

**Personal
Information**

Marital status: married (two children)

- Nationality: Portuguese

- Age: First October 1963

- Place of Birth: Oporto – Portugal

- Parents: Fernando Martino Menezes Oliveira, Emilia Augusta Simões da Rocha Menezes Oliveira

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Education

Beginning of the Chemical Engineering Course in January 1982 in the Oporto University and end of the licentiate's degree with a 14 mark on the 16th October 1986.

Masterchip degree in Electrotechnical Engineering and Computers, profile Industrial Automation by the Engineering Faculty Oporto's University, with the essay "Assisted Computer Control on Dynamics and Control" Mark: Very Good (on the 6th May 1991).

Doctor's degree in Chemical Engineering by the Engineering Faculty of the Oporto University with the essay "Monitoring and Control of Fermentation Processes - applied to the "Baker's Yeast, with unanimous approval (on the 22nd December 1997).

Work experience

1986 – 1987 Scholarship of the scientific and technologic National Research Council under the supervision of Prof. Sebastião Feyo de Azevedo, Engineering College/Porto University (FEUP), under the Project “Control of the Centrifuge’s Sector of a Sugar Refinery; simulation and implementation with programmable logic controllers”

Training at the firm EFACEC from the 1st December 1986 to 15th January 1987 in the area of the automations CLP 40 Program; under the supervision of Eng. Pina Cabral.

Training at the firm RAR. Refinarias de açúcar Reunidas, S.A from the 2nd February to 6th March 1987 where the author developed the work “Automation of the six centrifuges using the EFACEC programmable controller CLP 40.

1987 – 1989 Scholarship of the Scientific and Technologic National Research Council, developing the project – Computer Control of a Sugar Refinery: Use of programmable logic controllers in cyclic operations control of ionic exchanges - under the supervision of Prof. Sebastião Feyo de Azevedo.

1989 – 1990 Scholarship of AUPEEQ (Association Oporto University with Chemical Engineering Firms) working in projects in the area of automation and control processes, under the supervision of Prof. Sebastião Feyo de Azevedo.

Assistant lecturer invited by the Biotechnological Superior School, where the author lectured practical lessons on Elements of numeric analysis (1st semester 2nd Year) and Thermodynamics (2nd semester 2nd Year).

During this period attended the lectures in the Electrotechnical and Computers Engineering Masters in FEUP, and developed the essay under the supervision of Prof. Sebastião Feyo de Azevedo and Prof. Artur Capelo Cardoso (FEUP).

1990 – 1992 Scholarship of the Scientific and Technologic National Research Council developing the doctor’s degree work “Monitoring and Fermentors Control – use to the Baker’s yeast” under the supervision of Prof. Sebastião Feyo de Azevedo and Prof. José António Teixeira (University of Minho).

During this period the proponent finished the mastership essay in Electronic and Computer Engineering, entitled “Computer Assisted Control of Dynamics and Processes Control” which was presented in May 1991.

1992 – 1997 As assistant in the Industrial Electronic Department of the University of Minho, lectured theory and/or theory-practical lessons of the disciplines Control Theory and Processes Control and Automation to the students in the Industrial Electronic Engineering, Production Engineering courses (3rd/4th and 5th years). The proponent also lectured practical lessons on Integrated Laboratories II and III of the Industrial Electronic Course (3rd and 4th years respectively).

Guidance of several works of the final course (examination) students.

Between October 1995 and September 1996 developed her PhD on Chemical Engineering by the Engineering College of the Oporto University,

entitled "Monitoring and Control of Fermentors – Use of baker's yeast" (scientific responsibility: Prof. Sebastião Feye de Azevedo and co-orientation of Prof. José António Teixeira) being released from the service between October 1996 and February 1997

From the 23rd December 1997 until now, assistant professor in the Industrial Electronic Department of the University of Minho, lecturing theoretical and/or theory-practical lessons on Control and automation fields to the Industrial Electronics courses (3rd, 4th and 5th years). The proponent lectured as well practical lessons on Laboratories III and Factory Automation and Computer Control to the Industrial Electronic Master students. The proponent guided several trainings of the final course (examination).

