CURRICULUM VITAE

PERSONAL INFORMATION

Surname/ First name: Vico / Francisco
Address: ETSI Informatica, Universidad de Malaga, Blvd. Pasteur s/n 29071 Malaga (Spain)
Telephone: +34 952137199
E-mail: fjvico@uma.es
Nationality: Spanish
Date of birth: 26/09/67

WORK EXPERIENCE

Dates: 01/01/1992 - 31/05/1995
Occupation or position held: Research assistant
Main activities and responsibilities: PhD Student
Name and address of employer: University of Malaga
Type of business or sector: Accademy / Research

Dates: 01/06/1995 - 28/02/1996
Occupation or position held: Research assistant
Main activities and responsibilities: Postdoc
Name and address of employer: Amherst Systems, Inc. (NY, USA)
Type of business or sector: Industry / Research

Dates: 01/03/1996 - 30/09/2000
Occupation or position held: Lecturer
Main activities and responsibilities: Research and lecturing
Name and address of employer: University of Malaga
Type of business or sector: Accademy / Research

Dates: 01/10/2000 - 31/03/2012
Occupation or position held: Associate professor
Main activities and responsibilities: Research and lecturing
Name and address of employer: University of Malaga
Type of business or sector: Accademy / Research

Dates: 01/04/2012 - present
Occupation or position held: Full professor
Main activities and responsibilities: Research and lecturing
Name and address of employer: University of Malaga
Type of business or sector: Accademy / Research

TEACHING ACTIVITY

Dates: 01/10/1998 - 30/09/2006

Occupation or position held: Lecturer

Main activities and responsibilities: Master in Software Engineering and Artificial Intellige. Course on "Neural and Neuro-Fuzzy Systems"
Name and address of employer: University of Malaga

Type of business or sector: Accademy / Research

Dates: 01/03/1996 - present

Occupation or position held: Lecturer

Main activities and responsibilities: Lecturing Theory of Automata and Formal Languages

Name and address of employer: University of Malaga

Type of business or sector: Accademy / Research

EDUCATION AND TRAINING

Dates: 30/09/1991

Title of qualification awarded: MSc Computer Science

Principal subjects/occupational skills covered: Computer Science (AI)
Name and type of organisation providing education and training: University of Malaga

Dates: 31/05/1995

Title of qualification awarded: PhD in Computer Science

Principal subjects/occupational skills covered: Biological modelling, Artificial intelligence

Name and type of organisation providing education and training: University of Malaga

PERSONAL SKILLS AND COMPETENCES

Mother tongue(s): Spanish

Other language(s): English

Computer skills and competences: Biological modelling, Algorithmic music

Artistic skills and competences: None

ADDITIONAL INFORMATION

Reputed in algorithmic music, after the publication of Iamus' first album, a computer-composer designed and programmed at our research group, whose pieces were considered human-level and were interpreted by the London Symphony; and that developed its own composition style. More on this project in wikipedia.org/wiki/Melomics

PUBLICATIONS

- Seinfeld, S, Bergstrom, I, Pomes, A, Arroyo-Palacios, J, Vico, F, Slater, M, Sanchez-Vives, MV (2016) Influence of music on anxiety induced by fear of heights in virtual reality. *Frontiers in Psychology*, **6**(1969). DOI: 10.3389/fpsyg.2015.01969 (online)
- Caparros-Gonzalez R, Torre-Luque, A, Buela-Casal G, Vico F (2015) MELOMICS relaxing music for premature infants: preliminary results testing its effects on physiological parameters. In *10th International Conference on Child and Adolescent Psychopathology* (20 - 22 July 2015) Roehampton University, London
- Torre-Luque A, Caparrós-González R, Bastard T, Buela-Casal G, Vico F (2015) Acute stress recovery through listening to Melomics relaxing music: A randomized controlled trial. *Nordic Journal of Music Therapy* (to appear).
- Torre-Luque A, Caparrós-González R, Bastard T, Buela-Casal G, Vico F (2014) Effects of relaxing music listening after the exposure to acute stress within laboratory settings. In *Proceedings of the 7th International Congress of Clinical Psychology*, 14-16 November (Seville) (PDF, poster)

