone Traces for Mobility Studies** at EPFL, Switzerland, *January- July 2014*
Abson Sae-Tang, **Understanding Complaint Behaviors in Social Media** at EPFL, Switzerland, *January- July 2013*
Marc Zimmerman, **Modeling Traffic Patterns from Cellular Data** at EPFL, Switzerland, *January- July 2013*
Alberto Rubio , **Adaptive Non-Parametric Identification of Dense Areas Using Cell Phone Records for Urban Analysis** at Rey Juan Carlos University, Spain, *January- July 2009*

Professional Service

Organizer
Chair, Industrial Track, User Modeling, Adaptation and Personalizations **UMAP** 2011

Program Committee Member (last five years)
2016 UbiComp 2016, PURBA 2016, ECML-PKDD 2016, FAB 2016 International Symposium on Foundations and Applications of Big Data Analytics, MDM 2016 Industrial Track, ACM Digital Health 2016, ICDM Demo Session, International Symposium on Big Data Management and Analytics (BIDMA 2016), Second Workshop on Machine learning, Optimization and big Data (MOD 2016), IEA/AIE 2016
2015: ECML PKDD 2015, SocialCom 2015, Ubicomp 2015, PURBA 2015, NetMob 2015, IEA/AIE 2015, DAMASCA 2015, Workshop on Machine learning, Optimization and big Data (MOD 2015), Digital Health 2015
2014: SocialCom 2014, Ubicomp 2014, PURBA 2014,IEA-AIE 2014, ECML/PKDD 2014, ACM Multimedia 2014, ENIC 2014, CHI 2014, ICCE 2014, CityLabs2014
2013: SocialCom 2013; CitiSen 2013; PURBA 2013; AAAI 2013; CHI 2013; IEA/AIE 2013
2012:IUI 2012, UbiComp 2012, PURBA 2012, IEEE Conference on Social Informatics 2012, UMAP 2012, Socialcom 2012
2011:ECML PKDD 2011; CAEPIA 2011; IEA/AIE 2011; CBMI 2011; SocialCom 2011; UMAP 2011; 2nd Int. Workshop Information Heterogeneity and Fusion in Recomender Systems 2011
2010:SAPMIA 2010; HetRec 2010; PRICAI 2010, ICCE 2010; SocialCom 2010; ESWC 2010; IEA/AIE 2010; UMAP 2010; QMQ 2010 in conjunction with ICTD2010

Journal Reviewer
ACM Transactions on Intelligent Systems and Technologies (ACM TIST)

ACM Computing Surveys
IEEE Pervasive Computing
Journal of Pervasive and Mobile Computing
IEEE Instrumentation and Measurement Magazine
IEEE Transactions on Very Large Scale Integration Systems
International Journal of AI Tools (IJAIT)
International Journal of Control and Intelligent Systems (ISSN:1480-1752), ACTA Press
Adaptable and Adaptive Hypermedia Systems (ISBN 1-59140-567-X)
Advances in Web-based Education: Personalized Learning Environments
Journal of Network and Computer Applications
IEEE Transactions on System Man and Cybernetics – Part C
Computers in Biology and Medicine: an International Journal

Other Revieweing Activities
Spanish National Agency for Scientific Evaluation (ANEP) - Programa Torres Quevedo
Spanish National Agency for Scientific Evaluation (ANEP) - Programa Juan de la Cierva
Spanish National Agency for Scientific Evaluation (ANEP) - Programa de Transferencia Tecnologica
Centro para el Desarrollo Tecnologico Industrial (CDTI)- Programa Innova - CENNIT
Wayra Start-Up Accelerator
Start Up Europe OpenAxel – DigitalEurope, European Commission
Judge of the Final Phase of Global Data Fest organized by IBM, Intel and IEEE Smart Cities http://www.global.datafest.net/about/judges

Honors and Awards

Best PhD Thesis Award, School of Computer Science, Universidad Politecnica de Madrid, 2001

FPI Fellowship, 4-year Spanish Fellowship awarded by the Ministry of Education to pursue PhD studies in Spain, 1998 (200 awarded every year to all areas of knowledge)

Post-Doctoral MEC-Fulbright Fellowship, Spanish Commission for Scientific Research, 2001-2003

Ramon y Cajal Fellow, 5-year research contract awarded by the Spanish Commission for Scientific Research, Ranked #1 in Spain in the area of Computer Science for the 2008 call, Declined

Media

Our paper "Studying Human Behavior through the Lens of Mobile Phones during Floods"" has been featured in the UN Global Pulse web page and included in the 2014 Annual Report of the United Nations Global Pulse

" Spectral Clustering for Sensing Urban Land Use using Twitter Activity" has been featured in ABC Newspaper (spanish), Muy Interesante (Printed Magazine), Muy Interesante (On-Line Magazine), CienciaXPlora, Vanguardia de Mexico, CBC News, TIME.com, The Times of India, Phys.org, Science Daily among others:
http://time.com/3650317/tweeting-partying-urban-planning/

My work on modeling H1N1 spreading has been featured in The Economist as an example of how Big data can be used to control Ebola: "Ebola and Big data: Wainting on Hold". Also by Australia Journal, Digital Economics,YeYang.org, 24h.net.

"From mobile phone data to the spatial structures of cities" was featured at MIT Tech Review, Morphocode, Mobiles for Human Development Blog and World News Update - Science Section.

My Data visualizations of mobility using cell phone records was part of Big Bang Data Exposition and was featured at National Spanish Television & CCCB Webpage.

My work in Big Daya for Social Good is featured in SOMOS Magazine:
http://somos.telefonica.com/num/33en/responsables-big-data-for-social-good/

My work in modeling H1N1 spread using CDRs has been featured in The Guardian ("Combating Global Epidemics with Big Mobile Data"), MSN Innovation ("Big Data and How it will change your world") and ABC newspaper (in spanish) "Los móviles, utiles para entender los movimientos poblacionales durante una pandemia".

My research using CDRs for Developing Economies was featured at UNICEF:
http://www.unglobalpulse.org/unicef-virtualworkshop

Re:think 2012 - Advertising Research Foundation Panel: Data Philanhropy can make a difference:
http://rethink12.thearf.org/talks/24563

Our work in identifiying socioeconomic levels from CDR data is featured in Forbes Magazine:
http://www.forbes.com/sites/oreillymedia/2011/09/20/data-philanthropy-is-good-for-business/

My research was featured in the United Nations Global Pulse Blog: Enhancing Public Policy Decision Making using Large-Scale Cell Phone Data