Pedagogical Activity

Courses of licentiate's degree the following lectured disciplines fit in with the disciplines interest of the Industrial Electronic Department of the Engineering College of the University of Minho and were part of (included in) the study planning of the following licentiate's degrees:

- Industrial Electronic Engineering
- Production Engineering
- Systems Engineering and Informatics Computer

Control Theory

Licentiate's degree in Systems Engineering and Informatics – 4th year/2nd semester.

1992 – 1993 (four hours theory-practical lectures (first time));

1993 – 1994 (four hours theory-practical lectures);

1994 – 1995 (two hours theory lectures (first time) and four hours theory-practical lectures).

Processes Control

(Licentiate's degree in Systems Engineering and Informatics - 5th year/1st semester)

1993 – 1994 (four hours theory-practical lectures (first time))

Control Theory

(Licentiate's degree in Production Engineering – 3rd year/2nd semester)

1992 – 1993 (two hours theory-practical lectures (first time));

1994 – 1995 (two hours theory lectures – first time, and 4 hours theory-practical lectures);

1996 – 1997 (regency, two hours theory lectures and 4four hours theory-practical lectures);

1998 – 1999 (four hours theory-practical lectures);

1999 – 2000 (four hours theory-practical lectures);

2000 – 2001 (four hours theory-practical lectures);

2001 – 2004 (two hours theory lectures, four hours theory-practical lectures).

Processes Control and Automation

(Licentiate's degree in Production Engineering – 4th years/1st semester)

1998 – 1999 (regency, two hours theory lectures and four hours theory-practical lectures).

2002 – 2004 (regency, two hours theory lectures and four hours theory-practical lectures).

Integrated Laboratories II

(Licentiate's degree in Industrial Electronic Engineering – 3rd /annual)

1992 – 1993 (first semester – nine hours practical lectures – first time).

Control Theory

(Licentiate's degree in Industrial Electronic Engineering – 3rd /annual)

1992 – 1993 (2nd semester – two hours theory- practical lectures – first time).

Processes Control and Automation

(Licentiate's degree in Industrial Electronic Engineering – 4th year/annual)

1992 – 1993 (two hours theory-practical hours – first time);

1993 – 1994 (one hour theory-practical lectures);

1994 – 1995 (one hour theory-practical lectures – 2nd semester);

1996 – 1997 (regency, two hours theory lectures – first time, and one-hour theory-practical lectures/2nd semester);

1998 – 1999 (regency, two hours theory lectures and one-hour theory-practical lectures).

Integrated Laboratories III

(Licentiate's degree in Industrial Electronic Engineering – 4th year/annual)

1993 – 1994 (tree hours practical lectures – first time);

1996 – 1997 (eight hours practical lectures – 2nd semester);

1999 – 2000 (two hours practical lectures – first semester).

Digital Control – Option P 1

(Licentiate's degree in Industrial Electronic Engineering – 4th year/1st semester)

1999 – 2000 (a classic digital control, ¼ of the total hours, theory and theory-practical hours - first time);

2000 – 2001 (a classic digital control, module 1/3 of the total hours, theory and practical lectures);

2001 – 2002 (a classic digital control, module and an adapted control module, 2/3 of the total hours, theory and theory-practical lectures).

Automation

(Licentiate's degree in Industrial Electronic Engineering – 4th/1st semester; a new discipline in the course after a structural reorganization; the annual discipline of process control and automation gave place to two semi-annual disciplines: automation and processes control).

1999 – 2000 (regency, two hours theory lectures and one hour theory-practical lectures – first time);

2000 – 2004 (regency, two hours theory lectures and one hour theory-practical lectures);

Processes Control

(Licentiate's degree in Industrial Electronic Engineering – 4th year/2nd semester, a new discipline in the course after a structural reorganization; the annual discipline processes control and automation gave place to two semi-annual disciplines: Automation and Processes Control).

