



✓ Lista de alunos matriculados no Programa de Doutoramento ***Leaders for Technical Industries (LTI)***

- Carla Marisa V. Salsinha Pepe
- Eduardo Luís Mesquita Santos
- Marco Alexandre de Oliveira Leite
- Rui Alexandre Salgado Carreira
- Sérgio Manuel Oliveira Tavares
- André Delgado Martins Dias
- Helena Luísa Simas Silva
- Ivo Miguel Lopes Ferreira
- Pedro Domingos B. Carmona Marques
- Alexandre M. T. de Barros F. da Silva
- Helena Lopez Fernandez

Helena Silva

Has relevant experience in design, development and implementation of projects and methodologies for product development and advanced manufacturing processes in the automotive industry.

She is graduated in production engineering and she has a Master degree in management and industrial strategy.

Currently, she is a PhD student under the Framework of the MIT-Portugal Program, "Leaders for Technical Industries".

She worked for five years in the manufacturing planning department of VW Autoeuropa. Subsequently, she coordinated the team that created CEIIA.

Her current position in CEIIA is adviser to the Management Board and Operation manager, being also responsible for the coordination of the CEIIA-Autoeuropa platform located at Palmela, Autoeuropa Industrial Park.

CEIIA – "Centro para a Excelência na Indústria Automóvel" is a nonprofit and private association that operates within automotive and aeronautic sector.

Curriculum Vitae

Personal information

Surname(s) / First name(s) **Tavares, Sérgio Manuel Oliveira**
 Nationality Portuguese Date of birth March 6, 1982
 E-mail sergio.tavares@fe.up.pt

Work experience

Dates	September, 2005 – September, 2007
Occupation or position held	Researcher Fellowship
Main activities and responsibilities	Researcher of the European Union Project. Project DaToN - Innovative Fatigue and Damage Tolerance Methods for the Application of New Structural Concept. Work with aeronautical companies EADS France, EADS Deutschland, Airbus Deutschland, Israel Aircraft Industries, etc. and research companies: DLR, NLR. My function in this project: Fatigue and Fracture Mechanics studies of stiffened panels including determination of stress intensity factors, crack growth modeling and residual strength analysis, using computational methods Participation in other research projects Modeling welding processes and the residual stress in the processes: Laser Beam Welding and Friction Stir Welding.
Name and address of employer	IDMEC – FEUP Porto - Portugal
Dates	May, 2005 – September, 2005
Occupation or position held	Young Researcher Fellowship
Main activities and responsibilities	Young researcher of the European Project – DaToN. Research in some aspects of Fracture Mechanics, and innovative temperature measurements in welding processes.
Name and address of employer	IDMEC – FEUP Porto - Portugal
Dates	1998 – 2004 (part-time)
Name and address of employer	Mindol, Metalúrgica Industrial, Lda (www.mindol.pt) Vale de Cambra, Portugal

Education and training

Dates	September, 2000 – July, 2005
Title of qualification awarded	Master degree (Portuguese 5 years <i>licenciatura</i>) in Mechanical Engineering - 15 (out of 20)
Name and type of organization providing education and training	Faculdade de Engenharia da Universidade do Porto (University of Oporto - Portugal)
Dates	September, 2005– July, 2007
Title of qualification awarded	Master in Science and Engineering – Mechanical Engineering - Highest classification (Muito Bom)
Principal subjects/occupational skills covered	Structural Engineering Thesis: Structural Integrity of Stiffened Structures: Fatigue and Fracture Mechanics Analysis
Name and type of organization providing education and training	Faculdade de Engenharia da Universidade do Porto (University of Oporto - Portugal)

ANDRÉ DIAS

ACADEMIC EXPERIENCE:

- 2007 – MIT Portugal PhD Student in Leaders for Technical Industries (EDAM-LTI)
Instituto Superior Técnico (IST), Technical University of Lisbon (UTL), Lisbon, Portugal
- 2006 – 2007 Visiting M. Sc. Student at UCLA
University of California at Los Angeles (UCLA), Los Angeles, United States
- 2005 – 2006 M. Sc. in Astrophysics, Space Sciences and Planetology
Université Paul Sabatier / SUPAERO, Toulouse, France
- 2004 – 2006 SUPAERO M. Sc. / Engineering Diploma
Ecole Nationale Supérieure de l'Aéronautique et de l'Espace (SUPAERO), Toulouse, France
- 2001 – 2007 M. Sc. in Aerospace Engineering
(Double Degree TIME exchange with SUPAERO)
Instituto Superior Técnico (IST), Technical University of Lisbon (UTL), Lisbon, Portugal

