

## Curriculum Vitae

# Mário Loureiro



PhD student in Steel and Composite Construction, Coimbra University.

Master in Mechanical Engineering.

Creative and dynamic on inventions, electro and mechanic, producer and designer. Specialized in industrial maintenance, vehicles, electronics, buildings, lighting, electricity, HVAC, energy efficiency, teaching technical...

**Mário António Fonseca Loureiro**

**Born 9 October 1962 in Coimbra**

**Nationality - Portuguese**

Office:

Rua da Cabine, 5A, Palheira,  
3040-692 Coimbra, Portugal  
Phone/Fax 351 239 437 476

Mobile phone:

351 917 573 117

[1@marioloureiro.net](mailto:1@marioloureiro.net)

or

[mario@lourotronica.pt](mailto:mario@lourotronica.pt)

web page

[www.MarioLoureiro.net](http://www.MarioLoureiro.net)

[www.MarioLoureiro.eu](http://www.MarioLoureiro.eu)

<http://www.linkedin.com/pub/mario-loureiro/86/a9b/821>

### Syntheses:

1-General Skills

2-Professional Experience

3- University academic qualifications

4- Continuous Training and Formation

University/ high

5-Publications

6-Further information

7-Leisure and personal projects

8-Attachments

Actualized at 9 January of 2016

## 1- General Skills

### 1.1-Professional skills

**Commercial management and seller** - In 1988 with 26 years of age, obtained total sales exceeding 50.000€ including VAT while working as industrial Managing partner and founder of [www.Lourottronica.pt](http://www.Lourottronica.pt) since 1988. Founder in 2005 and president of a non profit association [www.ADAPCDE.org](http://www.ADAPCDE.org), Association for the development of circus and amusement activities and fairs in Portugal; administrative, technical and safety, trainer, collaborates with the Portuguese government on the legal regulation of related issues, director of professional formation courses, has in 2013 over 640 associates registered.

**People Competence builder / Certified skills** - Successfully integrated individuals in labour market, who employed and trained; certified skills as trainer of adults and even engineers at his own business, and within the association that he presides. Five years experience as Validate teacher on adult competences.

**Skillsoft** - Microsoft Office (Word, Excel and Power Point), Statistical, Outlook e-mail accounts configuration, deep knowledge of management software informatics, development and creation of internet sites, insertion sites (upload) in FTP, computer installing and reparation since 1997, bought his first computer on 1986.

**Social skills** -Excellent team worker; easily adaptable to multicultural environments; good communication skills; ability to develop industrial team work strategies, ability to lead projects and production team work with excellent outcomes including on short term orders; certified leading team competences, able to mobilise and motivate team workers and co-workers to achieve and adhere to common goals, team and individual mobilization abilities and know-how. Ability to solve conflict situations with calm and perseverance, resistant to stress and easily adaptable to different cultures and costumes on a professional level, sense of responsibility and ability to promote new enterprises with it's own values ; high innovation abilities; good worker ; academic formation while working and studying.

**1.2-Technical skills** - For more detailed information see Attachment A.

#### 1.2.1- Technical skills in Mechanical Engineering

**Membership of Ordem dos Engenheiros (OE)** since 1998, Senior since 2013, [www.ordemengenheiros.pt/en](http://www.ordemengenheiros.pt/en)  
Experienced to expert in: Acoustic, CAD, CNC/CAD, MasterCam, Car/trucks Mechanic, Industry production, Industrial maintenance, Manufacturing processes, Innovation and Development, Inventor, Energy efficiency, Hydraulic, Metrology/data acquisition, Pneumatics, Responsible engineer, Scientific research, Security expert.

#### 1.2.2- Technical skills in electro-technology

Automation, Electrician, Electro-medical, Electronics/electrical, Electromagnetic and Lighting.

#### 1.2.3 - Technical skills in other subjects

Buildings, Carpenter, Insurance, Plumber, Photographer and Serigraphy.

### 1.3-Idioms

**Portuguese** - native

**Spanish and French** - understands, reads, speaks and writes currently within professional context.

**English and Italian** - understands, reads, speaks with some difficulties within professional context.

**German** - Basic user.

## 2-Professional Experiences

### 2.1- Professional experience - as Manager and family business

1988- to present, **Mário Loureiro Engenharia, Lda**, [www.Lourottronica.pt](http://www.Lourottronica.pt) Coimbra, Portugal, Founder and manager (manufacturing with 30 employees summer 1990); responsible for designs/projects, electronic and electric audio equipments, light equipment manufacturer, due to Chinese production on european market lost clients and had to stop production. Now he is mainly working in maintenance: industrial, vehicles, hydraulics, electronic automobile, buildings (electric installation of HVAC). Design, produces and does assistance maintenance on electric and automation for companies, industries and service. 1982-1994, **Manufacturing on their own**, Coimbra, Fabrication and repair of sound systems; speakers wind up for numerous companies; sound system supplier for festivals and shows.