1999 – 2000 (regency, two hours theory lectures and one hour theory-practical lectures – first time);

2000 – 2004 (regency, two hours theory lectures and one hour theory-

practical lectures);

Project

(Licentiate's degree in Industrial Electronic Engineering – 5th year/1st semester).

2002 – 2004 (practical lectures); several practical works, proposed by the author, in the automation and control areas.

2001 – 2002 (practical lectures); several practical works, proposed by the author, in the automation and control areas, namely:

- Control and management of an auto-park (a miniature garage) using PLC;
- Semaphores control using PLC;
- Simulation of baker's yeast fermentation
- Intelligent building: using a PLC OMRON;
- Control of a pilot installation (in collaboration with the Polymer Engineering Department) of a differential thermal analyzer for the study of the crystallization phenomenon.
- Implementation of a measuring system of the yarn uniformity.
- Communication with PLC OMRON.
- Kit control of a train line.

2000 – 2001 (practical lectures, first time); practical works, proposed by the author, in the automation and control areas, namely:

- Implementation of a measuring system of the yarn uniformity by capacitive sensors;
- Development of a monitoring system based on LabView for detection of irregularities on textile yarns;
- Development of a strength monitoring system;
- Computer control of a tank system on a laboratorial scale, using the LabView tool together with its control toolbox PID/Fuzzy. The purpose is to compare the performance of the fuzzy controller with the PID applied to the level (and temperature) control;
- Control of a pieces transport based on a selection system, mounting and inspection of the components using the labView tools and its toolbox for the image program to detect faulty pieces;
- Data communications on a Ethernet exploring the potentiality of the LabView;
- Simulation of the leavening of the baker's yeast (in open loop) using Matlab.

Supervision of Curriculum

Training Courses

The author supervised the curriculum training of students in Systems and Informatics Engineering and Industrial Electronic Engineering licentiate's degree courses. These latest students, were enrolled in following areas: automation, control, computing, management, energy administration on a average of 8 students/per year, for example:

Leonor Susana Ferreira, Industrial Electronic Engineering, Management, optimization and fixing of textile machine, Fábrica de Tecidos Viuva de Carlos da Silva Areias e C^a.Lda, Caldas de Vizela, October 1997.

Marco Paulo Sousa – Industrial Electronic Engineering, Instrumentation and Control System, Portucel Industrial, S.A, Setúbal, November 1997.

Marco António Rebelo, Industrial Electronic Engineering, Acquisition system and Automatic Control, Microprocessador Sistemas Digitais, S.A., Porto, November 1999.

Baltazar Filipe Peixoto, Industrial Electronic Engineering, Production and Packing Control System, Lear Corporation, Póvoa de Lanhoso, November 1999.

Margarida Ferreira da Silva, Industrial Electronic Engineering, Calculation of the of electronic products for the Porto underground works, EFACEC, Sistema de Electrónica, S.A, Porto, November 1999.

Rui Fernando Pinto, Industrial Electronic Engineering, Remodeling (structural reorganization) of the electric equipment of the cable machine, 69 copper wires, Celcat, Caves de Energia e Telecomunicações, S.A, Pedro Pinheiro, November 1999.

Carla Marília Ferreira, Industrial Electronic Engineering, Stastical processes statistical control/improvement of the productive processes, PHILIPS Portuguese, S.A, Ovar, June 2000.

Joana Braga, Industrial Electronic Engineering, Implementation system to detect yarn irregularities, Tecminho, Guimarães, Setembro 2000.

Filipe Francisco Domingues, Industrial Electronic Engineering, Programming CNC machines, Interplástico, Marinha Grande, October 2000.

Teresa Elisabete Gomes, Industrial Electronic Engineering, Automation of the work place, Blaupunkt, Auto-rádios, Portugal, Braga, October 2000.

