

## **International Projects:**

### **As Leading Partner:**

1. Project AGARD NATO N° P126, "Integrated Fluid-Structure Computational Analysis of Aerospace Vehicles", Coordinator: Prof. A. Suleman (IDMEC-IST), Partners: US Air Force, USA and University of Victoria, Canada, Oct 2001 - Sept 2004.
2. Project AGARD-NATO P129 "Integrated Models for Material and Structure Optimal Design for Time-Dependent Phenomena", Coordinator IDMEC/IST (H. Rodrigues), Partners : Technical Un. of Denmark, Un. of Michigan, Un. of Delft, Un. of Pennsylvania., Period: January de 2001-December de 2004.
3. Project "Adaptive Space Truss Structures" , Coordinator: Prof. A. Suleman (IDMEC-IST), Financing Institutions: Canadian Space Agency, Sensor Technology Ltd., Period: Jan 2000- Dec 2002.
4. Project "Adaptive Composites" , Financing: Profile Composites Inc., Canada , Coordinator: Prof. A. Suleman (IDMEC-IST), Period: Jan-2002 – Dec- 2004 ,
5. ref. PE208/04, Find Persons in Atlas Areas, financed by CERN, January 2004 to December 2004.
6. Project "Smart Structures and Materials" , Financing: Sensor Technology Canada, Coordinator : Prof. A. Suleman (IDMEC-IST), Period: Jan 2000 – Dec-2004.
7. Project "Design of materials for vibration control in automotive systems", Coordinator: IDMEC-IST (Prof. H. Rodrigues), Financing: Toyota Motor Corporation, Japan, Period: July 2004 – June 2006.
8. ref. B12/02 - "Effective Modelling and Control of Flexible Robotic Manipulators for Industrial Applications", Anglo-Portuguese Joint Research Programme, Windsor Treaty, with Prof. M.O. Tokhi, University of Sheffield, U.K., from 1 April 2002 to June 2004.
9. ref. B7/01 - "Artificial Intelligence Techniques Applied to Automatic Control". Anglo-Portuguese Joint Research Programme, Windsor Treaty, with Dr. Becerra, University of Reading, U.K. From March 2001 to February 2003
10. Sampaio, R. P. C. Coordinator for the project WeSchool of the Portuguese Nautical School (wireless lan, web services and e-learning), funded by EU and by Operational Program of Society of Information. Beggined in September 2004.
11. "On line process quality optimization for the manufacturing of cast metallic parts", Growth; IDMEC, 2001-2004, 50 279 €
12. "Integration of Rapid Prototyping Techniques in the Manufacturing Chain Processes of the Foundry Industry", NATO - Science For Stability, IST/IDMEC, 1996-2000, 350 000€
13. Contract No. MRTN-CT-2004-505166, Research Training Network Towards Competitive Ocean Wave Energy, Sixth Framework Programme, Marie Curie Research Training Networks, European Commission, 2004-2008.
14. Contract No. JOR3-CT98-0282, Performance improvement of OWC power equipment, European Commission, 1999-2002
15. MISART – Integrated Modelling of an Environmental, Rural and Tourist System, funded by the *Life* Program of the European Commission

- (LIFE94/P/A151/P/01307/CEN), promoted by Junitec - Junior Empresas do Instituto Superior Técnico in partnership with Instituto Superior Técnico (total funding of 196.859,71 ECU; 1995-1997).
16. LandSTATE – Sustainability of Tourism and Agriculture Through Total Consumer Involvement, funded by the *Life* Program of the European Commission (LIFE97 ENV/P/000152) and promoted by IST in partnership with Terraprima - Sociedade Agrícola, Lda., Câmara Municipal de Lisboa, Câmara Municipal da Covilhã, Liga para a Protecção da Natureza, Jornal do Fundão (financiamento total de 296.370,92 ECU; 1998-2001).
  17. “EXTENSITY – Environmental and Sustainability Management in Extensive Agriculture”, funded by the *Life* Program of the European Commission, promoted by IST in partnership with Auditor de Ambiente do Ministério da Agricultura, Desenvolvimento Rural e Pescas, AESBUC – Associação para a Escola Superior de Biotecnologia da Universidade Católica, ANCOSE - Associação Nacional de Criadores de Ovinos da Serra da Estrela, CAP - Confederação dos Agricultores de Portugal, DECO - Associação de Defesa do Consumidor, DECOECO – Projectos Ambientais, Fertiprado - Sementes e Nutrientes, Lda., IDRHa – Instituto de Desenvolvimento Rural e Hidráulica, Liga para a Protecção da Natureza, and SGS – Sociedade Geral de Superintendência, Portugal, S.A. (financiamento total de 709.785,00 € 2003-2008).
  18. “Three-Dimensional Laser-Doppler Velocimetry Measurements in a VW Polo Headlight”, financiado pela Volkswagen AG, em 2002/2004.
  19. Contract No.: NNE5/1999/136“ EURO-ISLAS: New and Renewable Energy Sources for Islands and Remote Regions, Instituto Superior Técnico, 1 March de 2000/ 28 de February, Funding: Sub-Program Energie, European Commission, € 724.418,00
  20. Contract No.: ENK5-CT-2002-80651, “ERA\_ISLA - New and Renewable Energies, Electricity and Water in Outermost Regions”, Instituto Superior Técnico, 1 November 2002/ 31 October 2003, Funding: Energy, Environment and Sustainable, European Commission, Amount of funding: €41.667,00
  21. “ EIA - Estudo de Impacte Ambiental para a Nova Central Eléctrica de Palmarejo”, Instituto Superior Técnico, 19 July 2002/20 September de 2002, Funding: Electra, Amount of funding: 18.000,00
  22. Contract No.: 4.1030/C/00-019/2000, “Heating and Fueling Landal for a Community with 100% Renewable Energy Supply”, Instituto Superior Técnico, 1 May 2002/31 September 2002, Funding: Altener Programme, European Commission, Amount of funding: €73.400,00
  23. “ Plano Energético de Cabo Verde - Energy Plan for Cape Verde”, Instituto Superior Técnico, July 2002/ July 2003, Funding: APAT, Portuguese Cooperation, Amount of funding: €220.000,00
  24. Contract No.:NNE5/2001/641, “HySociety - The European Hydrogen (based) Society – target Action A”, Instituto Superior Técnico, 1 February 2003/31 January 2005, Funding: Energy Programme, European Commission, Amount of funding: € 223.410,00
  25. Contract No.: 7.623/D/02-001, “CDM-Africa - CDM for Sustainable Africa-Capacity Building for Clean Development Mechanism in Sub-Saharan African Countries”, Instituto Superior Técnico, June 2003 / December 2004, Funding: Synergy Program, European Commission, €116.682,00