1972-1982, **João António Loureiro**, Coimbra, family business, of car workshop and manufacture of hydraulic, specializes in repair and produce of hydraulic;

## 2.2- Professional Experience – training in private entities

2007- to present, **ADAPCDE**, Food and Hygiene knowledge related to Fair and Amusement security procedures, circus and public events.

1988- to present, **Lourotroica Lda**, Professional trainer of all employees, tutored secondary school pupils on practical training phases; tutoring and training of several university students, mentored junior engineers, successfully entering labour work market through Lourotroica, mechanics, electricity, electronics, informatics, civil et geology (all payed).

1996, **FORSIVA – Formação e Organização e Serviços, Lda.**, Coimbra, in maintenance of heavy passenger vehicles.

## 2.3-Professional Experience – training/teacher public schools.

Teacher and training young and adults in government schools of Portugal from 1998 to the present. Over 20 temporary contracts often work in two schools at the same time.

For more detailed information see Attachment B.

## 2.3-Professional work experiences outside of mainland Portugal

2012, **Morocco**, Tangier, amusement and power networks electrical repair.

2012, **Brazil**, Recife/PE, Do finishes in his residential property, who rented

2008-2011, **Autonomous Region of Madeira**, Vocational Training and responsible technician.

2000, **Germany** - Visit to Visaton, factory in Dusseldorf

1989 to 2000, **Spain**, Madrid and other cities, installation and maintenance of sound equipment and amusements repair.

1989, **Spain**, Madrid, participated in fair sound equipment.

1988 to 1992, **Spain**, Valencia, fair participant "Enduferias".

1987-1989, **Autonomous Region of the Azores**, repaired sound equipment.

1987 - **Italy**, Milano, visit fair of electronic

## 3- University academic qualifications (always as working student)

**2013** - to present, **PhD, Civil Engineering, Steel and Composite Construction**, Coimbra University (UC).

Practical design of structures by Robot, euro codes and finite element (FEA) by Abaqus,...

2005-2008, **Master in mechanical engineering** (pre-Bologne), UC,

1998-1999, **Specialized Trainship in Mechanical Engineering** (pre-Bologne), UC,

1985-1997, **Graduate in Mechanic Engineering** Thermodynamics and Fluids, UC,

## 4- Continuous Training and Formation University/ high

2016 - Lecture "**Pathology and Rehabilitation Flat Roofs**", Engineer Pedro Gonçalves and PhD Prof. Raimundo Silva, DEC-UC, 3h, 9 January;

2016, Research work presentation of ISISE "**Steel and Composite Structures Modelling**", by PhD Prof. Pedro Vellasco, DEC-UC, 8 January;

2015, Training in **Advanced Excel** (and VBA programming), IEFP, 75h completed on 22 December;

2015 - **X Congress of Steel and Composite Construction**, CMM, Coimbra, 28 and 29 November;

2015 - Training "**Basics of First Aid - Basic Life Support**", ADAPCDE, 4h, 11 November;

2015 - Training "**Prevention and Fire Fighting**", ADAPCDE, 4h, 11 November;

2015, debate "**Research and Innovation in Civil Engineering and the Environment: How to boost collaboration between universities and companies?**", DEC-UC, 06 November;

2015, Conference "**The new markets of Steel Construction**", DEC-UC, 4 November;

2015, "**Noise means of transport: measuring, modeling and mitigation**" ITeCons, 28 October, 4h;

2015, lecture "**Restoration and Passos Manuel High School Expansion in socio-cultural context**", by architect Victor Mestre, DEC-UC, 16 October;

2015 **Steel Towers For Wind Turbines**, Rui Matos, DEC-UC, 2 October;

2015, **Additive Manufacturing Metals - A New Industrial Revolution. Challenges and solutions**. OE, 25 September;

2015, **CAD 2e3D**, ADAPCDE, 28,5h concluded the 14 July;

2014/2015 - **Markets and Energy Efficiency**, discipline of PhD, UC, (14);

2014/2015 - **Technical High Voltage and Protections**, discipline of MSc, UC, (18);

2015, lecture on **INTERFACE FIRE**, by PhD Prof. Xavier Viegas, UC, 26 June, 3h;