- Requena G., Sánchez C, Corzo-Higueras JL, Reyes-Alvarado S, Rivas-Ruiz F, Vico F, Raglio A (2014) Melomics music medicine (M^3) to lessen pain perception during pediatric prick test procedure. *Pediatric Allergy and Immunology*, **25**(7), 721-724. DOI: 10.1111/pai.12263 (PDF)

- Fernandez JD, Vico FJ (2013) AI Methods in Algorithmic Composition: A Comprehensive Survey. *Journal of Artificial Intelligence Research,* **48,** 513-582. (PDF)

- Sánchez C, Moreno F, Albarracín D, Fernández JD, Vico FJ (2013) Melomics: A Case-Study of AI in Spain. *AI Magazine*,**34**(3), 99-103. DOI: 10.1609/aimag.v34i3.2464 (PDF)

- Ball, P. (2012) Algorithmic rapture. *Nature*, **488**, 458. DOI: 10.1038/488458a (on Iamus)

- Seinfeld S, Bergstrom I, Slater M, Vico F, Sanchez-Vives M. (2012) The influence of relaxing music on anxiety induced by fear of heights in an immersive virtual reality experience. In *Proceedings of the 120th APA Convention*, 1-5 August (Orlando, FL). (PDF)

- Fernandez JD, Vico FJ & Doursat R (2012) Complex and diverse morphologies can develop from a minimal genomic model. *Proceedings of the Genetic and Evolutionary Computation Conference* (GECCO2012): 553-560. DOI: 10.1145/2330163.2330242

- Fernandez JD, Doursat R & Vico FJ (2012) The Evolution of Controller-Free Molecular Motors from Spatial Constraints. *Proceedings of the Spatial Computing Workshop* (SCW2012): 19-24. (PDF)

- Fernandez JD, Lobo D, Martin G, Doursat R & Vico FJ (2011) Emergent diversity in an open-ended evolving virtual community. *Artificial Life*, **18**(2), pp. 199-222. DOI: 10.1162/artl_a_00059

- Fernandez JD & Vico FJ (2011) Automating the search of molecular motor templates by evolutionary methods. *Biosystems*, 106(2): 82-93. DOI: 10.1016/j.biosystems.2011.07.002

- Lobo D, Dassow J & Vico FJ (2011) Graph grammars with string-regulated rewriting. *Theoretical Computer Science*, **412**(43), pp. 6101-6111. DOI:10.1016/j.tcs.2011.07.004

- Lobo D & Vico FJ (2010) Evolution of form and function in a model of differentiated multicellular organisms with gene regulatory networks. *Biosystems*, **102**(2-3): 112-123. DOI:10.1016/j.biosystems.2010.08.003

- Lobo D & Vico FJ (2010) Evolutionary development of tensegrity structures. *Biosystems*, **101**(3): 167-176.DOI:10.1016/j.biosystems.2010.06.005

- Martin GM, Vico FJ, Dassow J & Truthe, B (2010) Low disruption transformations on cyclic automata. *Fundamenta Informaticae,* **104**(1-2): 93-110. DOI: 10.3233/FI-2010-337

- Dassow J, Martin GM & Vico FJ (2009) Evolving under small disruption. In *Proceedings of the Workshop on Non-Classical Models of Automata and Applications* (*NCMA*09) -17*th International Symposium on Fundamentals of Computation Theory*, pp. 91-106. 31/08-1/09, Wroclaw, (Poland).