## As Project Partner:

1. ref. GNSS/EGNOS – “Global Navigation Satellite System/ European Geostationary Navigation Overlay System - “EGNOS/ESTB Data Collection and Evaluation in Portugal”, financed by EUROCONTROL, 2003-2004
2. Project TIP3-CT-2004-506503, APROSYS: Integrated Project on Advanced Protection Systems: SP6-Virtual Testing, Coordinator: Mecalog, Partners: Faurecia, Regienov, CIDAUT, Fh G, IFTR, Techn. Un. of Graz, Cranfield Impact Center, Polit. de Milano, TNO, IDMEC-IST (Prof. J. Ambrósio), Period: 2004-2008
3. Project TIP3-CT-2004-506503, APROSYS: Integrated Project on Advanced Protection Systems: SP6- Intelligent Safety Systems, Coordinator: SIEMENS VDO.
4. Project TIP3-CT-2003-506257, APSN: Network of Excellence Advanced Passive Safety Network, Coordinator: TNO (Netherlands), Partners: IDMEC-IST (Prof. Jorge Ambrósio) + more than 60, Period: 2004-2009.
5. Project FP6-012440, EUROPAC: European Optimised Pantograph Catenary Interface, Coordinator: Société nationale des chemins de fer Français (SNCF), Partners: Alstom Transport, ARTTIC, Banverket, České dráhy akciová společnost, Deutsche Bahn, Faiveley, Mer Mec, Politecnico di Milano, Réseau ferré de France, Rete ferroviaria italiana, Trenitalia SpA, IDMEC-IST ( Prof. J. Ambrósio) , Period: 2004-2008
6. STRP 013517 CASSEN-Composite and Adaptive Structures: Simulation Experimentation and Modeling (provisionally approved by EU, proposal is being negotiated).
7. AIP3-CT-2003-502773 “Friendcopter” Coordinator: Vertair EEIG (Belgium) , Partners: more than 50 plus IDMEC-IST (Prof. J. Miranda Guedes), Period: 2004-2007.
8. 5<sup>th</sup>FP EU - GRD1-2001-40129 “HORTIA Heat and Oxidization Resistant Titanium Alloys Applications”., Coordinator: Turboméca/Snecma (France) , Partners: Casa, ECF., Exameca, Formtech, Inasmet , NLR, TNO , Turboméca , Un. Hamburgo- Harburg TUHH , Plansee , EADS-CASA, IDMEC-IST (Prof. H Rodrigues), Period: 2002-2006
9. HPRN-CT-2002-00284 “New Materials, adaptive Systems and Their Nonlinearities;
10. Modelling Control and Numerical Simulation”, Coordinator: Prof. Miara ( France), Period: 2003-2006.
11. EUCLID/CEPA 3/RTP 3.15/RPF 001: “Resin Transfer Moulding (RTM) for Aerospace Structural Components”, Coordinator: EADS, Partners: more than 15 plus IDMEC-IST ( Prof. CA Mota Saores) , Period: June 1999 - May 2002

12. 5<sup>th</sup> EU FP- Growth “Active Aeroelastic Aircraft Structures (3AS)”, Coordinator: EADS (Germany), Partners: EADS-CASA, INTA, GAMESA , ALENIA, CIRA, U. Manchester , VZLU, DLR , SAAB, KTH , TsAGI , IDMEC-IST ( Prof. Afzal Suleman).
13. 5<sup>th</sup> EU FP-Growth, SAFETRAM – Passive Safety of Urban Trams for Europe” Coordinator: Bombardier (Portugal), Partners more than 20 + IDMEC-IST ( Prof. M. S. Pereira), Period: 2001-200
14. Partners: Faurecia, Daimler-Crysler, CIDAUT, Fh G, Warsaw University of Technology – IAAM, TNO), IDMEC-IST (Prof. Jorge Ambrósio), Period: 2004-2008.
15. 6<sup>th</sup> EU FP, “EURNEX - European Rail Research Network of Excellence”, Coordinator: FAV (Germany) , Partners: More than 20 plus IDMEC-IST, (Prof. M S Pereira , Period: 2004-2009.
16. 6<sup>th</sup> EU FP - PLT-506652 MODTRAIN, “Innovative Modular Vehicle Concepts For An Integrated European Railway System”, 6th Framework Programme, Coordinator: FAV (Germany) , Partners: More than 20 plus IDMEC-IST, (Prof. M S Pereira ), Period: 2004-2008
17. Project BRRT-CT98-5067 “ASSET -Applications of Smart Structures in Engineering and Techonology” , Coordinator: University of Strathclyde, Other partners: IDMEC-IST (Prof. A Suleman) + more than 50 partners.
18. 6<sup>th</sup> EU Framework Project “ARITIMA -Aircraft reliability through intelligent materials application”, Coordinator: Gamesa (Spain) , Partners: EADS , DLR , Eurocopter, Swedish Defense Res. Agency, Un. Sheffield, IDMEC-IST ( Prof. A. Suleman), Period: 2005-2007.
19. ref. CERN/P/FIS/15173/99,"Calorimetry for ATLAS/LHC 2000 – FPIAA, Find Persons in Atlas Áreas”, financed by CERN and Fundação para a Ciência e a Tecnologia, Ministério da Ciência e do Ensino Superior, January 2002 to June 2003.
20. ref. NIVELLI - "Nichtlineare Dynamik und Verteiltes Lernen in Produktion und Logistik", at Siemens AG, Corporate Technology, Information and Communication, Neural Computation Department, CT IC4, from September 2001 to March 2002.
21. ref. IST-2000-29207 - EUNITE – European Network on Intelligent Technologies for Smart Adaptive Systems, European Union FP5, from January 2001 to June 2004.
22. ref. HPRN-CT2000-00110. European Community FP5 Research Training Network – “DAMADICS – Development and Application of Methods for Actuator Diagnosis in Industrial Control Systems”. Coordinatorr: University of Hull (U.K.), partners: Instituto Superior Técnico – Technical University of Lisbon, Universitat Politècnica de Catalunya, the Technical University of Bochum, Università Degli Studi di Genova, Université des Sciences et Technologies de Lille, Warsaw University of Technology and the Technical University of Zielona-Gora, from Jul. 2000 to Jun 2003
23. ref. AURORA – “Autonomous Unmanned Remote Monitoring Robotic Airship”, Coordinator: Informatics Technology Institute (ITI)Brazil, financed by GRICES Ministério da Ciência e do Ensino Superior, from 1999 to present.
24. ref. ERB FMRX-CT970137 - "Nonlinear Control Network : breakthrough in the control of nonlinear systems", European Commission's Training and Mobility of Researchers (TMR). Coordinator: Centre National de la Recherche Scientifique (France), partners: Universiteit Gent (Belgium), Universidad de Murcia (Spain), Universitat Augsburg (Germany), Università di Roma (Italy), University of Sheffield (United Kingdom), Universiteit Twente (Holland), Universidade de