2015, APSEI Forum "**Passive Protection: Safety is not seen**" (to fire) and ITeCons, 2 June, 4h;  
2015, Rittal seminar: **IEC 61439 - New Standard for Electrical Low Voltage Installations**, OE, 19May;  
2015, Conference - **EfS 2015, Energy for Sustainability**, Coimbra, on 14-15th May 2015, UC and ITeCons;  
2015, **International Symposium on Anthropology and Natural Disasters**, 17 and 18 April, UC;  
2015, **Ventilation in Revitalized Buildings on Trade in Services**, by Victor Monteiro, DEM-ISEC, 8 April  
2015, Seminar **Energy Performance Contracts in Portugal**, OE, 7 April;  
2015, **Trends and Challenges for Wind Energy Harvesting**, DEC-UC, 30 and 31 March;;  
2015, **Security in Excavation Ditches - Recommendations and Best Practices**, OE, Leiria, 24 March;  
2015, **Recovery Secondary Raw Materials - A European priority**, OE, 13 March;  
2015, Research work presentation of ISISE "**Impact and Explosions in Offshore Structures - Analysis According the DNV-RP-C204**", by Tiago Manco, DEC-UC, 13 March,  
2015, **2nd Discussion Forum on Industrial Ecology and Life-Cycle Management**, DEM-UC, 5 and 6/March, mornings open to university community.  
2015, "**Dynamic Simplified Calculation (Monozona)**" [ISO 13790 Application] - ITeCons, 3 March,  
2015, "**Fire Prevention and Fighting**," ADAPCDE, 5h, 28 February  
2015, **International Seminar, "Regulatory Challenges of the Electricity Sector "**, as 12 and 13 February, OE,  
2014/2015 - discipline of MSc - **Design of electrical installations**, UC, (14)  
2014, Seminar, **Structures Security controls with great socio-economic importance**, 12 December, OE, Leiria  
2014, **Robot Structural Analysis Professional**, 7, 8, 14 and 15 November, ITeCons, 24h.  
2014, **Seminar on Contaminated Soils: Characterization and Rehabilitation**, 5 November, OE  
2014, Conference on **Basic Sanitation in Central Region: Situation and Perspectives**, 24 October, OE  
2014, Workshop "**Design of Dissipative Joints for Seismic Resistant Steel Frames**", Civil Engineering Department, UC, 25th June,  
2014, "**Energy Performance Contract: A business model to implement energy efficiency measures**", OE, 3h, 18th June  
2014, **OFFSHORE structures**, 9, 10, 16 and 17 of May, 2014, UC (common course to doctoral discipline),  
2014, **Office for Education Training Entrepreneurship**, Centro de Formação de Associação de Escolas Minerva, Coimbra, 6 March to 20th May  
2014, **CAD 2e3D**, ADAPCDE, 6h, 24 February to 27 March  
2014, Course Free - **English (A1-2)**. Escola Superior de Educação de Coimbra [www.esec.pt](http://www.esec.pt).  
2013, **Computer Networks**, 54h, UC, 2013,  
2013, Technical Workshop "**Certification and Quality in Buildings Service**", Coimbra, 24 October, Ordem dos Engenheiros Técnicos.  
2013, **The new fiscal on transport under E-making (Portugal)**, ADAPCDE, 5h, 12th June;  
2013, course **Introduction to the German language**, 50h, Coimbra, [www.cearte.pt](http://www.cearte.pt);  
2013, **Innovation and Technology**, seminar, 9 October, Lisboa, OE;  
2013, **Geothermal Heat Pumps for Cooling of Buildings**, seminar, 26 September, OE;  
2013, Workshop: "**Industrial Developers of Virtual Reality and Networking**", OE, 18 to 20 de September;  
2013, **7th International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL'13)**, Coimbra, Portugal, organized by European Commission-Joint Research Center, IEA, UNDP, CLASP e ISR - Coimbra University, from September, 11<sup>th</sup> to 13<sup>th</sup>;  
2013, **CAD/CAM, Computer Aided Machining**, [www.ISEC.pt](http://www.ISEC.pt), 24h;  
2013, **Revalidation electrician competencies**, Centro de Formação Profissional de Coimbra;  
2012, **Technical support, management and maintenance of institutional buildings, schools, hospitals, social institutions and related services**, en [www.cfae-Minerva.edu.pt](http://www.cfae-Minerva.edu.pt), 50h  
2012, **Harmonic distortion in electric distribution networks- Impact and Solutions**, OE,  
2011, **Phosphoric techniques in pedagogical and personal development**, APDF-Associação para o Desenvolvimento do Fosfenismo, duration: 3 days, [www.fosfenismo.pt](http://www.fosfenismo.pt)  
2010, **Electricity Production from renewable energies**, OE, 1day  
2008-2009, disciplines of MSc, **Food Security and Process Engineering Biochemical and Biophysical subjects**, <http://portal.esac.pt>  
2008, **Seminar on dioxins and furans**, Aveiro University, 1 day,  
2007, **Food and security Hygiene**, Escola de Hotelaria e Turismo de Coimbra, 35h  
2007, **Engineering challenges on climatic changes**, OE, 1 day  
2004, **Different pupils, equal evaluations? Teachers how can they to evaluate?** 1 day.  
[www.FederacaodosProfessores.com](http://www.FederacaodosProfessores.com) (FP),