WORK AND RESEARCH EXPERIENCE

- 2006 – 2007 *Master's Thesis (October – April)*
Title: *A Toolbox for the Automated Synthesis of Embedded Systems Control Software*
Department of Electrical Engineering, University of California at Los Angeles (UCLA), United States
- 2006 *Engineering Research Internship (April – October)*
Title: *Propulsion Architecture Optimization and Optimal Thrusters Selection in a 6 DOF Controlled Spacecraft*
EADS Astrium Space Transportation, Les Mureaux, France

MARCO LEITE

My experience with the industrial environment started in the late years of my undergraduate studies, working at a company that designs and manufactures integrated solutions for production lines. At that same time I worked for a semi trailer builder designing custom made solutions. During my undergraduate studies I also won a one year scholarship at IDMEC working for the Portuguese Institute of Welding and Quality, (ISQ). The job was to create the trainee manuals as well as two scripts for instruction videos for the course: International Welding Engineer held at ISQ for the European Federation for Welding, Joining and Cutting.

I started my Master Studies in Mechanical Engineering at Instituto Superior Técnico (IST) in September 2002. My research theme was in reinforced sandwich structures applied to refrigerated semi trailers. This research work finished in November of 2004. The work naturally lead to a prototype: a Refrigerated Trailer designed to transport cherries from the fruit farm to a process industry in controlled temperature and humidity. This prototype was built with the collaboration of the refrigerated trailer builder Honório – Carroçarias do Cartaxo.

In March 2004 I started working at my present job as a Lecturer at Instituto Politécnico de Tomar (IPT). My scientific area is Structural Mechanics lecturing Mechanics of Materials, Structural Mechanics and Finite Element Analysis. I was invited to lecture Mechanics of Materials, Mechanical Vibrations and Machine Component Design at Universidade de Évora from September 2005 up to now.

In 2002, I joined the Fatigue of Materials and Structures and Composite Materials Group at Instituto de Ciência e Engenharia de Materiais e Superfícies. The objectives of the Group are: fundamental research and research in close collaboration with industry. The results were some conference papers, two journal papers and two industrial reports. The international journal papers were in the field of Multiaxial Fatigue and in the field of Core Reinforced Sandwich Beams (in review). The reports; one for Bombardier Transportation (Sandwich behaviour of plates with thermal loads) and another for Honório – Carroçarias do Cartaxo (Bending of core reinforced sandwich beams) were acknowledged by the industry and resulted in technological adjustments. At IPT, I was responsible for projects that lead to conference papers (Impact behaviour of glass-fibre reinforced polymer) and also to a report for the Industrial Association of Santarém (Technology Audits). My latest research interest is the use of cork composites for the core of sandwich structures. This work is being developed together with IST and a world cork industry leader, Corticeira Amorim, and the results at the moment are the shear properties of cork composites and a two poster communications.

1. Rui Alexandre Salgado Carreira

2. Academic degrees

2002- 2003 - Post-Graduation in Health and Safety at Work (professional certificate emitted by the Institute of Employment) with the length of 720 hours

1994-1999 - 5 year degree (including curricular internship and thesis debate) in Industrial Engineering and Management in the Faculty of Engineering of the University of Porto.

3. Previous and current scientific and/or professional activities

Jan. '00 – Sept. '07 Work in the company A. Dias Ramos - Máquinas-ferramenta, Lda.

With the following functions since December '00:

- Responsible for the Quality, Health and Safety, Environmental and Social Accountability Management Systems (certified by NP EN ISO 9001:2000).
- Responsible for the metrological laboratory and Quality Control.
- Internal and External Auditor. Trainer of several courses in the subjects related to the Management Systems.
- Health and Safety responsible for the activities of prevention and risk assessment.
- Elaboration of the Emergency's Procedure in which participates as Fire Brigade responsible.
- Participation in the Health and Safety's Internal Commission.

December '04 Trainer of Health and Safety course in “Centro de formação das escolas de Espinho” with the length of 15 hours.

4. Participation in projects

Jan.-Feb.'03 Elaboration of the Emergency's Procedure of the company A. Dias Ramos - Máquinas-ferramenta, Lda. Definition and training of the fire brigades.

April '00-March '01 Protection of the machines regarding Safety requirements.
Evaluation of the fulfilment of the decree-law 82/99 (transposition of the European Directive 89/655/CEE concerning the minimum safety and health requirements for the use of work equipment by workers at work) and other reference standards.

Definition and confirmation of the necessary corrective actions.

April-August '99 Rohde & Schwarz (Munich, Germany) – Curricular Internship held in English with the subject: “Energy consumption – one aspect of an environmental management based in ISO 14001” .