- Coimbra (Portugal) and National Technical University of Athens (Greece), from December 1997 to 1 December 2001.
25. ref. BRPR-CT96-0209 - "Film Actuators and Active Noise Control for Comfort in Transportation Systems", European Commission's BRITE/EURAM III. Coordinator: VTT - Technical Research Centre of Finland (Finland), partners: TNO (Holland), Metravib Recherche, Développement, Service, S.A. (France), Rieter Automotive Systems (Switzerland), Italiana Sistemi Inerziali ISIS S.p.A. (Italy), Centro Ricerche Fiat S.C.p.A. (Italy), Ford Werke AG (Germany), Adtranz Portugal - Sorefame Division (Portugal) e Alenia Aerospazio S.p.A. (Italy), 1996-1999
  26. Maia, N. M. M., Participation on a Project under the bilateral cooperation between Slovenia and Portugal (2004-2005).
  27. Silva, F. A. P., Participation in the European Project UPTUN, as leader for the Task 7.4 –Safety in Existing Tunnels-Organization of Summer and training Courses.
  28. "Machining of Very Hard Materials for Tool and Die Manufacturing", BRITE-EURAM, SHG-IPT (leader), 1999-2000, 149639 €
  29. "TRANSTECH - Transport Technology Product and Process Innovation Management, RECITE II, IPK (leader), 1998-2001, 498797 €
  30. "PHIDIAS Network – Technology for manufacturing of medical models based on rapid prototyping and medical imaging technique", Euram thematic networks, Materialysi (leader), 1998-2002. 209490 €
  31. Contract with Ocean Energy Limited, Cork, Ireland, Preliminary Study of the Power Take-off System for the Cork Wave Energy, 2004-2005.
  32. Contract No. 502701, Co-ordination Action on Ocean Energy, Sixth Framework Programme, Renewable Energy Technologies, European Commission, 2004-2007.
  33. Contract No. JOR3-CT-0312, Islay LIMPET wave power plant, European Commission, 1998-2002.
  34. Contract No. ERKS-CT1999-20001, Establishment of a European thematic network on wave energy, European Commission, 2000-2003.
  35. Contract No. PD-161/02, Estudio de una planta de generación tipo OWC en nuevo dique de abrigo del puerto de Mutriku (gipuzkoa), Ente Vasco de la Energia (Spain), 2001-2002.
  36. Portuguese Subglobal Assessment for the *Millennium Ecosystem Assessment*, funded by *Millennium Ecosystem* and promoted by the Centro de Biologia Ambiental of the Faculdade de Ciências da Universidade de Lisboa (total funding of 32.500,00 USD, 2003-2005).
  37. TELFONA – Testing for Laminar Flow on New Aircraft", aprovado para financiamento pela EC no FP6-2003-AERO-1, referência FP6-516109, em 2004.
  38. "SUPERTRAC – Supersonic Transition Control", aprovado para financiamento pela EC no FP6-2003-AERO-1, referência FP6-516100, em 2004.
  39. BIOFLAM: Application of Liquid Biofuels in New Heating Technologies for Domestic Appliances Based on Cool Flame Vaporization and Porous Medium Combustion; contracto No ENK6-CT-2000-00317; financiamento de 231.386 euros pela EC; Instituição: OMV Refining & Marketing GmbH; de 1/02/2001 a 31/01/2005;
  40. Helix Innovative Aerodynamic High Lift Concepts; Financiamento 113.502 Euros pela EC; contracto No G4RD-CT-2001-00516; Instituição Airbus UK Limited; de 01/01/2001 a 31/05/2004
  41. AWIATOR: Aircraft Wind with Advanced Technology Operation; contracto No G4RD-CT-2002-00836; financiamento de 75. 001 Euros pela EC; Instituição Airbus Deutschland GmbH; de 01/07/2002 a 30/06/2006

42. UPTUN: Sustainable and Innovative Upgrading Methods for Fire Safety in Existing Tunnels; contracto No G1RD-CT-2002-00706; financiamento de 93.759 Euros pela EC; Instituição Netherlands Organization for Applied Scientific Research TNO; de 01/09/2002 a 31/08/2005
43. HYSAFE- Safety of Hydrogen as an Energy Carrier; contracto No SES6-CT-2004-502630; financiamento de 103.010,00 Euros pela EC; Instituição Forschungszentrum Karlsruhe GmbH; de 01/03/2004 to 28/02/2009
44. Contract No.: ENK6-CT-2001-00546 “ECOTHERM - Evolution Control Technology for Sustainable Thermal Processes”, Instituto Superior Técnico, 1 January 2002/31 December 2004, Funding: Research DG, European Commission, € 94.527,00
45. Contract No.: ENK5-CT-2002-20625  
“POWERCLEAN - POWERCLEAN Thematic Network for Clean Power Generation”, Instituto Superior Técnico, 1 November 2002/30 October 2005  
Funding: Energy, Environment and Sustainable Development Programme, EC  
Amount of funding: €51.449,00
46. Contract No.: ENK5-CT-2001-00564 “NGT - New Combustion Systems for Gas Turbines”, Instituto Superior Técnico, 1 December 2001/30 November 2004  
Funding: Energy, Environment and sustainable Development Programme, European Commission, Amount of funding: €120.773,00
47. Contract No.: 502596 (SES6), Hyways – The Development and detailed Evaluation of a Harmonised European Energy Roadmap, IDMEC, 1 Abril 2004/31 March 2007, Funding: DG TREN, European Commission, Amount of funding: € 210.975,00
48. Contract No.: 4.1041/D/02-003-507.21086 “CDM MEDA - Business Opportunities for CDM Project Development in the Mediterranean”, Instituto Superior Técnico, 1 May 2003/30 April 2005, Funding: Synergy Programme, European Commission
49. Contract No.: ASI/B7-301/98/679-031, UNIPASUD - EU-ASIA University Partnership for Sustainable Development Project, 15 June 2003/14 December 2004, Funding: Asia-Link Programme, European Commission, Amount of funding: € 98.186,00
50. Contract No.: NNE5/2002/73, “RenewIslands - Renewable Energy Solutions for Islands – Target Action A”, Instituto Superior Técnico, 1 January 2003/31 December 2004, Funding: Energy, Environment and Sustainable Development – Part B: Energy Programme, EC, Amount of funding: €95.705,00
51. Contract No.: NNE5/2002/81 “OLA - Promotion of Modern, Clean energy and Transport Technologies and Policies in Latin America & The Caribbean”, Instituto Superior Técnico, 1 January 2004/28 February 2005, Funding: Energy, Environment and Sustainable Development – Part B: Energy Programme, European Commission, €18.000,00
52. Contract No.: NNE5/2002/75, Eminent - Early Market Introduction of New Energy Technologies by the OPET Network in Liaison with Science and Technology, Instituto Superior Técnico, 1 April 2003/30 September 2005, Funding: Energy, Environment and Sustainable Development – Part B: Energy Programme, European Commission, Amount of funding: €144.267,00
53. Contract No.: LIFE00/TCY/CRO/000084, LIFECROCHP - Sustainable development of Croatian capacity in CHP (combined heat and power) sector, Instituto Superior Técnico, 1 January 2002/31 June 2004, Funding: Life-Financial Instrument for the Environment, European Commission, Amount of funding: € 116900