- Dassow J, Martin GM & Vico FJ (2009) A similarity measure for cyclic unary regular languages. *Fundamenta Informaticae*,**96**(1-2):71-88. DOI:10.3233/FI-2009-168

- Casas M, Vico FJ (2009) On the performance of some bioinspired genetic operators in complex structures evolution. In*Proceedings of the* 2009 *Genetic and Evolutionary Computation Conference* (*GECCO*'09), pp. 1841-1842. July 8-12, Montreal (Canada).

- Dassow J, Martin GM & Vico FJ (2009) Some operations preserving primitivity of words. *Theoretical Computer Science*, **410**(30-32): 2910-2919..DOI: 10.1016/j.tcs.2009.01.024

- Vico FJ (2008) Biomimetic Engineering. Acta Hort. (ISHS) **802**:21-32. (PDF)

- Vico FJ (2007) Selfo: A class of self-organizing connection games. *Technical report ITI* 07-7. Dpto. Lenguajes y Ciencias de la Computación (Universidad de Málaga). (PDF)

- Seamari Y, Narvaez JA, Vico FJ, Lobo D, Sanchez-Vives MV (2007) Robust Off- and Online Separation of Intracellularly Recorded Up and Down Cortical States. *PLoS ONE* 2(9): e888. DOI: 10.1371/journal.pone.0000888

- Vico F, Canteli V, Lobo D, Fernandez JD, Bandera C, Garcia-Linares A, Rivas R, Rosen M & Schlegel B (2007) Mobile just-in-time training application for emergency healthcare. In *Proceedings of the IADIS International Conference. Mobile Learning*, pp. 209-213. Lisbon (Portugal). (PDF)

- Vico F, Canteli V, Lobo D, Fernandez JD, Bandera C, Garcia-Linares A, Rivas R, Rosen M & Schlegel B (2007) Just-in-time etraining applied to emergency medical services. In *Proceedings of the Third Internatioonal Conference on Computational Intelligence in Mecicine and Healthcare.* Plymouth (UK). (PDF)

- Seamari Y, Narvaez JA, Vico FJ, Lobo D, Sanchez-Vives MV (2007) Separación automatica off- y online de estados corticales de activacion en registros intracelulares. Proceedings of XII Congreso Bienal de la SENC, pp. 101. Valencia (Spain) (PDF)

- Veredas F, Vico F & Alonso JM (2006) Evolving networks of integrate-and-fire neurons. *Neurocomputing*, **69** (13-15): 1561-1569. DOI: 10.1016/j.neucom.2005.06.013 (PDF)

- Veredas F, Vico F & Alonso JM (2005) Factors determining the precision of the correlated firing generated by a monosynaptic connection in the cat visual pathway. *Journal of Physiology*, **567**: 1057-1078. DOI: 10.1113/jphysiol.2005.092882 (PDF)

- Jerez J, Atencia M & Vico F (2005) A learning rule to model the development of orientation selectivity in visual cortex. *Neural Processing Letters*, **21** (1): 1-20. DOI: 10.1007/s11063-004-2023-7 (PDF)

- Sanchez A, Vico F, Lopez I, Cabello S, Veredas F, Seamari Y, Farfan J & Garcia-Herrera G (2005) A competitive-based method for determining the number of groups: a clinical application. In *Computational Intelligence and Bioinspired Systems*, LNCS **3512**, pp. 1214-1221. (PDF)

- Vico F, Veredas F, Seamari Y & Lopez I (2005) Formalización y aplicación de un proceso de especiación biológica. In *Actas del I Congreso Español de Informática*, pp. 475-477. IV Congreso Español sobre Metaheurísticas, Algoritmos Evolutivos y Bioinspirados. Granada (Spain). (PDF)

- Vico F, Veredas F, Seamari Y, Lopez I, Farfan J & Garcia-Herrera G (2005) Generation of gait patterns with competitive learning. In *Proceedings of the 2nd International Conference on Computational Intelligence in Medicine and Healthcare*(CIMED2005), pp. 336-339. Lisbon (Portugal). (PDF, poster PDF)

