

**Secretary of State for Science, Technology and Higher Education  
Government of Portugal**

Manuel Heitor graduated in 1981 in Mechanical Engineering from Instituto Superior Técnico (IST, the engineering school of the Technical University of Lisbon, [www.ist.utl.pt](http://www.ist.utl.pt)) and carried out his studies in the Imperial College of Science, Technology and Medicine of the University of London in the area of Fluid Mechanics and Combustion, where in 1985 he obtained his Doctorate degree. In 1986 he conducted a post-doctoral study in the University of California San Diego in the area of microgravity flame propagation.

He was appointed Assistant Professor (1986) of the Department of Mechanical Engineering of IST, Associate Professor (1991) and Full Professor (1995). He is co-editor of several books ("Combusting Flow Diagnostics", Kluwer Acad. Publ., 1992; "Unsteady Combustion", Kluwer Acad. Publ., 1996) and author of several scientific papers in the area of experimental combustion and related energy aspects. During the period 1990-2005 he was a member of the International Organizing Committee of the Conferences on "Applications of Laser Techniques to Fluid Mechanics", <http://in3.dem.ist.utl.pt/conflaser/>, based on which he has co-edited several books through Springer Verlag. He was President of the Portuguese Section of the Combustion Institute during the period 1995-2002.

Manuel Heitor has served as Deputy-President of Instituto Superior Técnico, Technical University of Lisbon, for the period 1993-1998. He is co-author of "New Ideas for the University" (in portuguese), IST Press, 1998, and has published several technical papers in the area of higher education policy. His research work includes publications in the area of the management of technology and the development of engineering and innovation policies and engineering design.

Since 1995, he has been Research Fellow of the IC2 Institute, Innovation, Creativity and Capital, the University of Texas at Austin. He is member of the Advisory Board of "Technological Forecasting and Social Change" and the "Intl. Journal of Technology, Policy and Management", where he has served as guest editor for several Special Issues. He chaired during the period 1996-2005 the Organizing Committee of the series of International Conferences on "Technology Policy and Innovation", <http://in3.dem.ist.utl.pt/confpolicy/>, which were organized annually since 1997, in Macau, Lisbon, Austin, Curitiba, Austin, Kansai and Monterey. He is co-editor of the book series on "Technology Policy and Innovation", launched through Greenwood Publishers, Connecticut and continued through Purdue University Press. In the area of Engineering Design, he has published "The Glass Chair" (IST Press), and "*Collaborative Design and learning: competence building for innovation*" (Praeger books).

Manuel Heitor was the founding director of the IST's "Center for Innovation, Technology and Policy Research", <http://in3.dem.ist.utl.pt/>, which was awarded in 2005 by the International Association of Management of Technology, IAMOT, has one of the top 50 global centres of research on "Management of Technology". He has launched the IST's M.Sc. Programmes on "Engineering Policy and Management of Technology" (1998) and on "Engineering Design" (2002), as well as the "IST Design Studio", (2002).

He was appointed in 1999 National Coordinator of the Evaluation of Research Units by the Portuguese Minister of Science and Technology, and has coordinated the evaluation of the Mechanical Engineering panel in 1996. He was co-founder in 2002 of "Globelics - the global network for the economics of learning, innovation, and competence building systems", and has worked until 2005 as member of its Scientific Board and co-Director of the "Globelics Academy – PhD School on Systems of Innovation and Economic Development". In 2003 he coordinated a national exhibition on "Engineering in Portugal in the 20<sup>th</sup> century", which was awarded with the *Dibner Award* of the Society for the History of Technology. In 2004 he received the Research Excellence Award of the IAMOT.

Manuel Heitor has participated in several international *fora* on science, technology and innovation policy, and represented Portugal at the OECD in the project "Steering and Funding of Public Research" and in the "Futures Programme". He is a member of the Science and Technology Council of the "International Risk Governance Council", IRGC.

Manuel Heitor was appointed Secretary of State for Science, Technology and Higher Education for the Government of Portugal in March 2005.

**Name :** Manuel Frederico Tojal de Valsassina Heitor

**Birth:** September 21, 1958 - Lisbon, Portugal; **Nationality:** Portuguese

**Contact/ Email:** [mheitor@ist.utl.pt](mailto:mheitor@ist.utl.pt); [mheitor@mctes.gov.pt](mailto:mheitor@mctes.gov.pt)

**Area of Specialization:**

Science, Technology and Innovation Policy; Higher Education Policy, Engineering and Public Policy;

**Other research areas of interest:**

Management of Science and Technology; Risk Governance

Energy and Environmental Technologies; Experimental Fluid Mechanics and Combustion;

**Education :**

1981: Engineering Diplom (5 years) in Mechanical Engineering, IST, Technical University of Lisbon