54. Contract No.: 4.1030/Z/01-035/2001, GREEN PRO - Guide for renewable energy installations to promote biomass, photovoltaics and solar thermal in the EU, Instituto Superior Técnico , 1 January 2002/31 December 2003, Funding: Altener Programme, European Commission, Amount of funding: €87.441,00
55. Contract No.: NNE5/2001/707, Green Hotel - Integrating Self Supply into End Use for Sustainable Tourism –Target Action C , Instituto Superior Técnico, 1 April 2003/31 March 2006, Funding: Energy, Environment and Sustainable Development Programme – Part B: Energy Programme, European Commission, Amount of funding: €220.304,00
56. Contract No.: ENK5-CT-2002-00693, OPTICOMB - Optimisation and Design of Biomass Combustion Systems, Instituto Superior Técnico, 1 January 2003/30 June 2006, Funding: Energy, Environment and Sustainable Development Programme, EC  
Amount of funding: €40.966,00
57. Contract No.: ENG2-CT-2002-20657, FCTESTNET - The Fuel Cell Testing and standardization Network, Instituto Superior Técnico, 1 January 2003/31 December 2005, Funding: Research DG, European Commission, €23.400,00
58. Contract No.: NNE5-2001-00402, Pulscoat System - Adaptation of a New Energy-and Timesaving Hard Anodizing Process for Different Al-alloys and tests in Selected European Industrial Applications, Instituto Superior Técnico, January 2003/31 December 2005, Funding: Energy Programme, European Commission, Amount of funding: €47.925,00
59. Contract No.: ENK5-CT-2002-00662, AFTUR - Alternative Fuel for Industrial Gas Turbines, Instituto Superior Técnico, 1 January 2002/31 June 2005, Funding: Research DG, European Commission, Amount of funding: €25.062,00
60. Contract No.: ENK6-CT-2001-00546, ECOTHERM - Evolution control technology for sustainable thermal processes, Instituto Superior Técnico, 1 January 2002/ 31 December de 2004, Funding: Research DG, European Commission, € 94.527,00
61. Contract No.: ENK5-CT-2001-80350, Delphi-CO<sub>2</sub>-removal - Future perspectives of CO<sub>2</sub> - removal at power plants in Europe, Instituto Superior Técnico, 1 January 2002/ 31 May de 2003, Funding: DG Research, European Commission., €59.370,00
62. Contract No.: 4.1030/Z/01-143/2001, MunicipRegEnergAid - Study of regional and municipal energy management in the area of energy efficiency and renewable energy, Instituto Superior Técnico, 1 January 2002/ 31 June de 2003, Funding: DG for Energy and Transport, European Commission, Amount of funding: €71.924,00
63. Contract No.: 4.1031/Z/01-130/2001, Promotion of tri-generation technologies in the tertiary sector in mediterranean countries (Greece, Italy, Spain and Portugal)", Instituto Superior Técnico, 1 January 2002/ 31 December 2003, Funding: European Commission, Amount of funding: €19.540,00
64. Contract No.: NNE5/2001/101-SI2.318297, Organization for the promotion of energy technologies in Portugal" OPET-II, Instituto Superior Técnico , 1 July 2001/ 31 May de 2002, Funding: Energy Programme, European Commission, €200.000,0
65. Contract No.: NNE 5 1999/312, Fuel Cell Bus for Berlin, Copenhagen and Lisbon, Phase II, Instituto Superior Técnico, 1 March 2000/ 28 February de 3, Funding: Thermie Programme, European Commission, Amount of funding: € 1.830.680,00

66. Contract No.: NNE5/2000/208, CUTE - Clean urban transport for Europe, Instituto Superior Técnico, 1 December 2001/ 31 November 2006, Funding: DGTREN, European Commission, Amount of funding: €240.543,00
67. Contract No.: NNE5/2000/113, VIRTUAL FUEL CELL POWER PLANT - System-development, build, field installation and European demonstration of a virtual fuel cell power plant, consisting of residential micro-CHPs, Instituto Superior Técnico, 30 November 2001/ 31 March 2005, Funding: DGTREN, European Commission, Amount of funding: €3.124.488,00
68. Contract No.: ECSC 7720-PR-060, MILL FIRE – The Prevention of Mill Fires and Explosions, Instituto Superior Técnico, 1 November 1999/ 31 October 2002, Funding: European Coal and Steel Community, European Commission, DGTREN, Amount of funding: €263.650,40
69. Contract No.: NNE5-1999-00309, LVCB - Development of a Burner for Low Volatile Coal Combustion, Instituto Superior Técnico , 1 January 2000 /31 December 2002, Funding: Energy Demonstration Programme, European Commission, DGTREN, Amount of funding: €1.099.782,00
70. Contract No.: ENK5-CT1999-00009, IOFLAM - Advanced Solid Fuel Characterisation for Pulverised Combustion Systems, Instituto Superior Técnico , 1 March 2000/ 28 February 2002, Funding: Energy Programme, European Commission, DGTREN, Amount of funding: €1.984.306,00
71. Contract No.: ENK5-CT1999-00004, SLAGMOD-Slagging and Fouling Prediction by Dynamic Boiler Modelling, Instituto Superior Técnico , 1 February 2000/ 31 January de 2002, Funding: Energy Programme, European Commission, DGTREN, €1.190.000,00
72. Contract No.: 7200-PR-104, PRESSURISED COAL - Experimental, numerical and theoretical investigation on pressurised pulverised coal combustion, Instituto Superior Técnico , 1 November 2000/ 31 October de 2002, Funding: Specific ECSC RTD Programme, €1.161.900,00
73. Contract No.: ENK5-CT2000-00114, “ FLOXCOM - Low NO<sub>x</sub> Flox Combustor for High Efficiency Gas Turbines”, Instituto Superior Técnico, September 2000/November 2003, Funding: CEC/DGXVIII, €1.799.933,00
74. Contract No.: G4RD-CT-2002-00664, “21Emission Systems”, Instituto Superior Técnico, June 2002/May 2005, Funding: CEC/RESEARCH DG, €218.056
75. Contract No.: ERB-FMRX CT98-0224, RADIARE – Fundamental Improvements in Radiative Heat Transfer, Instituto Superior Técnico , 1 April 1998 – 30 September 2002, Funding: TMR Programme, European Union , €1.012.100,00
76. Contract No.: ENK5-CT-2001-00564, NGT - New Combustion Systems for Gas Turbines, Instituto Superior Técnico, 1 December 2001/30 November 2004, Funding: Energy Programme, European Union, Amount of funding: €2.296.855,00
77. MIGREYD – Modular IGCC Concepts for In-Refinery Energy and Hydrogen Supply, 2003/2006, Funding: EC/DGTREN - Energy, Environment and Sustainable Development – Part B: Energy Programme, Amount of funding: €163.602,00
78. Contract No.: RFC-CR-03004, “Minimisation of Impact of Nitrogen Oxide Reduction Technologies on Operation and Performance”, Instituto Superior Técnico., September 2003/February 2007, Funding: CEC/ECSC, Research Programme, European Commission, Amount of funding: €205.105,00
79. Contract No.: NNE5-1999-00310, ISB2000 – Innovative Supercritical Boilers for Near Term Global Markets, Instituto Superior Técnico, July 2000/June 2002,