2004, **Consequences of alcoholism on work accidents**, Agrupamento de Escolas de Pampilhosa, 1 day, [www.eb23-pampilhosa-botao.rcts.pt](http://www.eb23-pampilhosa-botao.rcts.pt)  
2003, **ALECOP, Didactic material for technical teaching**, duration: 3 days, Escola Básica Integrada Ponte das Três Entradas, [www.eb1-2-3-ponte-tres-entradas.rcts.pt](http://www.eb1-2-3-ponte-tres-entradas.rcts.pt)  
2003, **I want to be a teacher**, FP, 1 day  
2003, **Re-think teaching in the form of melodies**, FP, 2 days  
2003, **Security routines/procedures**, Escola Secundária Afonso Lopes Vieira, 1 day,  
2002, **School security**, Direcção Regional de Educação do Centro, 1 day,  
2001-2002, **Pedagogical Formation**, 148h, in PROFIFORMA, Lda, Coimbra,

## 5-Publications

, available in [www.marioloureiro.net](http://www.marioloureiro.net)

2015, **Offshore Structure Design** (didactic work)  
2015, [Smart grids: an integrated perspective on efficiency, from supply to demand](#) (didactic work)  
2014, **Design of wind tower 90m**, (didactic work)  
2013, **Inventions, design, ideas and projects by Mário Loureiro**, (book for publishing house),  
2013, **Portfolio Electrotechnical by Mário Loureiro**  
2012, **Manuals for the course in refrigeration and air conditioning** (five for adults),  
2011, **Economy in vehicles by energetic efficiency**, (training manual),  
2009, **Good Practices of Food Safety (HACCP) in the Restoration Temporary**  
[www.adapcde.org/restauracao/haccp/CodigoBOASPraticasRestTemp.doc](http://www.adapcde.org/restauracao/haccp/CodigoBOASPraticasRestTemp.doc)  
2008, **Ignition Fuel Forest by Particles with High Temperature**, (master's theses),  
2008, **Good Practices of Food Safety (HACCP)** (formation manual), ADAPCDE, co-author  
2006, **Mechanical manuals** (seven for professional education),  
2002, **Applications of explosives in industry**, welding, cutting and packing, (compilation of techniques translated from English to Portuguese),  
2000, **Reparation of audio amplifiers**, on the *AUDIO Professional Magazine*, (manual),  
1999, **Toroidal transformer optimal** (Applied Mathematics for Engineering),  
1999, **Sound level analyses and equivalence in the neo-natal units**, (co author of research and statistical analysis),

## 6-Further information

Pedagogic competence Certificate, EDF 16813/2002DC issued by [www.IEFP.pt](http://www.IEFP.pt);  
Chartered engineer (PT) n°39955, OE  
Responsible Technician for electric installations n°154088, [www.DGEG.pt](http://www.DGEG.pt);  
Driver's license: A, A1, B, B1,

## 7-Leisure and personal projects

Portuguese Legislation database publication (currently has more than 20,000 associates and more than 1000 related technical diplomas responsible). Produce prototype of flying disk (about 2m in diameter). Construction of prototype to produce diesel fuel by distillation - used motor oil (used motor oil).  
[www.marioloureiro.net/invent/11CombustivelVeiculos.pdf](http://www.marioloureiro.net/invent/11CombustivelVeiculos.pdf)

## 8-Attachments

### A- Explanation of Skills in:

**Acoustic** - inventor and manufacturer of sound speakers, experienced in sound insulation, sound technician since 1981.