1985: Ph.D. in Mechanical Engineering, Imperial College, University of London, UK

1992: "Agregação", D. Sc., in Mechanical Engineering, IST, Technical University of Lisbon

**Academic and Research Career:**

1980-1981: Research student, IST, Dept. Mechanical Engineering

1981-1985: Research student, Imperial College, University of London, UK

1985-...: Lecturer at IST, Technical University of Lisbon

1986- Post-doctoral researcher, University of California at San Diego, USA

1995-...: Full Professor, IST, Mechanical Engineering Department

**Main awards:**

- IAMOT Award 2005 (institucional) – "Top 50 global centres of research on Management of Technology", Intl. Association for the Management of Technology
- IAMOT Award 2004 – *Excellence in Research Award on Technology Innovation Management*, Intl. Association for the Management of Technology
- "Solvay Innovation Trophy 2003" for "Management Improvement", through the project "Solvay Ideas Challenge", <http://www.green-wheel.net/> (co-winner)
- Dibner Award 2003 – Society for the History of Technology, SHOT, Best Exhibition, through the project "Engineering in Portugal in the 20<sup>th</sup> century" (co-winner)
- Prémio TELEciência 2003 (4<sup>o</sup> lugar) - V Festival Internacional do Filme de Divulgação Científica, através do filme "ENGENHO E OBRA: engenharia em Portugal no seculo XX"

**Political and Government Appointments**

2005-....: Secretary of State for Science, Technology and Higher Education, Government of Portugal

**Institutional Development and University Management Appointments:**

1993-1998: Deputy-President of the Instituto Superior Técnico, Technical University of Lisbon

1998-2005: Founder and Director of the "Center for Innovation, Technology and Policy Research", IN+, at the Instituto Superior Técnico, Technical University of Lisbon

**Management of University Programmes:**

1997-2005: Founder and Director of the M.Sc. Programme at IST on "Engineering Policy and Management of Technology"

1997-2000: Director of the IMPACT Programme at IST on science and technology commercialization

2001-2005: Director of the VECTOR<sup>o</sup> Programme at IST on science and technology commercialization

2002-2005: Founder and Director of the M.Sc. Programme at IST on "Engineering Design"

2004-2005: Director, Globelics Academy – PhD School on Systems of Innovation and Economic Development

**Appointments in Research and Scientific Institutions**

1996- ...: "Senior Research Fellow", IC2 Institute (Innovation, Creativity, Capital), The University of Texas at Austin, USA.

- 1996: Coordinator of the national evaluation of R&D units in the area of Mechanical Engineering, Portuguese Ministry of Science and Technology
- 1999-2000: National Coordinator of the evaluation of R&D Units in Portugal, Portuguese Ministry of Science and Technology
- 2002- ...: Co- founder and member of the “Scientific Board” of the international network “Globelics - the global network for the economics of learning, innovation, and competence building systems”
- 2004-...: Member of the Science and Technology Council, International Risk Governance Council

**Other Functions:**

- 1990-2005: Member of the International Organizing Committee of the Conferences on “Applications of Laser Techniques to Fluid Mechanics”
- 1997- 2005: Co-founder and “Chairman” of the international Conferences on “Technology Policy and Innovation”
- 2000-2001: Expert at OECD, Science, Technology and Innovation Division, for the Project “Steering and Funding of Public Research”
- 2000- 2004: Expert at OECD, for the Project “Futures”
- 2002/03: Director for the exhibition “Engineering in Portugal in the 20<sup>th</sup> century”
- 2002-2003: Director, “*Pensar e Fazer* – Engineering for youngsters”
- 2002-2004: Member of the Examiners Committee of the Technology Policy Programme, University of Cambridge, Judge Institute of Management