- Veredas F, Vico F & Alonso JM (2004) A computational tool to simulate correlated activity in neural circuits. *Journal of Neuroscience Methods*, **136** (1): 23-32. DOI: 10.1016/j.jneumeth.2003.12.026. (PDF)

- Veredas F, Alonso JM & Vico FJ (2004) Estudio de la influencia de factores fisiológicos y de conectividad de red en la correlación de actividad entre pares de neuronas de integración y disparo. In *Actas del I Simposio de la Red Andaluza de Sistemas Inteligentes* (ISTANET), pp. 163-184. Málaga (Spain).

- Taboada JM, Rojas J & Vico F (2004) Geometría Fractal aplicada al Diseño de Piezas de Joyería. In *Actas del I Congreso Internacional sobre Fundamentos Fractales para el Diseño Arquitectónico y Medioambiental del Siglo XXI*. Madrid (Spain). (PDF)

- Jerez J, Atencia M, Vico F & Dominguez E (2003) A learning rule to model the development of orientation selectivity in visual cortex. In *Computational Methods in Neural Modeling*, LNCS **2686**, pp. 190-197. (PDF)

- Vico F & Jerez J (2003) Stable neural attractors formation: learning rules and network dynamics. *Neural Processing Letters*,**18** (1): 1-16. DOI: 10.1023/A:1026258500432. (PDF)

- Vico F, Mir P, Veredas F & de la Torre J (2001) Animal-like adaptive behaviour. *Artificial Intelligence in Engineering*, **15** (1): 5-12. DOI: 10.1016/S0954-1810(00)00023-6. (PDF)

- Burrezo S, Garcia A, Vico F, Garcia-Herrera G, Garrido J & Farfan J (2001) Hip surgery planning from preoperative radiographs. In *Proceedings of the 4th International Conference on Neural Networks and Expert Systems in Medicine and Healthcare* (NNESMED'01), pp. 121-125. Milos (Greece). (PDF)

- Vico F, Burrezo S, Polifeme C, García-Herrera G & Farfan J (2001) Knee surgery planning with genetic algorithms and neural networks. In *Proceedings of the 4th International Conference on Neural Networks and Expert Systems in Medicine and Healthcare* (NNESMED'01), pp. 335-340. Milos (Greece). (PDF)

- Manzano O, Vico F & Veredas F (2000) Inhibitory unlearning: a mechanism for increasing the storage capacity in an attractor network. In *Proceedings of the 4th International Conference on Knowledge-Based Intelligent Engineering Systems & Allied Technologies*, **1**, pp. 177-180. Brighton (UK). (PDF)

- Veredas F, Alonso JM & Vico F (2000) Exploring networks that generate correlated firing consistent with monosynaptic connections. *Soc Neurosci Abstr* 26. (PDF)

- Vico F, Guillen MJ, Burrezo S, Aguilar J, Polifeme C & Veredas F (2000) A clustering method based on genetic search and competitive learning. In *Proceedings of the 7th International Conference on Neural Information Processing* (ICONIP'00), **2**, pp. 750-754. Taejon (Korea). (PDF)

- Vico F, Guillen MJ, Veredas F & Polifeme C (2000) Modeling the intrinsic dynamics of biological speciation. In *Proceedings of the Real Life Evolutionary Design Optimization Conference* (PPSN'2000), pp. 138-140. Paris (France).

- Veredas F, Vico F & Guillen MJ (2000) Genetic algorithms with implicit encoding for solving high-dimensional optimization problems. In *Proceedings of the Real Life Evolutionary Design Optimization Conference (PPSN'2000)*, pp. 151-155. Paris (France).