**AutoCAD** - Teached in 2007 and 2012; including 3D, has more than 700 drawings

**Automation** - Over 10 years of experience, schematics. [www.marioloureiro.net/invent/8Eletrotecnia.pdf](http://www.marioloureiro.net/invent/8Eletrotecnia.pdf)

**Automotive/Car/trucks** - since 1974 has worked in car mechanics and internal combustion engines, hydraulic, gearboxes and pneumatic valves, transmissions, electrical motors DC. Example - repaired an immobilised (Mercedes) petrol car in 15 minutes, only with 12 years old. Repair, design and manufacture of electronic circuits for cars. [www.marioloureiro.net/invent/1\\_Automovel.pdf](http://www.marioloureiro.net/invent/1_Automovel.pdf)

**Building** - Worked as construction builder/practitioner in construction of two buildings with an area of over 800m<sup>2</sup>. Since 1997 made building rehabilitation/recovered 5 residential buildings and mixed type buildings. In 1997 was co-author of the industrial Lourotronica, design in Steel and Composite Construction with 1500m<sup>2</sup>, approved by [www.CM-Coimbra.pt](http://www.CM-Coimbra.pt). Obtained noise reduction in buildings caused by water meters for Construction Company. On invitation by the Ordem de Engenheiros, visited the construction works: Rainha Santa bridge (Coimbra) the 07/12/2003, and the bridge to the river Ceira, Coimbra the 21/09/2013. With the PhD is to develop skills in calculation and design, uses Euro Codes and programs like, ABAQUS, DesignBuilder, SeismoStruct, Therm, Ecotect,...

[www.marioloureiro.net/invent/10EdificiosMobiliario.pdf](http://www.marioloureiro.net/invent/10EdificiosMobiliario.pdf)

**CNC/CAD** - Teached in 2007; and programming by MasterCam.

**Carpenter** - loudspeakers, flat cases, console devices, wooden moulds manufacture, furniture design and manufacture, bookcases, desks, tables.

**Electrician** - 20/03/2013 in [www.IEFP.pt](http://www.IEFP.pt), obtained by validated by acquired experience programs. Electrical portfolio [www.marioloureiro.net/conhecimentotecnico.htm](http://www.marioloureiro.net/conhecimentotecnico.htm).

**Electro-medical** - over 10 years experience in maintenance of electro-medical equipment for [www.Fitomedica.pt](http://www.Fitomedica.pt) produced several prototypes, namely the invention in 2004, of a magnetic blanket for human therapy. [www.marioloureiro.net/invent/9Electro-medicina.pdf](http://www.marioloureiro.net/invent/9Electro-medicina.pdf)

**Electronics/electrical** - Project fabrication expert, circuit reparation experience. Gave technical support to the Carmotronica Lda industry, located in Viseu 1986-9. Manufactured and installed ignitions and regulators in a automobile. Hexadecimal programming of Eprom. Experienced user, for several years of simulation software *Electronics Workbench*. Designs electronic circuits with *Tango* software since 1992. Electronic circuit creator: audio amplifiers, audio equalizer, audio mixers, light sequence systems, tests amplifiers, water level system for vehicle, created automatic fading sound system when talking (talk over/audio mixers), bell system for digital telephone, supplies DC/DC bus passenger for Marcopolo - Coimbra. During the existence of dozens of count down, the Polis program, installed in the main cities of Portugal, made the maintenance of them. [www.marioloureiro.net/invent/6eletronica.pdf](http://www.marioloureiro.net/invent/6eletronica.pdf)

**Electromagnetic** - Experienced in electromagnetic compatibility and interference reduction. Repair of DC motors and alternators. Repaired, designed and manufactured of control alternators in cars, generators, trucks, planes. Designed and coil production to magnetic therapies uses. Produced electric filters.

**Energy efficiency** - Over 20 years of experience. Better use of electric motors. Reduced consumption of a Mercedes C200D (1994), from 7.4 to 5.4 litres/100km, using his knowledge of tribology, Michelin energy tires and further knowledge combined with proper maintenance cautions. In buildings, for example in his home in Antanol, Coimbra, applied drainage system around the house, applied exterior insulation and roof, double glazing (a laminate), applied outside the windows aluminium shutters with polyurethane, natural ventilation. Installed PEX pipes for distributing warm waters including the dish and cloth washers. The home heating is obtained from hot water and renewable energy (solar thermal and biomass), applied a pressure reducer at the entrance of the hot water and a thermostatic mixing valve on the output of the hot water - the temperature is below 45 ° C, in 2013 spared energy and spent no more than one 1kg of gas. Applies "FIBRAN" insulation (of 40mm) below his summer pool. Installed computer network in the whole house including in the garage for future monitoring and control.