Curriculum vitae

Informação pessoal

Nome(s) - Apelido(s)	Eduardo Luís Mesquita Santos
Morada institucional	Rua Prof Queiroz Veloso, nº36, 1600-658 Lisboa
Telefone(s)	
Correio(s) electrónico(s)	eduardolmsantos@gmail.com
Nacionalidade(s)	Portuguesa
Data de nascimento	8 de Junho de 1979
Local de nascimento	Santa Justa, Lisboa

Education:

- 2002: Degree in Environmental Engineering
- 2007: MSc in Engineering Design

Professional experience:

- 2002-2006: Scientific investigator at IST/IN+ in Waste management and Ecodesign
- 2006-2007: Consultant of Environmental Engineering
- 2007-...: PhD student

Ivo Ferreira Academic and Professional Experience

SEPTEMBER 2007 (onwards) - PhD candidate of the MIT-Portugal Program, LTI- Leaders for Technical Industries program of EDAM – Engineering Design and Advanced Manufacturing.
Compulsory Internship at the ESA Propulsion Laboratory at the ESTEC – European Space Agency – Netherlands.

APRIL– AUGUST 2007 - Internship for completion of thesis at the MVL(Man Vehicle Laboratory) at the MIT(Massachusetts Institute of Technology)
- Develop interface and control system to use in a human sized robot to study the performances of new spacesuits.
-Develop a physical/mathematical model to describe different performances of the space suits on Lunar/Mars environments.

2006-2007 - Degree: « Diplôme Ingénieur SUPAERO » (equivalent to a Masters of Science in Aerospace Engineering) at Toulouse – France, with a major in Space Mechanics, Structures and Thermodynamics:

- Main subjects: Rockets Aerodynamics, Hypersonic Aerodynamics, Rocket's Conception, Thermal Control of SpaceVehicles, Rarefied Air Thermal Effects, Satellite Imaging, Image Treatment, Space Propulsion, Electric Propulsion, Structures of Space Vehicles, ...

- Masters to Research in Space Sciences (a French degree that intends to anticipate a PhD) taken in SUPAERO /

Université Paul Sabatier (Toulouse) simultaneously with the MSc :

- Main subjects: Numeric Methods and Celestial References, Astrophysical and Geophysical Plasmas, Planets

Formation, Space Environments, Giant Planets, Space Mechanics and Dynamics, Techniques for Propulsion Optimization, Human Flight in Space, ...

APRIL-SEPTEMBER 2006 - Internship at Edisoft – Portugal

- Development of RTEMS (real-time multiprocessor operating system)

- Project for ESA for the development of new tools to adapt RTEMS to other kinds of processors.

SEPTEMBER 2005 - Entrance at SUPAERO (École Nationale Supérieure de l'Aéronautique et de l'Éspace – Toulouse – France) – Directly to the 2nd year of a 3 year's program

- Double degree Program (ERASMUS) with Portuguese University (Instituto Superior Técnico)

- Major in Physics and Space

- Main subjects: Electronic Space Imaging, Astrophysics, Active and Passive Infrared and Hyper Frequency Instrumentation, Space Mechanics, ...

2002 - 2005 - Degree in Aerospace Engineering (Licenciatura em Engenharia Aeroespacial)

- Instituto Superior Técnico – Lisbon – Portugal

- First 3 years of a 5 year's program (to be completed in Toulouse) (G.P.A. 16/20)

- Main subjects: Maths, Physics, Structures, Applied Mechanics, Flight Performances, Aerodynamics, Flight Dynamics, Flight Performance, ...

Full name

Helena Fernández López

Academic degrees

Year	Academic degree	Institution	Classification
2005	MSc	Rio de Janeiro Federal University (Brazil)	2,7 (max. 3,0)
1993	Systems Analyst	Rio de Janeiro State University (Brazil)	7,6 (max. 10,0)
1988	Electronics Engineer	Rio de Janeiro State University (Brazil)	15 (max. 20)

Previous and current scientific and/or professional activities

Period	Position or category	Institution
May/1989 – Jun./1995	Maintenance Engineer (On-board computers and electronic warfare equipment)	Brazilian Navy
Jun./1995 - Nov./1999	Maintenance Team Leader (Electronic warfare equipment)	Brazilian Navy
Nov./1999 – Feb./2003	Projects Technical Manager (Electronic warfare equipment selection, commissioning and project development technical supervision)	Brazilian Navy
Feb./2003 - Jul./2005	Design Engineer (Early detection)	Brazilian Navy
Jan./2006 - Jul./2007	Teacher and Course Coordinator (Electronics and informatics)	Alto Lima Professional School (Portugal)
Sep./2006 - Jul./2007	Instructor (Electronics)	IEFP (Portugal)
Since Set./2007	Scholar-ship holder	University of Minho

ALEXANDRE FERREIRA DA SILVA

My graduation studies background is Engineering. I finished my Integrated Master Degree on Biomedical Engineering. This course had the engagement of several engineering departments as, Biological, Electronics, Informatics, Mechanical and Polymers, which gave me a quite enlarged perspective of the Engineering field and its application. My course thesis was on "Microelectrodes Development for Biopotentials", obtained by the application of manufacturing techniques of integrated circuits, commonly used in microelectronics.