Marta Alexandra Araújo, Industrial Electronic Engineering, Project SIME-Information System of the Energy Market, EDINFOR, Sacavém, November 2000.

Eusébio António Machado, Industrial Electronic Engineering, Management and Maintenance of the Intelligent System Honeywell, installed in Guimarães Hospital, Senhora da Oliveira, December 2000.

Manuel Casimiro Borges – Industrial Electronic Engineering, Complete Remodeling of the primary Affluent Control System, PORTUGEL Viana, Viana do Castelo 2000.

Manuel Carvalho – Industrial Electronic Engineering, Achievement of Generic Software components in labView for Information System, IDITE Minho, Braga, February 2001.

Hugo Silva - Industrial Electronic Engineering, Optimization of Automatic Warp Beams Mounting Machines and Computation of Dimensional Control Measurements, SONAFI, S.Mamede de Infesta, October 2001.

José Gabriel – Industrial Electronic Engineering, Detection of Irregularities on Textile Yarns, Industrial Electronic Department, Guimarães, October 2001.

Paulo Amorim – Industrial Electronics Engineering, Acquisition System and Analysis of the Yarn Tension of Weft Knitting Machines, Industrial Electronic Department, Guimarães, October 2001.

Frederico Martins – Industrial Electronic Engineering, Automation of Industrial Washing machines, JOMARCA, Famalicão, November 2001.

António Barros, Industrial Electronic Engineering – Organization and industrial maintenance management, Kombert & Schluet Portugal, Lda, Guimarães, December 2001.

Vitor Hugo Carvalho, Industrial Electronic Engineering – Determination in real time of the yarn irregularities, using capacitive sensors, Dei-UM, Guimarães, Julho 2002.

Post degree courses (Post graduation Courses)

The following lectured disciplines fit in with the disciplines interest of the Industrial Electronic Department of the Engineering College of the University of Minho and are part of the planning of the Post degree courses (mastership's degrees and specialization courses), lectured in the University of Minho.

Factory Automation

Industrial Electronic mastership's degree and Industrial Electronic specialization courses – 1st semester
1999/00 (theory lectures, first time)

Computer Control

Mastership's degree in Industrial Electronic Engineering and Industrial Electronic specialization courses – 1st semester
2001/02 (theory lectures)
2000/01 (theory lectures, first time)

The work proposed by the authors and carried out by the students led to the publication of the following article in an international conference: Carlos Machado, Pedro Gomes, Rui Soares, Silvia Pereira, Filomena Soares, Control of baker's yeast fermentation PID and fuzzy algorithms, 27th conference IECON'01, Denver, U.S.A, from the 29th November to the 2nd December 2001 (ESBN 0.7803-7108-9/10 (Pages 770-775).

This article was presented by the licentiate Pedro Gomes and won the prize for the best article presentation.

Lecturing of other Courses

The under mentioned activities, the most part of short duration, have in common the pedagogical character or their relation to the teaching (at several levels and of different types):

Course: Laboratorial Techniques, module "Processing of Experimental Data" organized by the Chemical Engineering Department of the Engineering College, Porto University, having lectured 12 hours in 1987 and 6 hours in 1988.

Course: "Informatics Techniques" organized by the High School of Biotechnology, having lectured 20 hours theory lessons on Basic (1989).

Course: "Data Acquisition and Computer Control – Chemical, Biochemical and Food Industries" organized by Prof. Sebastião Feyo de Azevedo (FEUP) in collaboration with the Industrial Association of Porto, having lectured 20

hours theory lessons and 30 hours practical lectures (1990).

Course: Specialization on Computer Integrated Production, organized by the Production and Systems Department of the University of Minho, having lectured the discipline Digital Control Systems from the 2nd April to the 27th Mai 1993(theory and practical lessons).

Course: "AVAC", module "Control", organized by the Industrial Electronic Engineering Department of the University of Minho, having lectured 4 hours, in July 2002.