- Vico F, Veredas F, Bravo JM & Almaraz J (1999) Automatic design synthesis with artificial intelligence techniques. *Artificial Intelligence in Engineering*, **13**(3), pp. 251-256. DOI: 10.1016/S0954-1810(99)00014-X. (PDF)

- Vico F & Veredas F (1999) A Clustering Algorithm Based on Competitive Learning. In *Intelligent Engineering Systems through Artificial Neural Networks*, **9** (Smart Engineering System Design), pp. 765-770. St. Louis (MO - USA).

- Vico F & Veredas F (1999) Automatic Measurements on Knee Implant X-ray Images. In *Intelligent Engineering Systems through Artificial Neural Networks*, **9** (Smart Engineering System Design), pp. 969-974. St. Louis (MO - USA).

- Veredas F & Vico F (1998) Computación evolutiva basada en un modelo de codificación implícita. In *Revista Iberoamericana de Inteligencia Artificial*, 5, pp. 20-25. (PDF)

- Vico F, Bravo JM, Veredas F, Redrejo A & Ortega F (1997) Neural and evolutionary computation for industrial manufacturing. In *Proceedings of the European Simulation Multiconference*, pp. 81-86. Istanbul (Turkey).

- Bandera C, Du F, Bravo JM, Veredas F, Vico F & Ortega F (1997) Pork carcasses characterization with color vision. In *Proceedings of the European Simulation Multiconference*, pp. 359-366. Istanbul (Turkey).

- Vico F, Bravo JM, Veredas F, Ortega F & Mir P (1997) A design synthesis paradigm based on neural and genetic systems. In *Proceedings of Concurrent Engineering European Conference*, pp. 149-153. Erlangen-Nuremberg (Germany).

- Vico F (1996) Biomimética: biología artificial. *Encuentros en la biología*, 31. (full text)

- Bandera C, Vico F, Bravo JM, Harmon ME & Baird LC (1996) Residual Q-Learning applied to visual attention. In *Proceedings of the Thirteenth International Conference on Machine Learning*, pp. 20-27. Bari (Italy). (PDF)

- Vico F, Jerez J, Ortega F, Gonzalez M & Molina I (1995) Goal planning by reinforcement prediction. In *Proceedings of the European Congress on Artificial Life* (ECAL'95), p. 27. Granada (Spain).

- Vico F, Ortega F, Jerez J, Gonzalez M & Conde I (1995) A multiacuity connectionist model for attentional control and tracking. In *Proceedings of the World Congress on Neural Networks* **I**, pp. 234-237. Washington, (USA).

- Vico F, Ortega F, Jerez J, Gonzalez M & Conde I (1995) Modeling synaptic plasticity for features detection. In *Proceedings of the World Congress on Neural Networks* (WCNN'95)**I**, pp. 238-241. Washington, (USA).

- Vico F, Ortega F, Almaraz J (1995) Character recognition with neural assemblies. In *From Natural to Artificial Neural Computation*, LNCS **930**, pp. 486-490. DOI: 10.1007/3-540-59497-3. ([PDF](#))

- Bandera C, Conde I, Jerez J, Gonzalez M, Vico F & Ortega F (1995) A multiacuty connectionist model for local speed estimation. In *From Natural to Artificial Neural Computation*, LNCS **930**: 979-986.

- Ortega F, Vico F, Gonzalez M & Jerez J (1995) Classical conditioning for autonomous navigation. In *Proceedings of the 14th International Congress on Cybernetics.* Namur (Belgium)*.

- Ortega F, Jerez J, Vico F, Gonzalez M & Conde I (1995) Artificial life in artificial worlds. In *Proceedings of the* 1995*EUROSIM Conferece*, pp. 1241-1246. Vienna (Austria).

- Gonzalez M, Ortega F & Vico F (1994) Conditioning as the basis of cognition and adaptive behavior. In *III International Workshop on Artificial Life and Artificial Inteligence* (DBRAC'94), pp. 162-164. San Sebastián (Spain).