**Research Management (sample of main research projects, 1995-2005)**

Main International Projects

- “Clean Glass: Low-NOx Cost Effective Oil and Gas Combustion Technology for Glass Furnaces, Scaling by Modelling and Measurement by Spectral Sensors”; BRITE/EURAM Programme, EC-DGXII; contract n° BRPR-CT95-0033, with: IST, P; Saint-Gobain, Gas de France, CNRS-CORIA, F; IFRF, NL; AGEMA, SW; Hotwork-Koster, D. (Instituto Superior Técnico, 1995-1999).
- “Large Eddy Simulation Modelling for Lean Prevaporised Premixed Combustion”; BRITE/EURAM Programme, EC-DGXII; contract n° BRPR-CT95-0109, with: IST, P; Cranfield University, Loughborough University, Defense Research Agency, Rolls Royce, UK; Ecole Centrale de Lyon, ENSMA (Poitiers), SNECMA, F; Chalmers Tek. Hog., FI; VOLVO, SW. (Instituto Superior Técnico, 1995-1999).
- “Low Emission Systems Simulation Procedures for the Development of Fuel Efficient Combustor Technology”; BRITE/EURAM Programme, EC-DGXII; contract n° BRPR-CT95-0106, with: IST, PT; University of Zaragoza, ES; BRR, Heidelberg University, DE; Imperial College, Rolls Royce, UK; University of Rouen, SNECMA, F. (Instituto Superior Técnico, 1995-1999).
- “Low Emission Combustion Technology: Phase III”; BRITE/EURAM Programme, EC-DGXII; contrato n° BRPR-CT95-0122, with: IST, P; MTU, BMW, Tech. Univ. München, Univ. Heidelberg, DLR, Univ. Karlsruhe, D; Rolls Royce, DRA, Cranfield Institute of Technology, UK; SNECMA, Turbomeca, ONERA, CERT, Univ. de Rouen, LED, F; FiatAvio, Alfa Romeo, I; Univ. of Patras, GR; Volvo, SW. (Instituto Superior Técnico, 1995-1999).
- “DIME - Direct Injection Engine Spray Processes: Mechanisms to Improve Performance”; EC-DG Research; contract n° ENK6-2000-00101, with: IST, P; Universidad Politécnica de Valencia, SP; Universität Erlangen-Nürnberg, D; Univ. de Rouen, LED, F; Imperial College, UK; AVL, A, PSA Peugeot-Citröen, F. (Instituto Superior Técnico, 1999-2002; Coordinator)
- “Minknock - Improving engine performance and efficiency by minimisation of knock probability”; EC-DG Energy, Environment and Sustainable Development; contract ENK6-CT-2002-00643, with: IST, DaimlerChrysler AG, National Research Council of Italy, Institut für technische Verbrennung, Lund University, Shell Global Solutions, AVL List GMBH e Ford Werke AG (Instituto Superior Técnico, 2003-05)
- “The trend chart on innovation policies – Benchmarking and statistics of innovation policy measures and identification of good practices”; EC, contract n °TC-02 26146, with: IST e Maastricht Economic Research Institute on Innovation and Technology, MERIT; (Instituto Superior Técnico, 2003-04)
- “Regional Foresight Manuals”; European Commission, DG RTD, Directorate K, Science and Technology Foresight; (Instituto Superior Técnico, 2003-04)

Main National Projects

- NOVOVIDRO - “Novas Tecnologias, Inovação e Flexibilidade na Indústria do Vidro”; Projecto Mobilizador, PEDIP II, Contract N° N351, envolvendo Crisal, Dâmsaso, Ifavidro, Vistrocristal ACE, Fornocerâmica, INETI - ITA, Auder, TVC, Traça, Softaidia, CPD, ITEC/INT, CTCV, Porsel, Lda., BDO Binder & Co., Transgás. (Instituto Superior Técnico, 1995-99).

- Fundamental Studies on the Physics of Liquid Sheet Disintegration; Contract PRAXIS/34586/99; (Instituto Superior Técnico, 1999-2001).
- Efficient Energy Technologies through improved understanding and Physical Modelling of Turbulent Flame Propagation; Contract PRAXIS /P/EME/13160/1998 (Instituto Superior Técnico, 1998-2000).
- A Universidade e o Ensino de Pós-Graduação em Engenharia, Ciência e Tecnologia para a Sociedade do Conhecimento; Contrato PRAXIS/3/3.1/CTAE/1997/95 (Instituto Superior Técnico, 1998-2001)
- Elementos para a Compreensão da Inovação em Portugal; Protocolo Observatório para as Ciências e Tecnologias (Instituto Superior Técnico, 2000-02).
- Execução do CIS III e de Obtenção de Informação sobre Inovação em Portugal Protocolo Observatório para as Ciências e Tecnologias (Instituto Superior Técnico).
- Engenharia em Portugal no séc. XX; Contrato POSI 280/2.2/C/LVT; Contract POCTI/HCT/44094/2001 (Instituto Superior Técnico, 2000-03).
- Beyond engineering education: How far Technical Universities have influenced Portuguese society and promoted technical change? Contrato POCTI/HCT/41796/2001 (Instituto Superior Técnico, 2001-03).
- Globalization, Diversification and Technological Capability: firm Strategies and Geography Effects; Contracto POCTI/42087/GES/2001 (Instituto Superior Técnico, 2001-04).
- Identificação e promoção de projectos empresariais de base tecnológica; Projecto financiado pela Solvay Portugal, SA (Instituto Superior Técnico, 2001).
- INAUTO DESIGN – Design studios e gestão da tecnologia na indústria automóvel; Projecto financiado pelo Centro de Excelência da Indústria Automóvel, CEIIA, através do Programa Operacional da Economia (Instituto Superior Técnico, 2001-03).
- Green-Wheel: Promoção de Ideias Inovadoras e Projectos Empresariais; Projecto Financiado pelo IAPMEI, através do Programa Operacional da Economia (Instituto Superior Técnico, 2002-03).
- Fábrica de Alta Tecnologia para a Fileira do Calçado-FATEC; Contrato 03/183 financiado pelo Centro Tecnológico do Calçado, através do Programa Operacional da Economia (Instituto Superior Técnico, 2002-05).
- Desenvolvimento de um Módulo Assentos para uma Viatura Automóvel; Projecto financiado pela ACECIA, Componentes Integrados para a Indústria Automóvel (Instituto Superior Técnico, 2003-04).
- FIVE - Fomento da Inovação e Valorização Empresarial; Projecto financiado pelo IAPMEI, através do Programa Operacional da Economia (Instituto Superior Técnico, 2004).
- Formação Avançada - Investigação e desenvolvimento de engenharia de concepção automóvel; Projecto financiado pelo Centro para a Excelência e Inovação na Indústria Automóvel, CEIIA, através do Programa Operacional da Economia (Instituto Superior Técnico, 2004).
- Planeamento e concepção de novas áreas de serviços e de estratégias de mobilidade sustentável; Projecto financiado pela GALP ENERGIA, SGPS (Instituto Superior Técnico, 2004).
- Lisboa: Cidade de Empreendedores - Planeamento Estratégico para um eixo de desenvolvimento de Lisboa; Projecto financiado pela Câmara Municipal de Lisboa, Departamento de Planeamento Estratégico (Instituto Superior Técnico, 2004).
- Mapear Conhecimento e Inovação em Portugal; Projecto financiado pela UMIC- Agência para a Sociedade do Conhecimento (Instituto Superior Técnico, 2004).
- Diversidade Regional e Sectorial em Conhecimento e Inovação em Portugal; Projecto financiado pela UMIC- Agência para a Sociedade do Conhecimento; (Instituto Superior Técnico, 2004).