[www.marioloureiro.net/invent/4Refrigeracao\\_climatizacao.pdf](http://www.marioloureiro.net/invent/4Refrigeracao_climatizacao.pdf) and [10EdificiosMobiliario.pdf](http://www.marioloureiro.net/invent/10EdificiosMobiliario.pdf)

**Fairground amusements** - maintenance, translation of manuals, support Andite builder, repair design and manufacture of automation, corrosion prevention, corrections for safety improvement, manufacture of lighting systems including use of LEDs. Developing manuals to operate amusement equipments (with hydraulics). Operate and explore three funs on commission, society had two lanes of bumper cars.

**Hydraulic** - Since 1974 until present day, mechanic of hydraulics light and heavy vehicles: shock absorbers, power steering, lift cabin, cargo lifting, hydraulic jacks and cranes. Experienced in hydraulics systems amusements, machinery lubrication, hydraulic jacks wheel workshop and project didactics. Design and produce of projects didactics as teacher professional industrial maintenance technician course.

[www.marioloureiro.net/invent/3\\_Hidraulica.pdf](http://www.marioloureiro.net/invent/3_Hidraulica.pdf)

**Industrial maintenance** - Over 20 years of experience working for companies like, Grupunix Lda, Conelme Lda, [www.Electrex.pt](http://www.Electrex.pt), [www.rusticentro.eu](http://www.rusticentro.eu), [www.larvidro.pt](http://www.larvidro.pt),

**Industry production** - supervision in his own firm, Lourotronica Ltd

**Innovation and Development** - It has a thick curriculum innovation and development with dozens of inventions and innovations. To 15 years became the suspensions irreparable repairable car. With 24 years of age, devised a simplified amplifier module production, facilitating quality and maintenance, this meant an advancing approach only to be met many years later in relation to great's industrial audio. [Inventions, design, ideas and projects](#);

**Insurance** - Only with 20 years old worked as insurance as official insurance broker, but already ceased functions.

**Inventor** - metal boxes for amplifiers, mixing sound in 1987 with only 3 cm thick; heatsinks for semiconductors; cutting tables wood, table screen printing, punching dies without guides; gutter for roof Blocotelha; amps three phase; spark arrester for vehicle; structures for lighting spectacles; speakers; tubular heat exchanger and the solar system with liquid collecting for use in renewable energy; audio equipment, hydraulic equipment; vide book - [Inventions, design, ideas and projects](#)

**Lighting** - Since 1982 uses LEDs: flashlight, mirror cloakroom your home. Does the LED panels: 1988 price list with a dollar sign flashing, designed in 1995 and made a panel raffles with heart shape with sequencer. Makes decorative panels with 3 to 10W lamps since 1992, amending and repairing lamps/spotlights HQI

**Manufacturing processes** - Development of manufacturing processes in Lourotronica, ex. Grupunix, and ex. Conelme of Coimbra. [www.marioloureiro.net/invent/2\\_Maquinas\\_ferramentas.pdf](http://www.marioloureiro.net/invent/2_Maquinas_ferramentas.pdf)

**Metrology/data acquisition** - Designed and manufactured test equipment for transformers and electronic devices. Repairs and manufactures temperature controllers. Has researcher for his master's theses, developed skills on thermal analysis *ThermaCAM*, temperature control, acquisition and processing of data processing.

**Photographer** - Worked as party and event photographer, photographed weddings, commercial samples, it was my first legal activity only with 18 years old, has an image database that uses for professional purposes.

**Plumber** - WC performed seven of its buildings in PEX pipe since 2008, simply heat the water to 40 ° C.

**Pneumatics** - Since 1974 experienced mechanic on lubricate machines, air compressors, valves, jacks wheels, rollers, truck brakes, schematics/diagrams.

**Renewables** - Thermal solar and wind renewable energy - design and installation of systems in housing. Proposed wind tower 100m high (PhD course work). Teacher professional technician course renewable energy. Invention of compressor cooling to operate with hot water (renewable energy sources).

**Responsible engineer** - for vehicle transformation projects, circus, mobile restaurants, amusement fair grounds, tents, countertops, stages, structures and equipments for shows, sport events, indoor air quality, structures advertising panels, risk of fire, gas.

**Scientific research** - Since 1999 to 2008 conducted more than 1000 scientific tests on ignition as researcher of forest fires origin and causes, particularly in [www.ADAI.pt](http://www.ADAI.pt) the scope of his master's theses, also developed skills and research methodologies. [www.marioloureiro.net/conhecimentocentif.htm](http://www.marioloureiro.net/conhecimentocentif.htm)