- Vico F, Garrido F & Leibovic N (1994) A connectionist model for local speed estimation. In *Proceedings of the IEEE International Conference on Image Processing* (ICIP-94), **2**: 262-266. Austin (TX, USA). ([PDF](#))

- Vico F & Almaraz J. (1994) A Hebb-like learning rule for cell assemblies formation", In *Proceedings of the International Conferece on Artificial Neural Networks* (ICANN'94). Sorrento (Italy).

- Lahoz-Beltra R, Murciano A, Zamora J, Vico F, Jerez J & Hameroff S (1993) A computer simulation of backwards feedback across synapse via arachidonic acid. In *Proceedings of the International Conference on Artificial Neural Networks*, pp. 200-203.

- Vico F & Almaraz J (1993) Modelling biological learning from its generalization capacity. In *Proceedings of the European Symposium on Artificial Neural Networks*, pp. 51-56. ([PDF](#))

- Vico F & Almaraz J (1993) Learning by reinforcement: A psychobiological model. In *New Trends in Neural Computation*, LNCS **686**: 78-83.

- Galache T, Vico F & Gonzalez A (1992) Redes neuronales: Una nueva alternativa para modelar y predecir series temporales no lineales. In *Actas del I Congreso Iberoamericano de Estadística e I.O.*

- Vico F (1992) A learning by reinforcement model from the neurobiological outlook. In *Proceedings of the International Conference on Artificial Neural Networks* (ICANN'92), 2, **I**: 289-292. Brighton (UK).

- Vico F & Almaraz J (1992) A learning by reinforcement model to predict associative and nonassociative phenomena. In*Proceedings of the V International Symposium on Knowledge Engineering*, pp. 190-194. Sevilla (Spain).

- Vico F (1992) Neural network definition algorithm. *Microprocessing and Microprogramming*, **34**(1-5): 251-254. ([PDF](#))

- Vico F (1991) Use of genetic algorithms in neural networks definition. In *Artificial Neural Networks*, LNCS **540**: 196-203.

RESEARCH PROJECTS:

- *CAUCE: Generación automática de contenidos audiovisuales con calidad profesional mediante computación evolutiva* (TSI-090302-2011-8)
  P.N. de Investigación Científica, Desarrollo e Innovación Tecnológica. Subprograma Avanza Contenidos Digitales (MITYC). iSOFT Sanidad, BrainDynamics, CITIC. 01/2011-12/2013. P.I.: F.J. Vico

- *MELOMICS: Optimización de la respuesta terapéutica a la modulación de estímulos auditivos* (IPT-300000-2010-10)
  P.N. de Investigación Científica, Desarrollo e Innovación Tecnológica. Subprograma INNPACTO - Acción Estratégica de Salud (MICINN). iSOFT Sanidad, BrainDynamics, CITIC. 09/2010-12/2013. P.I.: F.J. Vico

- *ELEctronic Neurocognitive stimulAtion (EleNA): Plataforma Web para el Diseño, Ejecución y Seguimiento de la Rehabilitación Neurocognitiva mediante tecnologías asistivas y redes sociales* (TSI-020302-2010-88).

- *Tecnologías de Imagen Molecular Avanzada* (CEN-20101014). Centro para el Desarrollo Tecnológico Industrial. Sociedad Española de Electromedicina y Calidad, BrainDynamics, Integromics, Novasoft Ingenieríía. 01/2010-12/2012. P.I.: F.J. Vico

- *GENEX: Nuevas técnicas de Inteligencia Computacional para el modelado de redes reguladoras genéticas y su aplicación en procesos de desarrollo embrionario*. Proyectos de Excelencia de la Junta de Andalucía (P09-TIC-5123), NEOCODEX, BrainDynamics, iSOFT & CITIC. 02/2010-03/2014. P.I.: F.J. Vico

- *FORJAT: e-formación "justo a tiempo"* . MITYC (FIT-350100-2006-400), iSOFT Sanidad, S.A., INFOVA & CITIC. 10/2006-03/2009. P.I.: F.J. Vico