Participation in pedagogical activities

The author attended the formation course "Pedagogical Practice – a nature reflection", organized by engineering courses council, April 2002, the proponent attended particularly the module "Learning auto-regulation", lectured by Prof. Pedro Rosário.

Seminars

Participation in following seminars:

2nd journeys on the evaluation of the University Courses, Engineers Board, Lisbon, 23-24th May 1999.

Seminar "Transition to University Teaching", on the 18-19th Mai 2000 in Campus de Gualtar, University of Mingo, Braga.

Seminar "Contexts and Dynamics of the Academicals Life" on the 28-29th Mai 2002, Campus de Azurém, University of Minho, Guimarães.

Scientific Activity, Scientific Interests:

Since her admission in 1992 to the University of Mingo, the proponent is a researcher at the Industrial Electronic Line of the Algoritmi Center.

The main scientific interests are centralized in the areas of modeling and processes control, mainly in the area of biotechnical processes (specially the production of baker's yeast) and in the system automation area (with application to the development of equipments for the textile industry). At the moment, the proponent is studying new sensors for the measuring of ambient and state variables (Mastership's thesis of Pedro Gomes, see 5.3.1).

Research Projects

Since 1998 the author develops projects and submits them to national funding program, in collaboration with researchers of other departments of the University of Minho and other Portuguese.

Running Projects

Monitoring and Control of the Knitting process(Part II)

Functions: coordination of the Electronic team

Supporter: FCT (Program POSI)

Amount: € 60.000

Team: João Monteiro (DEI); Ana Maria Rocha (DET); André Catarino (DET);

Term of project: 2002-2004

Summary: Development of an on-line control system of circular looms.

Differential of thermal analysis for shear induced crystallization studies

Function: coordination of electronic team

Support: FCT (Program POSI)

Amount: € 34.016

Team: José Martins (DEP), António Brito (DEM), Manuel Romero (DEI)

Term: December 2000- September 2004

Summary: Develop of a Differential thermal analyzer (industrial Prototype) to study crystallization phenomena

Results: the work has been presented in international conferences.

Finished projects

On-line analysis the textile yarn regularity.

Function: member of team

Supporter: PRAXIS/P/EEI/13189

Total funding: €50.000

Team: João Monteiro (DEI); Rosa Vasconcelos (DET); Ana Maria Rocha (DET)

Duration (Time-Limit) of project: June 1999 - December 2003

Summary: The main target of this project is to develop a sensor to determine yarn irregularities in 1mm accuracy.

Results: This project was the theme of two curriculum trainings of Joana Braga and José Gabriel Pinto; the work has been presented in international conferences.

This Work was also presented in SEI. 3rd Industrial Electronic Symposium, organized by the students Group of the IEEE of the University of Minho on the 12-13th December 2001, in Campus Azurém.

Mombaker. Modelling, Optimisation and miniaturization of Baker's yeast production Process

Functions: responsible of the project

Support: Algoritmi Center

Amount (Total financing): € 19403

Team: Higinio Correia (DEI), Graça Minas (DEI), Celina P. Leão (DPS), Edite Fernandes (DPS)

Term of the project: November 2000- October 2002

Results were presented in international conferences.

TEXTTEST. Develop of multi-axial dynamometers for the measuring of textile and fabrics (tissues)

Support: IC-PME, Agência de Inovação

Funding U.M.: 226554 / Total 120.056

Team: João Monteiro (DEI), Carlos Couto (DEI), Júlio Martins (DEI), Mário Araujo (DEI), Ana Rocha (DET), Mário Lima (DEM) Fernando Mendes (DEI)

Term of the project: July 1999- December 2001

Summary: this project aims to develop a dynamometer for the measuring of multiaxial forces used on technical textiles and the development of essay methodologies possible of normalization (standardization)

Results were presented in international conferences.

