

JAVIER CONTRERAS

Permanent address

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Personal Data

Date of birth: 5 Nov. 1975
Nationality: Spanish
Marital Status: Single

Place of birth: Valencia, Spain
Availability: Available/Researcher/PHD

Academic Record:

2010-2013	Universidade Nova de Lisboa, FCT, Caparica, Portugal PHD in Materials Engineering, Microelectronics and Optoelectronics: "Application of amorphous silicon 3D sensors to object detection".
2002-March2004	<i>UNIVERSITY OF SALFORD</i> , Manchester, UK Master in Robotics and Automation (MSc)
2000-2001	<i>OPEN UNIVERSITY</i> , Milton Keynes, UK Distance course: Artificial Intelligence for Technology . Including: Knowledge Based Systems and Neural Networks. Course project: Research based on Neural Networks and Knowledge Based Systems as possible applications to hand-written character recognition.
1993-1998	<i>UNIVERSITY OF KENT</i> , Canterbury, UK Communications Engineering B.Eng. Including: Digital and Analogue Electronics, Communications systems and Computing. Final year project: CMOS Circuit VLSI Design for the Web.
1988-1993	<i>PRINCETHORPE COLLEGE</i> , Rugby, UK A-Levels: 2 G.C.S.E's: 8
1978-1988	<i>CENTRO PILOTO SANTO CALIZ</i> , Valencia, Spain

Extra-curricular courses :

2006 (Part-time)	COTEC-New University of Lisbon Entrepreneurship MBA Lecture / Start-up creation programme (www.cotec.pt)
2002	Advanced Programming in Java, Madrid (30 hours), Internet / Intranet (Win2000) – Security in Internet, Madrid (20 hours).
1997 (1 month)	Intensive French language course at the University of Strasbourg, France. Successfully passed the exams achieving a certificate.
1994 (2 months)	Elementary course in Dutch at the University of Kent

1991 (1 month) French language course at Eurocentre, La Rochelle, France.

Work Experience:

Nov 2004 - Present UNINOVA (www.uninova.pt), Lisbon, Portugal
Development and use of real-time 3D rendering systems (hardware/software) using arrays of position sensitive detectors (PSDs - 3D sensor - array of 32/128 detectors) as well as the fabrication of these thin film amorphous silicon and nanocrystalline 32/128 PSD sensor arrays in laboratory clean room facilities.
(3 years) Researcher: Marie Curie actions European project: ASSEMIC (Advanced Methods and Tools for Handling and Assembly in Microtechnology).
(April 2007 – April 2009) Founder & Associate of start-up company (Nanobiotech) Prova Essencial Lda. Development of DNA detection prototype systems (hardware & software) based on gold nanoparticle technology.

2000 (3 years) XEROX, Madrid, Spain.
Systems Analyst (Pre-sales): XEROX high print volume systems installation/implementation within client network as well as pre and post sales assistance of these systems. XEROX software and systems client training as well as demonstrations to clients of these systems. Visiting clients with sales representatives in order to create or expand business with XEROX.

1999 (10 months) Hewlett-Packard, Madrid, Spain
Computing analyst: HP Outsourcing department providing technical support to MICROSOFT customers on-line.

1997 (1 ½ months) GEC-ALSTHOM, Tarbes, France
Programmer: Developed a working operating interface for users (technicians) in an investigation platform, using MS-ACCESS.

1996 (2 ½ months) GEC-ALSTHOM, Tarbes, France
Programmer: Realisation of a driver for the automate (API) ALSPA 80-35 using the development system LABVIEW-VXI.

1995 (6 months) GEC-ALSTHOM, Valencia, Spain
Research assistant: Comparative research (Technical-Economical) of several methods and obstacle detection systems, for its possible integration on door control systems on trains. (Obstacle detection methods).

Languages

SPANISH/ENGLISH: Bilingual, FRENCH: Fluent, PORTUGUESE: Fluent

Computer Skills

MSAccess, LabView-VXI, Prolog, Flex, Visual C++, National Instruments (NiDaq), AtMega128 Microcontroller: Development & Programming. Visim, VHDL, ORCAD, NeuralWorks, Java: Knowledge.
Chipwise Design Toolkit (CMOS circuit VLSI design), CWX (developed in the University) and HTML for internet: All used in B.Eng. final year project.
Xerox software within different operating systems (MAC, PC, Sun-Solaris).

Publications & Communications

- J. Contreras, C. Baptista, I. Ferreira, D. Costa, S. Pereira, H. Águas, E. Fortunato, R. Martins, R. Wierzbicki, and H. Heerlein, “**Amorphous silicon position sensitive detectors applied to micropositioning**,” J. Non-Cryst. Solids **352**(9-20), 1792–1796 (2006) and ICANS’21 / 4-9th September 2005, Lisbon, Portugal (www.icans21.org).

- I.Giouroudi, J. Kosel, J. Contreras, H. Pfützner, D. Andijasevic, W. Brenner **“Evaluation of Micromotors”**, Proceedings of the 6th European Society for Precision Engineering and Nanotechnology International Conference (Euspen) – Baden bei Wien, Vienna – 28 May – 1st June, 2006.
- Marie Curie actions European project (www.assemic.net), ASSEMIC (Advanced Methods and Tools for Handling and Assembly in Microtechnology) European project presentations in Pisa (Italy), CEMOP-UNINOVA (Portugal), Vienna (Austria).
- Participation in Communicating European Research 2005 International Conference, Brussels, 14-15 November 2005, representing ASSEMIC European project.
- J. Contreras, G. Doria, L.B. Silva, A. Esteves, R.Franco, E. Fortunato, R. Martins and P. Batista **“Development of an Optoelectronic Biosensor Prototype for DNA detection based on gold nanoparticle probes”** Poster presentation in ESBES - 7th European Symposium on Biochemical Engineering Science, Faro, Portugal, September 7-10, 2008.
- J. Contreras, D. Costa, S. Pereira, E. Fortunato, R. Martins, R. Wierzbicki, H. Heerlein, and I. Ferreira, **“Micro cantilever movement detection with an amorphous silicon array of position sensitive detectors,”** Sensors (Basel, Switzerland) **10**(9), 8173–8184 (2010).
- J. Contreras, I. Ferreira, M. Idzikowski, S. Filonovich, S. Pereira, E. Fortunato, and R. Martins, **“Amorphous silicon position sensitive detector array for fast 3D object profiling,”** IEEE Sensors J. **12**, 812-820 (2012).
- J. Contreras, L. Gomes, S. Filonovich, N. Correia, E. Fortunato, R. Martins, and I. Ferreira, **“3D scanning characteristics of an amorphous silicon position sensitive detector array system,”** Opt. Express **20**, 4583-4602 (2012).
- J. Contreras, R. Martins, P. J. Wojcik, S. A. Filonovich, L. Gomes, E. Fortunato and I. Ferreira, **“Color sensing ability of an amorphous silicon position sensitive detector array system,”** IEEE Trans. Image Process. (Submitted 2013).