- *ECODIC: e-asistencia mediante una red de comunidades de interes clinico*. MITYC (FIT-350300-2006-98), iSOFT Sanidad, S.A. & CITIC. 01/2006-03/2008. P.I.: F.J. Vico

- *SINAI: Red de interes especial en artroplastia*. MEC (PTR95-0990-OP), iSOFT Sanidad, S.L. & CITIC. 05/2006-10/2008. P.I.: F.J. Vico

- *SOHO: Sensor óptico de humedad en orujos*. MITYC (CIT-020500-2005-23), CITIC. 10/2005-09/2006. P.I.: F.J. Vico

- *PSG: Integracion de nuevas tecnologias de almacenamiento y transmision de datos para el diseño de un polisomnografo ambulatorio.* CITIC, iSOFT Sanidad, S.A. 10/2005-10/2006. P.I.: F.J. Vico

- *BioEmergences: Towards the measurement of the individual susceptibility to diseases and response to treatments*. FP6 (NEST-2004-Path-IMP). 06/2006-05/2009. P.I.: F.J. Vico

- *Mind: Mineria de datos clinicos sobre una base de datos distribuida*. MITYC (FIT-350300-2005-105), iSOFT Sanidad, S.A. & CITIC. 01/2005-12/2007. P.I.: F.J. Vico

- *Realizacion de un videosensor movil digital y su aplicacion en tareas de vigilancia*. MEC (PTR95-0843-OP) & Tecnologias Viales Aplicadas, TEVA, S.L. 10/2004-09/2006. . P.I.: F.J. Vico

- *Sistema inteligente de videovigilancia*. MITYC (FIT-390000-2004-5) & Tecnologias Viales Aplicadas, TEVA, S.L. 07/2004-06/2006. P.I.: F.J. Vico

- *Sensores avanzados para carreteras inteligentes*. MITYC (FIT-370100-2004-45) & Tecnologias Viales Aplicadas, TEVA, S.L. 07/2004-06/2006. P.I.: F.J. Vico

- *Extraccion de conocimiento clinico mediante prospeccion de datos de seguimiento - II*. MEC (PTR95-0734-OP) & Johnson & Johnson Inc. 10/2003-09/2005. P.I.: F.J. Vico

- *Detección visual de perdidas de aceite de oliva en una almazara basada en redes de neuronas artificiales*. MEC (CICYT TIC2003-03067). 10/2003-10/2006. P.I.: J. Muñoz

- *Extraccion de conocimiento clinico mediante prospeccion de datos de seguimiento - I*. Junta de Andalucía (Consejería de Educación y Ciencia, OTRI-PAI-03-16). 08/2003-08/2005. P.I.: F.J. Vico

- *Desarrollo de un videosensor movil foveal con mecanismo atencional*. Junta de Andalucia (Consejería de Educación y Ciencia). 12/2002-12/2003. P.I.: F.J. Veredas

- *Optimizacion de un proceso de centrifugacion mediante aprendizaje por refuerzo*. Junta de Andalucía (Consejería de Educación y Ciencia). 12/2002-07/2003. P.I.: A. Sánchez

- *Clasificacion de texturas mediante redes neuronales autoorganizadas. Aplicación a la caracterizacion de imagenes de orujo*. MEC (CICYT TAP 99-0629). 12/1999-12/2003. P.I.: J. Muñoz

- *Functional circuitry of complex cells in visual cortex*. National Institute of Health (USA) (5 RO1 EY05253-16). University of Connecticut, CT-USA. 12/1999-12/2001. P.I.: J.M. Alonso

- *Aplicacion de redes neuronales y algoritmos evolutivos para la planificacion de la cirugia de rodilla*. MEC (1FD 97-0413). 01/1999-12/2000. P.I.: F.J. Vico

- Educational Innovation Project: *Integración de Teoría de Autómatas en el Campus Virtual* (PIE08-041). Universidad de Málaga.