Monotorization? An Control of the Knitting process

Function: coordination of the electronic team

Support: FCT (Program: POSI/ 3386/1999

Funding 19 952,00 €

Team: João Monteiro (DEI), Mário de Araújo (DET), Ana Maria Rocha (DET), André Catarino (DET).

Term of the project: July 2000 – July 2001

Summary: Preliminary studies on development of on-line control system of circular looms

Results were presented in international conferences.

Control of the centrifuge sector of the RAR. Refinaria de Açucares Reunidos

Scientific responsibility: Prof. Sebastião Foyo de Azevedo (FEUP / ISR.UP)

Support: RAR

Date: 1986 – 1988

Summary: the aim of this project consisted in controlling the performance of the 6 centrifuges in the refinery, using PLCs.

Modelling and Control of Bioreactors

Project of Doctor's Degree: Monitoring and control of fermentors - application to the baker's yeast.

Scientific Responsibility: Sebastião Foyo de Azevedo / FEUP / ISR / UP

Supporters: CEB – UM and CEQ- FEUP (Chemical Engineering Center)

Date: 1995 / 1997

Main Equipment set up (installed) in the University of Minho: Fermentor B. Beaum MDS.

Supervision of Academic Works

Running masterships

Co-supervisor of the student Pedro Gomes, in the Industrial Electronic Master in the essay "Optical sensorial module for monitoring and control of mini-bioreactors". This work began in October 2001 and ended in November 2002.

Running masterships

Co-supervisor of the student José Gabriel Pinto, in the Industrial Electronic Master in the essay "Real-time yarn mass measurement in 1mm range". This work began in November 2002 and will end in April 2004.

Co-supervisor of the student Alexandrino Silva, in the Industrial Electronic Master in the essay "Measurement and analysis in multi-axial machines". This work began in November 2002 and will end in April 2004.

Co-supervisor of the student Sebastião Filipe Rocha, in the Master Automation, Instrumentation and Control in FEUP, in the essay "Design of a simulator for dynamics and control studies". This work began in February 2003.

Participation in academic exams

Participation in the jury, as co-supervisor of the student Pedro Gomes, in the Industrial Electronic Master in the essay "Optical sensorial module for monitoring and control of mini-bioreactors", in 28th November 2002.

Participation in the Chemical PhD jury, of the student de Marta Isabel dos Santos Veríssimo, in the essay "Analytical applications of mass sensors based on different substrates", in 9th May 2003 (university of Aveiro).

Participation in technical and scientific Organizations

Member of the Engineer Board since 1984 (in this year was a student member)

Member of the Portuguese Automatic Control Association (APCA) since 1994

Member of the Chemical engineering technical committee of IASTED for the period 2001-2004

"Adviser" of the students group of IEEE of the University of Minho since January 2002

Scientific and Technical activities

Courses

Course of data acquisition and computer control in the food industry

Chemical Engineering Center (UP) and in the High school of Biotechnology, from the 3rd to the 5th May 1981.

Course of Support Models to the management of the food Industries, in the high School of Biotechnology, in Porto, on 23rd and 24th October 1989

Course of PLCs, organized by OMRON, Porto, on the 14th November 1991

Seminar on Fermentation “ Basics Principles in the optimization of processes”, in the High school of Biotechnology, Porto, on the 15th – 16th January 1992

NATO-ASI On the use of computer and informatics systems in Bioprocess Engineering” organized by the High School of Biotchnology of the Catholic University, Ofir, Portugal, 1992

Bioreactor Engineering Course, Organized by the European Federation of Biotechnology, working party on measurement and control, Island of Albarella, Rosalina, Italy, from the 26th to the 1st October 1992.

Course: “Advanced automatic control in (bio) process Engineering” by the “École d’été d’ automatique de Grenoble, Grenoble, France, 13-17 September 1993.