- Funding: Energy Programme, European Commission, DGTREN, Amount of funding: €1.123.631
80. Contract No.: NNE5-2000-00183, OREMA – Integrated Efficiency and Environmental Optimisation of Power Plants, Instituto Superior Técnico, January 2001/June 2003, Funding: Energy Programme, European Commission, DGTREN, € 679.236,00
  81. Contract No.: AL/2000/220, “Biomass residues utilisation as fossil fuel substitute for power generation and district heating in the Mediterranean region”, Instituto Superior Técnico, July 2001/November 2002, Funding: Energy Programme, European Commission, DGTREN, Amount of funding: €100.000,00
  82. “InVehicle Energy and Emissions Information Systems”, Partners: North Carolina State University (funded by FLAD), Date: 2004 – 2005.
  83. “EUR2EX - European Rail Research Network of Excellence”, Partners: Network of Excellency (funded by EU), Date: 2004 – 2005.
  84. Contract No.: 011744, HY-CO – Hydrogen Coordination. Proposal for an ERA-net in hydrogen, October 2004/September 2008, Funding: European Commission, NOTE: IST is the scientific institution supporting the Portuguese Partner (FCT – Fundação para a Ciência e Tecnologia)

### **National Projects:**

#### **As Leading Partner:**

1. POCTI/2001/EME/38367, “Computational and Experimental Models for the Stability Analysis of Hip Prostheses, Coordinator: IDMEC – IST, (Prof. Paulo Fernandes), Period: 2002 – 2005.
2. POCTI/2001/EME/37559:Computacional Models for Design Optimization , Damage and Identification of Smart Composite Structures and Materials, Coordinator: IDMEC – IST, (Prof. Carlos Mota Soares), Period: March 2002 – February 2005
3. POCTI/2002/EME/44728, Bloch Wave Analysis Techniques Applied to the Optimal Design of Periodic Structures”,Coordinator: IDMEC – IST, (Prof. Miguel Matos Neves), Period: 2003-2006
4. *MRRA - Motards, Rails e Reconstituição de Acidentes*, (Motards, Barriers and Accident Reconstruction) IDMEC Project, financed by DGV (Portuguese Directorate for Traffic), PRP (Road Prevention Institute) e Allianz (Insurance Company, Coordinator: IDMEC – IST, (Prof. João Dias), Period: July 2004-Dec. 2005

5. PARA – Peões, Atropelamentos e Reconstituição de Acidentes, (Pedestrian Accidents: Causes and Reconstructio) IDMEC Project, financed by DGV (Portuguese Directorate for Traffic), PRP (Road Prevention Institute) e Allianz (InsuranceCompany,Coordinator: IDMEC – IST, (Prof. João Dias), Period: July 2004-Dec. 2005
6. POCTI/EME/12028/1998 - Phase II “Modeling, Testing and Damage Identification of Composite Structures with Piezoelectric Laminae”, Coordinator: IDMEC / IST, (Prof. Carlos Mota Soares) , Period: July 2001 – June 2004
7. FCT/POCTI/1999/EME/35983, "Computational and Experimental models for the stability analysis of hip joint prosthesis", Coordinator: IDMEC-IST, (Prof. Paulo Fernandes) , Period: March 2002 – February 2005.
8. POCTI/EME/1947/95, SARA – Sistemas Automatizados de Reconhecimento Aéreo, Coordinator: IDMEC-IST, (Prof. Heitor Pina), Others Partners: OMS/IT, Period: June 2001- July 2003
9. POCTI/EME/39976/2001, “Dynamic analysis methodologies for application to the suty of the human musculo-skeletal behavior”, Coordinator: IDMEC/IST (Prof. Jorge Ambrósio),Period: 2002-2004,
10. Project POCTI/EME/34340/99, “Advanced Optimization of Rigid-Flexible Multibody Systems with Application to Structural Crashworthiness”,Coordinator: IDMEC-IST, (Prof. João Dias)
11. POCTI/EME/43531/99-1999-2002, “Multicriteria Optimization of 3D structures and materials”, Coordinator: IDMEC – IST, (Prof. Helder Rodrigues), Period: March 2001- Aug 2004.
12. POCTI/1999/EME/33947, FCT Numerical Optimization and Experimental Validation of Structural Fatigue life under multiaxial loading, Coordinator: IDMEC-IST, (Prof. Trigo Santos)Period: 2000-2004
13. POCTI/FCT/P/EME/12002/1998 – Phase II, "Optimal design of orthopedic implants".  
Coordinator: IDMEC-IST (Prof. Paulo Fernandes).Other Partners: INEGI, Un. of Aveiro, Period: July 2001 – June 2003.
14. Nuno Maia, POCTI/EME/2682/95 - Phase II, Dynamic Characterization of Joints Through Sub-Structure Analysis, 2001-2003
15. Ribeiro, A. M. R., Fatigue testing on automobile exhaust system components (VENEPORTE), 2001-02
16. Ribeiro, A. M. R., IST coordinator for the project POCTI/33733/AGR/2000, “Medição das Características Vibratórias dos Frutos”, finished in April 2004.
17. ref. POSI/SRI/45040/2002 “ DIVA Instrumented Airship for Aerial Surveillance”, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from January 2004 to December 2006.
18. ref. POCTI/EME/44336/2002 - "Robust Control of Hybrid Systems", financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e do Ensino Superior, from 15 July 2003 until 15 July 2005.
19. ref. IPS-3, “Supervisão e Controlo de Processos Industriais via Internet”, financed by Instituto Politécnico de Lisboa, from October 2003 to October 2004.
20. ref. POCTI/ECM/38296/2001 - “Application of fuzzy decision making in supervisory control strategies of complex solids-solid separation processes”, Fundação para a Ciência e a Tecnologia, Ministério da Ciência e do Ensino Superior, from November 2002 to November 2005
21. ref. POCTI/EME/41690/2001, “Dynamics and Control of Smart Flexible Arms”,

project financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from April 2002 - April 2005.

22. ref. POCTI/EME/39946/2001, Visual Servoing Applied to Rigid and Flexible Robot Manipulators, project financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from March 2002 to February 2005
23. ref. IPS-2, “Automation and remote supervision of a production line of batteries”, financed by AUTOSIL, from July 2002 to December 2004.
24. ref. CERN//P/FIS/43707/02, “Robotization of Optical Fibre Insertion in the TILECAL Calorimeter”. financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia and European Centre for Nuclear Research (CERN), under programme CERN, from January 2002 to December 2002.
25. ref. PE229/03, CP-2000, financed by Bombardier, January 2002 to October 2002, (Fund: 4,500 euros).
26. ref. IPS-1, “Industrial Manipulator for Têxtil Industry”, financed by Instituto Politécnico de Lisboa, from January 2002 to December 2002.
27. ref. POCTI/34058/EME/2000, “On soft computing in modeling and control”, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from November 2000 to October 2002.
28. ref. PRAXIS/C/EME/12124/1998, "Acoustic noise cancelation in train coaches using intelligent control", financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, March 1999 to March 2001.
29. ref. PRAXIS/3/3.1/CEG/2707/95 - “Active Control of Flexible Mechanical Structures in Robotic Manipulators”, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e do Ensino Superior, from October 1997 to October 2000.
30. ref. 3/3.1/CEG/2707/95, "Active structural control in flexible manipulators", financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from October 1997 to October 2000.
31. “Precision Forging of Gears”, SAPIENS, IDMEC (leader), 2000-2002, 44 892 €
32. “MICDRILL - Microfuração por Laser”, Growth, IDMEC (leader), 1999-2001, 6 08€
33. “Forjamento por Injecção”, PRAXIS XXI, IDMEC (leader), 1997-2000
34. “Tecnologia do Forjamento”, PEDIP, IDMEC (leader), 1999-2001, 199 519 €
35. “Certification of 1 and 2 EURO Bimetallic Coins”, INCM, IDMEC (leader), 2000-2001, 9 976 €
36. “Modelação Numérica e Análise Experimental do Processo de Estampagem de Chapa”, PRAXIS XXI, IDMEC (leader), 1997-2001, 37 410 €
37. “Modelização e Simulação para Optimização de Sistemas e Processos de Fundição”, PRAXIS, IDMEC (leader), 1997-2000, 22446 €
38. "Desenvolvimento de Programas Computacionais para Simulação dos Processos Tecnológicos de Produção e Ajustagem", MCT - PBIC/P/TPR/2553/95, IDMEC (leader), 1997-2000, 22 446 €
39. Contract No. 3/3.1/CEG/2554/95, Solving the Navier-Stokes equations for compressible flow in Wells turbines, FCT, 1999-2002.
40. Contract No. POCTI/33960/EME/2000, Hydrodynamic interaction between wave energy devices in arrays, FCT, 2000-2003.
41. Contract No. POCTI/EME/34146/2000, Theoretical and experimental study of a hydraulic cross-flow turbine, FCT, 2002-2005.

42. Contract No. POCTI/EME/39717/2001, Three-dimensional inverse methods for turbomachinery blade rows, FCT, 2002-2005.
43. Contract No. POCTI/1999/EME/34663, Phase-control of wave energy converters, FCT, 2001-2004.
44. “Studying Environment on a Farm”, funded by the Institute for Environmental Promotion and promoted by IST (total funding of 900.000,00 Esc.+ VAT, 2001).
45. “General Theory of Sustainability and Application to the Agricultural Sector”, funded by POCTI (POCTI/MGS/47731/2002) and promoted by IDMEC (total funding of 80.658,00 € 2003-2006).
46. “Caracterização do Escoamento Bifásico em Suspensões e Aerossóis Farmacêuticos”, financiado pela FCT, contrato POCTI/EME/46902/2002, em 2003/05.
47. “Modelação do fenómeno de incerteza no cálculo de escoamentos de fluido”; financiamento 23000 Euros pela FCT, contrato POCTI/EME/47012, de 21/05/2003 a 20/05/2005
48. Contract No.: Protocolo Nº 105/2002 “Apoio no Desenvolvimento e Implementação do programa Nacional sobre Alterações Climáticas: Questões dos Países em Desenvolvimento”, Instituto Superior Técnico, 30 July 2002/ 1 August de 2003  
Funding: Instituto do Ambiente, Amount of funding: €46.680,00
49. Contract No.: 59/2001 “PCIP - Protocolo entre a DGA e o IST para apoio técnico no âmbito das suas competências sobre prevenção e controlo integrados da poluição”  
Instituto Superior Técnico, 2 July 2001/ 1 July 2002, Funding: Direcção Geral do Ambiente, Amount of funding: €84.296,84
50. Contract No.: 19/2003  
PCIP-Interface - Protocolo entre o IA e o IST para apoio técnico e científico no âmbito das suas competências sobre prevenção e controlo integrados da poluição (PCIP), nos termos do Decreto-Lei Nº 194/2000 de 21 de Agosto, nomeadamente na interface PCIP com matérias relacionadas e a sua aplicação ao contexto nacional, Instituto Superior Técnico, 1 April 2003/31 March 2004, Funding: Instituto do Ambiente
51. Contract No.: 18/2003  
PCIP - Protocolo entre o IA e o IST para apoio técnico no âmbito das suas competências sobre prevenção e controlo integrados da poluição, Instituto Superior Técnico, 1 April 2003/31 March 2004, Instituto do Ambiente
52. Contract No.: POCTI / P / MSG/37601/2001  
TRAFFIMPACT - Modelação do impacte ambiental do tráfego em corredores de acesso lineares para grandes regiões urbanas, Instituto Superior Técnico, 1 October 2002/31 September 2004, Funding:Programa POCTI, Fundação para a Ciência e a Tecnologia, Amount of funding: €30.300,00
53. Contract No.: POCTI / P / MSG/37601/2001, STOP & GO – Avaliação do Impacte Ambiental resultante das paragens de veículos em portagens, estações de serviço e semáforos, Instituto Superior Técnico, 1 June 2002/ 31 May de 2004, Funding: Programa POCTI, Fundação para a Ciência e a Tecnologia, €50.400,00
54. Contract No.: POCTI / P / GMS/ 35659/99, FROTLAB - A portable environmental monitoring and forecasting laboratory for vehicles, Instituto Superior Técnico  
Funding:Programa POCTI, Fundação para a Ciência e a Tecnologia, 1 August 2000/ 31 July 2003, Amount of funding: €50.000,00