**Security expert** - Expert on accident prevention and investigation, identification and avoidance of general hazards, fire prevention, food, electric security. Safety issues have been one of his higher concerns, since 1998, during the development of his research for the masters dedicated specifically to the origin of forest fires, participated in seminars on fire prevention organized by the ADAI, collaborated with Firefighters of Coimbra in training sessions/ organized research. Presented legal proposals on security to the Portuguese government, sent directly to the Prime Minister office, his proposal are now partially covered by Law (DL) 156/2004 and DL124/2006 (on forest fires), Law 33/2004 (prevention of road accidents) and DL34/2010 (mandatory quality in pyrotechnics). Available in [www.DRE.pt](http://www.DRE.pt)

**Serigraphy** - serigraphy maker since 21 years of age for printout sound amplifiers and manufacture of printed circuits; taught serigraphy techniques in art superior college [www.arca.pt](http://www.arca.pt) to teachers, and industrial workers CVA Lda, Porto, [www.cva.pt](http://www.cva.pt)

## B - training/teacher public schools.

2013-2014, [www.ESAB.pt](http://www.ESAB.pt), Technical design, industrial organization, practical automobile mechatronics courses, Renewable Energies, HVAC and Refrigeration since 1/10/2013 a 31/08/2014.

2012-2013, **ESAB**, (*1rst*). Automobile mechatronics practical courses, renewable Energies, HVAC and Refrigeration for adult pupils.

2011-2012, **ESAB**, AUTOCAD - 12 level of Professional Course Renewable Energies, practical lessons Professional Courses - Air-conditioned and Refrigeration for adults, night schedules compatible with working students.

2010-2011, [www.AgrupamentoInesdeCastro.com](http://www.AgrupamentoInesdeCastro.com), HVAC and Refrigeration: technologies and practice with welding, electricity, ...

2010-2011, **ESAB**, HVAC and Refrigeration Technologies for adult students. Night schedules.

2009-2010, **Agrupamento Inês de Castro**, HVAC and Refrigeration: technologies and practice welding, electricity,...

2009-2010, **ESAB**, HVAC and Refrigeration for adult student's course.

2009, **Agrupamento Ines de Castro**, Education and training for adult students, night schedule.

2008, **Escola Secundária Martinho Árias**, [www.EscolasdesSoure.pt](http://www.EscolasdesSoure.pt), Mechanical locksmithing, only 30 days.

2007-2008, **ESAB**, Practical Auto-CAD, 3D modulation CAD/CAM and CNC.

2007-2008, **Escola Secundária Martinho Árias**, Practical lessons to Industrial Maintenance Technicians.

2006-2007, **ESAB**, Mechanic Technologies - Training Course for Industrial Maintenance Technicians

2005-2006, [www.eb23-pampilhosa-botao.rcts.pt](http://www.eb23-pampilhosa-botao.rcts.pt), *Technologic Education - Mechanics*

2004-2005, **Agrupamento de Escolas de Pampilhosa**, Technologic Education - Mechanics, Maths, Director of the 5th group, Maintenance to the school informatic system.

2002-2003, **Escola Secundária Quinta das Flores**, 2 days, [www.esqf.pt](http://www.esqf.pt), Invited to Lecturer a presentation on "The electronics industry and career".

2002-2003, [www.acondeixa.pt](http://www.acondeixa.pt) Technological Education - Mechanics, taught students with "special needs", **Responsible for school security**; other subjects: electronics, carpentry, pneumatics.

2001-2002, **Escola Básica N° 2 de Condeixa-a-Nova**, Technological Education - Mechanics, other subjects: electronics, carpentry, pneumatics, and practical lessons to «special needs» children.

2000-2001, **Escola Poeta Manuel Silva Gaio, Coimbra**, <http://agsilvagaio.ccems.pt>, Technological Education - Electrotechnical

1998-1999, **Escola Básica N.º 2 de Condeixa-a-Nova**, Technological Education - Mechanics

## C - List of education and training in higher education

Degree in Mechanical Engineering, name of discipline	year	S/A	Av	institution	Faculty/Department
Linear Algebra and Analytic Geometry	Y1	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mathematics
Mathematical Analysis I	Y1	A	12	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mathematics
Design and Graphics Methods	Y1	A	13	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mathematics
Eng. Programming and Algorithms Processes	Y1	A	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC,Electrotechnical
General physics	Y1	A	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, physics
Mathematical Analysis II	Y2	A	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mathematics
Numerical Analysis	Y2	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mathematics
Design of Mechanical Constructions	Y2	S	13	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mathematics
Elasticity and Plasticity	Y2	S	14	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Electronics and Instrumentation	Y2	S	12	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, physics
Introduction to Physics of Solid	Y2	S	13	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, physics
Chemical Physics	Y2	A	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, chemistry
Elements of thermo. and Mec. Statistics.	Y2	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, physics
Statistical Treatment of Data	Y2	S	14	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Materials Science	Y3	A	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Applied Mechanics	Y3	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Fluid Mechanics	Y3	A	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Mechanics of Solids	Y3	A	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics



Material Resistance I	Y3	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Material Resistance II	Y3	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Mechanical Technology I	Y3	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Mechanical Technology II	Y3	S	12	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Applied Thermodynamics	Y3	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Vibrations	Y3	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Automation I	Y4	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Automatic Control Systems	Y4	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Reliability and Quality Control	Y4	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Generators Heat	Y4	S	17	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Operational Research	Y4	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Fracture Mechanics	Y4	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Thermal engines	Y4	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Organization of Production	Y4	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Bodies Machines	Y4	A	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Heat Transmission	Y4	A	18	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Turbomachinery	Y4	S	12	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Climatization and Refrigeration	Y5	S	14	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Business Economics I	Y5	S	12	<a href="http://www.UC.pt">www.UC.pt</a>	Faculty of Economics
Business Economics II	Y5	S	13	<a href="http://www.UC.pt">www.UC.pt</a>	Faculty of Economics
Energy Environment	Y5	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Energy Management	Y5	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Methods of Measurement	Y5	S	10	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Project	Y5	A	15	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Seminar	Y5	A	13	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
total: 13 annual and 30 semiannual				Av - avaluation 1 to 20	
<b>Specialization in Sciences of Mechanical Eng.</b> name of discipline					
		S/A	Av	institution	Faculty/Department
Data Acquisition and PROCESSING	Y6	S	15	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Calculations of Transfer Phenomena in Flows	Y6	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Climatology Environment	Y6	S	11	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Complements of Fluid Mechanics	Y6	S	12	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Applied Mathematics for Engineering	Y6	S	15	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Shock Wave and Detonation	Y6	S	16	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Industrial Drying Operations	Y6	S	14	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Self-Controlled Systems	Y6	S	17	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
Heat Transfer	Y6	S	16	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, mechanics
<b>Master of Food Engineering,</b> name of discipline					
		S/A	Av	institution	Superior Institute
Process eng. biophysical and biochemical	Y1	S	12	<a href="http://www.IPC.pt">www.IPC.pt</a>	<a href="http://www.ESAC.pt">www.ESAC.pt</a>
Food Safety	Y4	S	10	<a href="http://www.IPC.pt">www.IPC.pt</a>	<a href="http://www.ESAC.pt">www.ESAC.pt</a>
<b>Another Training, curses of</b>					
		h	Av	institution	Superior Institute
CAD / CAM - Computer Aided Machining	2013	24	na	<a href="http://www.IPC.pt">www.IPC.pt</a>	<a href="http://www.ISEC.pt">www.ISEC.pt</a>
Course Free Foreign Language - English (A1-2)	2014	50	10	<a href="http://www.IPC.pt">www.IPC.pt</a>	<a href="http://www.esec.pt">www.esec.pt</a>
<b>Another Training, curses of</b>					
		h	Av	institution	Faculty/Department
Computer Networks	2013	54	15	<a href="http://www.UC.pt">www.UC.pt</a>	FCTUC, informatics'
<b>PhD, Civil Engineering, Steel and Composite Construction</b>					
		S/A	Av	institution	Faculty/Department
Design of Steel Structures for Renewable Energy Systems	2014	S	15	<a href="http://www.UC.pt">www.UC.pt</a>	<a href="http://www.dec.uc.pt">www.dec.uc.pt</a>
Steel Technology, Welding, Fatigue and Brittle Rupture	2014	S	13	<a href="http://www.UC.pt">www.UC.pt</a>	<a href="http://www.dec.uc.pt">www.dec.uc.pt</a>
Sustainability and Life Cycle Analysis of Structures	2014	S	16	<a href="http://www.UC.pt">www.UC.pt</a>	<a href="http://www.dec.uc.pt">www.dec.uc.pt</a>
<b>Master/PhD, Electrical Engineering, name of discipline</b>					
		S/A	Av	institution	Faculty/Department
Design of electrical installations (Master)	2015	S	14	<a href="http://www.UC.pt">www.UC.pt</a>	<a href="http://www.deec.uc.pt">www.deec.uc.pt</a>
Technical High Voltage and Protections (Master)	2015	S	18	<a href="http://www.UC.pt">www.UC.pt</a>	<a href="http://www.deec.uc.pt">www.deec.uc.pt</a>
Markets and Energy Efficiency (PhD)	2015	S	14	<a href="http://www.UC.pt">www.UC.pt</a>	<a href="http://www.deec.uc.pt">www.deec.uc.pt</a>