Course: “3rd Euroensors school on Fundamentals of Sensors Science and Technology”, Praga, Check Republic 14-15 September 2002

Seminars, Congresses and Conferences

- “5th International Conference on Computer Application in Fermentation Technology and 2nd IFAC symposium on Modeling and Control of Biotechnical Processes, Colorado, USA, 29th March to 2nd April 1992
- CHEMPOR ´ 93, International Chemical Engineering Conference, Porto, Portugal, May 1993
- “6th European of Biotechnology” Florence, Italy, 13-17 June 1993.
- Controlo ´94 – 1st Portuguese meeting on automatic Control, 14-16 September 1994, Lisbon, Portugal.
- Conference “Launch of 5th Frame Work program”, Essen, Germain, 25-26 February 1999
- ESBES- 2nd European Symposium on Biochemical Engineering Science, Porto, Portugal, 16-19th September 1998
- Controlo´2000 – 4th Portuguese Meeting on automatic control, Guimarães, Portugal, 4-6th October 2000
- 1st Annual International IEEE-EMBS special topic conference on Microtechnologies in Medicine & Biology, Lyon, France, 12-14th October 2000
- Control and application 2001, IASTED Conference, Banff, Canada, 27-29th June 2001
- 27th Conference IECON ´01, Denver, USA, from the 29th November to the 2nd December 2001
- SEI – 3rd Symposium on Industrial Electronics, organized by the students Group of IEEE of University of Minho, Campus Azurém, Guimarães, Portugal, 12-13th December 2001.
- IO´2002, 10th Congress of Portuguese Association of Operational Research, University of Minho, Campus Azurém, Guimarães, Portugal, 24-27 March 2002.
- ICOSMO´2002, Skiathos, Greece, 25-28 September 2002

- *Filtrum– Feira de Electrónica Industrial*, organized by Núcleo de Estudantes do IEEE da Universidade do Minho, Pavilhão Multiusos; Guimarães, Portugal, 4 - 6 Dec, 2002.
- *ISIE'03, International Symposium on Industrial Electronics*, Rio de Janeiro, Brasil, 9-11 July 2003.
- *Workshop on Modeling and Simulation in Chemical Engineering*, Coimbra, Portugal, 30 June-4 July.
- Euroensors XVII, Guimarães, Portugal, 21- 24 September, 2003

Candidatures to Funding Programs

- **Monitoring and control of the knitting process (partII)**

Fundação para a Ciência e tecnologia (Science and Technology foudation). (FCT, POCTI)

Team: Industrial Electronics and Textile Departments of University of Minho

Date: 2001

Summary: Development of an on-line control system of circular loops

Situation: accepted

- **Candidature to the re-equipment program of Algoritmi Center**

Science and Technology Foundation

Date: 2002

Situation: Waiting for a decision

e-conteúdos educativos

Science and Technology Foundation: POSI – “programa conteúdos em banda larga”

Team: Departamentos de Electrónica Industrial, Produção e Sistemas, Engenharia Têxtil, Engenharia Mecânica, Matemática para a Ciência e Tecnologia e Economia da Universidade do Minho (UM)

Date: 2003

Situation: Waiting for a decision

Organization of events and scientific and technical conferences

Participation in the organization of several events, such as:

- ISIE'97, International Symposium on Industrial Electronics, University of Minho, Guimarães, 7-11 July 1997
- Member of organizing committee of the ESBES- 2- end European Symposium on Biochemical Engineering science, at the Vilar Seminary, Porto 16-19 September 1998.
- Member of the organizing committee of the conference CONTROL'2000- 4th Portuguese association of automatic control, Guimarães, 4-6th October 2000.
- Member of the Organizing committee of sites computation, organized by the Information, Industrial Electronic and Informatics Departments, within the scope of the commemorations of the 25 years of the Engineering School, which take place from March to December 2000
- Member of the organizing committee of the 1st Robotic Festival, organized by the Industrial Electronic Department on the 25th to 28th April 2001

- Member of organizing committee of Eurosensors conference, Campus Azurém, Guimarães, September 2003