My Master course was made in the University of Minho and during the last year course I did stay for a semester in RWTH Aachen University, in Germany. During my abroad stage, I integrated a very organized team, working in the development of a study on alternative sputtering processes, in order to evaluate their performance justifying their utilization on electrodes production. This gave me the opportunity to work with advanced techniques of micro-fabrication.

At this moment, my PhD thesis is over "Automotive smart flooring based in photonics", which proposes a novel inner car smart flooring concept, able to sense chassis deformation when occurs a collision or a car accident. In this project, the development of advanced optoelectronic sensing devices for the automotive industry is proposed. The multidisciplinary synergy arising from the research consortium and industrial partners will be explored.

Carla Valente Pepe

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I finished my Mechanical Engineering degree participating on the ERASMUS program, in Italy. For 6 months, I studied in the Politecnico di Torino and, later I concluded a 5 month internships at Pininfarina CAE Department. This Pininfarina's department dedicates itself to research, design and development of methodologies and the results of static, modal, transient crash and optimization analysis applied to any kind of body in white cars. During my training, I was involved in the feasibility study for the small city car Nido, considering the passive safety legislative aspects. My work was mainly focused in Nido simplified finite element model frontal impact; the results of this work were compared with the homologated vehicle results. This training was very important in my personal development. This first professional experience, allowed me to understand the industrial environment, namely challenges of project management under time pressure and issues in communication.

After this training I realized that was important to improve my skills and further solidify my technical background. Therefore, **I completed the Engineering in Design Master Course, at Instituto Superior Técnico, with an IN+ scholarship.**

My Master experience was successful in improving my knowledge in some areas like product development, taking into account economical, ecological and innovative concerns. Throughout the curricular part of the master, I was engaged in the Peugeot 406 side door redesign. My participation in this process focused on the passenger safety, the weight reduction and, consequently the ecological impact, the manufacturing, the project planning, etc.

My Master thesis, focused on passenger safety in the vehicle interior, was supported by a mould company, Simoldes. During this period I dedicated myself to the analysis of the interior head impact on the Renault Clio A-pillar, using FEM methodologies. The pillar was redesigned considering the FMVSS 201 legislation requisites.

After the Master Program, I've been responsible for the Mechanical Department at LusoSpace Lda, an Aerospace Technologies Company. This company is committed to build innovative space related products and services for European Space Agency. During 2 years, I have been responsible for the space qualified products mechanical design development and subsequent mechanical analyses and physical tests.

Name: Carmona Marques, Pedro

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Education

2005 – MSc in Physical Engineering (Applied Nuclear Physics), Lisbon University, Portugal.

1996 – Engineer's degree - Industrial Production Engineering, Lisbon New University, Portugal.

Experience

Since 2007 - PhD Fellow, IST-DEM, Leaders for Technical Industries – Engineering Design & Advanced Manufacturing, MIT-Portugal Program.

2001/2007 – Research Technician, ITN-Reactor, Sacavém, Portugal.

1999/2001 – Quality/Metallurgical Engineer, CERN-LHC (Adi), Geneva, Switzerland.

1998/1999 – Research Fellow (innovation management), INETI-DMS, Lumiar, Portugal.

1997/1998 - Physics-chemistry Professor, Gago Coutinho School, Lisbon, Portugal.

1997/1998 – Consultant Mechanical Engineer, Pressão, Algés, Portugal.

1996/1997 - Trainee Product Engineer, Sommer Allibert Industrie, Palmela, Portugal.

Professional Affiliation

Member: Portuguese Engineers Association (mechanics specialization).

Formation

1998 – Formation in Quality Management, IBER, Portugal (340 h).

Research Projects

Creativity in Product Development (IST, MIT, FEUP, since 2007).

Neutron Tomography at the RPI (ITN, 2007).

Emission Channelling Experiment with Neutron Induced Reactions (ITN, 2003-2007).

The Integration of Post-graduation People in the Areas of Science and Technology (INETI, 1998-1999).

Research Areas

Engineering Design, Industrial Engineering, Applied Nuclear Physics.