55. Contract No.: POCTI / P / GMS/ 35649/99, ECODRIVE – Simulador de Condução Ecológica e Ambiental, Instituto Superior Técnico , 1 August 2000/ 31 July 2003  
Funding: Programa POCTI, Fundação para a ciência e a Tecnologia, €100.000,00
56. Contract No.: SAPIENS – POCTI/1999/EME/36343, Modelação física, matemática e numérica das propriedades radiativas em meios participativos, Instituto Superior Técnico, 1 January 2001/ 31 December 2002, Funding: Fundação para a ciência e a Tecnologia, Amount of funding: €40.000,00
57. Contract No.: POCTI/EME/35971/99., “Radiómetro para Aplicações Industriais”.  
Instituto Superior Técnico, April 2001/March 2003, Funding: Fundação para a Ciência e Tecnologia, Amount of funding: €49.880,00
58. Contract No.: POCTI/43622/EME/2000, “Estudo e Implementação de Estratégias para a Redução Simultânea de NO<sub>x</sub> e Partículas em Fornos a Fuelóleo”, Instituto Superior Técnico, November 2001/October 2004, Funding: Fundação para a Ciência e Tecnologia , Amount of funding: €30.000,00
59. Contract No.: POCTI/EME/37410/2001, “Investigação Experimental e Numérica da Importância da Radiação na Formação de NO<sub>x</sub> em Chamas de Difusão Turbulentas”, Instituto Superior Técnico, February 2002/January 2005, Funding: Fundação para a Ciência e Tecnologia (P), Amount of funding: € 75.000,00 (IDMEC)
60. Contract No.: POCTI/EME/37529/2001, “Development of a Model for NO<sub>x</sub> Reduction Under Reburning Conditions Using Natural Gas and Biogas as Secondary Fuel”, Instituto Superior Técnico, April 2002/March 2005, Funding: Fundação para a Ciência e Tecnologia, Amount of funding: €23.637,00 (IDMEC)
61. Contract No.: POCTI/EME/41349/2001, “Diagnostic System for Thermal Application”, Instituto Superior Técnico, August 2002/July 2004, Funding: Fundação para a Ciência e Tecnologia, Amount of funding: 14.364,00 (IDMEC)
62. Contract No.: POCTI/1999/EME/35967, “Avaliação do Desempenho da Ventilação Natural de um Edifício de Habitação Multifamiliar”, Instituto Superior Técnico, 15 October 2001/14 October 2004, Funding: Programa POCTI, Fundação para a Ciência e Tecnologia , Amount of funding: €50.000,00
63. Contract No.: POCTI/EME/44107/2002, A hybrid finite volume / finite element method for the solution of the radiative transfer equation, Instituto Superior Técnico, 1 September 2003/31 August 2006, Funding: Fundação para a Ciência e Tecnologia, €35.250,00
64. Contract No.: POCTI/EME/44225/2002, AdapChem: Improvement and application of the concept of adaptive chemistry to CFD calculations of laminar flames, 2003-05  
Funding: SAPIENS, ount of funding: €35.000,00
65. Contract No.: IST, "Estudo de regaseificador de convecção natural atmosférica para gás natural liquefeito"February 2002 / October 2004, Funding: Transgás, € 7.020,00
66. Prevenção e Controlo Integrados da Poluição (PCIP), Partners:  
Instituto do Ambiente, 2004 – 2005.
67. “Monitorização energética e ambiental de automóveis ligeiros de passageiros” ,  
Partner: Galpenergia , 2004 – 2005.
68. “Impacte energético e ambiental de um posto de abastecimento de combustível”,  
Partners:TOTAL, Portugal Petróleos S.A., 2004 – 2005.

69. “Viabilidade de Implementação de uma Estação de Abastecimento Multifuel em Portugal”, Partner:Galpenergia , 2004 – 2005.
70. “Análise e quantificação do impacte energético e ambiental das tecnologias de Autocarros de Transportes Urbanos de Passageiros”, Partners: STCP, APVGN, (funded by DGTT), 2004 – 2005.

### **As Project Partner:**

1. POCTI/35939/99, ROTDYN, Coordinator: Inst. Proponente ITN, Period: June 2001 – Dec 2004
2. POCTI/2700/95 “LAGOS SOLARS: Dinâmica de Sistemas com dupla difusão”, Coordinator: INETI , Partner: IDMEC – IST, (Prof. Heitor Pina), Period: June 2001- July 2003
3. POCTI/EME/33710/99, “Development of non-lubricated roller-chain drives with optimal surface treatment”, Coordinator: Prof. Ramalho Un. Coimbra , Partner: IDMEC-IST ( Prof. Jorge Ambrósio)., Period: 2002-2004
4. Júlio Montalvão, UME/CP 2000, Bombardier Transportation, 2002-03
5. ref. POSI/SRI/41201/2001, “Recognition of Antique Typographic Font”, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e do Ensino Superior, from September 2002 to September 2004.
6. ref. POSI /SRI / 41201 / 2001, REFINA – Recognition of Antique Typographic Fonts, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from 2002 to August 2004.
7. ref. PRAXIS/2/2.1/TPAR/2057/95 phase 2, “CVAM – Automatic Visual Classification of Polished Marbles Surfaces”, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, coordinator: Instituto Nacional de Engenharia e Tecnologia Industrial INETI, from August 2001 to December 2003.
8. ref. PRAXIS /P/EEI/12201/1998 phase 2, “AUTOCARTIS - Automatic Methods for Updating Cartographic Maps Using Satellite Images”, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, coordinator: CVRM - Instituto Superior Técnico, from July 2001 to June 2003.
9. ref. PRAXIS /C/EEI/12122/1998, phase 2, “ROMA- Antic Music Optical Recognition”, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from July 2001 to December 2002.
10. ref. POSI/SRI/34244/99 – “DISCO - Distributed Embeddable Systems for Control Applications, coordinator: Aveiro University, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e do Ensino Superior, from July 2000 to June 2003.
11. ref. POCTI/EME/34768/2000 - " Dynamics and Control of Flame Stabilisation and Propagation for Advanced Energy Systems ", financed by Fundação para a

- Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from October 2000 to October 2003.
12. ref. PRAXIS/3/3.1/CTAE/1947/95, “SARA – Automatic Aerial Recognition”, financed by Fundação para a Ciência e a Tecnologia, Ministério da Ciência e da Tecnologia, from 1996 to 2004.
  13. “HISIM - High Speed Intelligent Milling Cell for Mould and Die Making”, PEDIP II, AGILTEC (leader), 1998-2000, 299276 €
  14. “PROSSEIA – Advanced Manufacturing of Signal and Energy Distribution Systems for the Automotive Industry”, PEDIP II, DELPHI (leader), 1998-2000, 4773495 €
  15. “TAVAC – Advanced Machining and Finishing Technologies for Moulds & Dies”, PEDIP II, Anibal H. Abrantes (leader), 1997-2000, 4140022 €
  16. “RNPR – Portuguese Rapid Prototyping Network”, PEDIP II, Iberomoldes (leader), 1997-2000, 5976112€
  17. “TECNAC – Development of Electro-Discharge Polishing Technology for Moulds and Dies”, PRAXIS XXI, ITEC (leader, 1997-2000, 59855 €
  18. “COMPOSIN – Abrasion Wear of Si<sub>3</sub>N<sub>4</sub> matrix based composites with carbides nano-inclusions: ultrasonic machinability studies” PRAXIS XX, Universidade de Aveiro (leader), 1997-2000, 59855 €
  19. “Aplicação de processos de fabrico de formas quase definitivas na indústria automóvel”. PEDIP II, INETI (leader), 1999-2000, 219 471 €
  20. “TECNACAM - Integração de Tecnologias de Corte e Soldadura Laser e da Enformação Plástica para o Fabrico de Componentes Multimaterial / Multiespessura”, PEDIP II, INETI (leader), 1999-2000, 199 519 €
  21. “TECNACAM - Desenvolvimento e Implementação de uma Metodologia de Prototipagem Virtual para Estampagem de Chapa Metálica e Tecnologia Avançada de Estampagem de Chapas Metálicas”, PEDIP II, INETI (leader), 1999-2000, 269 351 €
  22. “Estudos do Estado da Arte - Mutação Tecnológica nos Métodos de Produção de Componentes em Chapa Metálica”, PEDIP II, INETI (leader), 1999, 19 952 €
  23. “Modelação Numérica e Análise Experimental do Processo de Estampagem de Chapa”, PRAXIS XXI, IST (leader), 1997-2001, 37 410 €
  24. “INTELIMAQ - Maquinagem inteligente e integrada por computador”, PEDIP II, INETI (leader), 1999-2000, 224459€
  25. “Engineering and Technology 2000” Ministério da Economia (Sponsor), Academia de Engenharia, Ordem dos Engenheiros, AIP (leaders), 1999-2000, 14963€
  26. “SERENA: Serviços de Engenharia Avançada no Sector Automóvel – MAOPF: Métodos Avançados de Optimização de Processos de Fabrico”, PEDIP, INETI (leader), 1997-2000, 29 928 €
  27. Contract WEC Douro (CEO Douro), IDEA Programme, ADI, Portugal, 2004-2005.
  28. Contract DEMTEC 016/1/03 OWC Demonstration (Demonstração CAO Douro), DEMTEC Programme, ADI, Portugal, 2004-2005.
  29. Contract No. PL228/02, Estudo de caracterização do comportamento dinâmico do sistema de abastecimento de gás natural à Termoeléctrica do Ribatejo, IDOM Engenharia Lda (Portugal), 2002-2003.
  30. Protolactis – Development of a Prototype for the Traditional Manufacturing of Cheese, funded by the Programa for the Support of the Modernisation of Agriculture and Forestry (Nº 411071580370) and promoted by Escola Superior de Biotecnologia

da Universidade Católica Portuguesa in partnership with IST and Ovibeira (funding for IST of 3.830,00 Esc.).

31. “ECOSEGURANÇA – Promotion of Eco-Efficiency and Safety in Traditional and Innovative Production Systems at the Farm Scale”, funded by Programa Agro, Medida 8 – Desenvolvimento Tecnológico e Demonstração, Acção 8.1 – Desenvolvimento Experimental e Demonstração, promoted by Escola Superior de Biotecnologia da Universidade Católica Portuguesa, in partnership with ANCOSE - Associação Nacional de Criadores de Ovinos da Serra da Estrela, Terraprima – Sociedade Agrícola, Lda., Estação Zootécnica Nacional and IST (funding for IST of 8.588,62 €).
32. “Assessment of the Stability and Effective Administration of Pharmaceutical Suspensions and Aerosols by Laser Diffractometry”, financiado pela FCT, contrato POCTI/FCB/41628/2001, em 2002/04.
33. Contract No.: PCTI/1999/EME/34266, “COMBISTRESS -Development of a Methodology to Analyse the Combined Effect of Discomfort Stressors in Riding Passengers” ESTG Leiria, 01/01/2001 to 31/12/2003, Funding: Financiado pela Fundação para a Ciência e Tecnologia
34. “Monitorização de Acústica do Ambiente no âmbito do Programa Polis Leiria” ESTG Leiria, 01/2002 to 31/07/2005, Funding: Financiado pela Sociedade Leiria Polis (Parque Expo / Câmara Municipal de Leiria)
35. “Network of Laboratories of functional materials for reactions, membrane processes and fuel cells”, Funding: FCT: PROGRAMA NACIONAL DE REEQUIPAMENTO CIENTÍFICO, Amount of funding: €421 200,00
36. “Gestão Integrada de Sistema de Frotas: Optimização Energética e Ambiental no Transporte Rodoviário de Passageiros”, Partners: Rodoviária de Lisboa, SA (funded by DGT), 2004 – 2005.
37. Contract No.: POCTI/47900/EME/2002. "Analysis of particle deposition in boilers".  
Venue: Instituto Superior Técnico, November 2003/October 2006, Funding: Fundação para a Ciência e Tecnologia (P), Amount of funding: 50.000,00
38. Contract No.: IST\_1105  
Characterization of unit Sines4 before and after the installation of complementary measures for NOx reduction, July 2004 / March 2005, Funding: Companhia Portuguesa de Produção de Electricidade (P), Amount of funding: 20.400,00