Other Scientific Activities

• Invitation to speeches

- Journey to German to give a lecture on “Scientific Research on DEI” 4-6 October 1999
- Journey to German to give a lecture on “Automation and Control-Application on biotechnical and textile processes” in the universities of Ilmenau and Aachen, from the 9th to 12th July 2001

• International Conferences Committee

- Evaluation of articles of the conference MIC 2002 – Modeling, identification and control, Innsbruck, Austria
- Evaluation of articles of the conference CA2002. Control and applications, Cancun, México, 20-22 May 2002
- Evaluation of an article of the IEEE/ASME magazine – Transactions on Mechatronics, February 2002
- Evaluation of articles of the conference IECON’02, Sevilha, Spain, December 2002.
- Evaluation of articles of AIA 2002, IASTED – artificial Intelligence and application, Malaga, Spain, 9-12 September 2002
- Evaluation of articles of the conference MIC 2003 – Modeling, identification and control, Innsbruck, Austria, 10-13 de Fevereiro 2003.
- Evaluation of articles of the conference MS 2003, IASTED – Modeling and Simulation, Palm Springs, California, USA, 24-26 Feb 2003.
- Evaluation of articles of the conference Eurosensors XVII, Guimarães, Portugal, 21-24 September 2003.
- Evaluation of articles of the conference AIA 2003, IASTED – Artificial Intelligence and Applications, Benalmádena, Espanha, 8-10 September 2003.
- Evaluation of articles of the conference CA 2004 – Control and Applications, Marina del Rey, California. USA, 1-3 March 2004.

University Management Activities

• Participation in management organs

- Secretary to the scientific commission of the DEI from June 1998 to June 1999
- Member of the executive commission of the Industrial Electronic Department. Since 1998, sharing running administration tasks of the Department.
- Member of the Industrial Electronics Engineering course commission from October 1998 to July 1999
- Director assistant of the Licentiate’s degree course on the Industrial Electronics Engineering from October 1998 to July 1999. In this ambit the author coordinated training processes of students in this licentiate’s degree, and participated in the evaluation discussions of the works. In order to obtain the training works of last year’s students, the author prepared, submitted and coordinated the candidatures to curriculum trainings in the ambit of the PRODEP. Participation in the elaboration of the ECTS dossier, relative to the Industrial Electronics Engineering course. Elaboration of the licentiate activities together with the director of the course. Execution of works relative to the

running management of licentiate's degree on Industrial Electronics Engineering

•Scientific Coordinator of the industrial electronic line of the Algoritmi center since 1998

- elaboration of annual activities reports, collaboration with the Department Directors in the scientific organization of the DEI.
- Participation in diffusion programs and representation of the Research line
- Promotion of the curriculum training of Paulo Silva for elaboration of the www page of line/ Department center
- Participation in the elaboration of the proposed to the re-equipment of the Research center; this initiative was promoted by FCT.

• Member of the executive commission of the Algoritmi center since 1998

- Evaluation of several candidatures to internal projects of the center
- Participation in reorganization tasks of the center
- Executive of works relative to the management of the center

• Sub-director of the Algoritmi center since the 21th October 1998

- Substitute of the center Director whenever necessary
- Participation in the organization of the visit of experts of the Science and Technology Foundation for evaluation of the Center, from 1996 to 2002

Publications

Theses

- Filomena Oliveira Soares, Computer assisted control of dynamic and Process Control – Theses of the Master degree in Electronics Engineering and computers, profile of Industrial Automation, Engineering college of Oporto University, 1991.
- Filomena Oliveira Soares, Monitoring and control of fermentors – Application to the baker's yeast. Theses of the PhD degree in chemical Engineering by the Engineering college of the Oporto University, 1997

Articles in international journals

S. Feyo de Azevedo; Filomena Oliveira Soares; A. C. Cardoso, *TEACON - A Simulator for Computer-Aided Teaching of Process Control*, Computer Applications in Engineering Education, Vol. 1, N. 4, 1994 (p307-319).

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