### **Supervision of Post-Graduate Students (sample)**

- **Doctorate (Ph.D):**
- J.M.M. Barata: 1986-1989; Numerical and Experimental Study of Impinging Jets Through a Crossflow (IST; Co-Supervision).
- A.L.N. Moreira: 1987-1991; Aerodynamics of Industrial Burners (IST; Co-Supervision).
- P.M.C. Ferrão: 1988-1993; Transport Processes in Disc-Stabilized Flames (IST; Co-Supervision).
- A.C. Pires: 1991-1995; Non-premixed Turbulent Flames (IST).
- S. Carvalho: 1992-1996; Atomization of Liquids in Flows with and without Recirculation (IST).
- E.C. Fernandes: 1992-1997; Pulse Combustion (IST).
- H. Horta: 2003-2006; Autonomy and diversification in higher education (IST; Co-Supervision)
- A. Vaccaro: 2004-2007; Diversification and globalization in the auto-parts sector (IST)
- M.J. Rodrigues: 2004-2009; Building integrated photovoltaics: an essay on technology policy (IST; Co-Supervision)
- **Master:**
- P.M.C. Ferrão, 1987: The combustion of Portuguese coals in a fluidized bed.

- I.S. Carvalho, 1990: Experimental characterization of turbulent flames
- E.C. Fernandes, 1991: Estabilidade e Estrutura de Chamas Turbulentas Confinadas em Geometrias Aximétricas
- P. Anacleto, 1993: Pré-Mistura e Pré-Vaporização de Combustíveis em Câmaras de Combustão
- P. Conceição, 1995: O Financiamento das Universidades Públicas em Portugal: Aplicação ao Ensino da Engenharia, Ciência e Tecnologia. (ISEG; Co-Supervision)
- F. Santos, 1997: A Organização e Gestão das Universidades: aplicação ao Sistema Português. (ISEG; Co-Supervision)
- P. Oliveira, 1997: Políticas de comercialização de ciência e tecnologia (IST).
- D. Santos, 1998: Liquid Film Disintegration (IST)
- P. Ferreira, 2000: Wage Inequality and Technology: An Exploration using the Theil Index and Industry Estimations of Technology Intensity (IST)
- C.M. Costa, 2001: Development Policies for the Biotechnology Industry in Portugal. (IST; Co-Supervision)
- A.C. Diogo, 2001: Perspectives for Technological Innovation for the Portuguese Hand Made Glass Sector. (IST; Co-Supervision)
- A.R. Videira, 2001: Learning Dynamics in transition economies: Case studies in the auto-parts sector in Portugal. (IST; Co-Supervision)
- L.C. Reis, 2001: Competitiveness factors for the auto-parts industry: determinants of quality. (IST; Co-Supervision)
- P.M. Vieira, 2001: Are Environmental Concerns Drivers of Innovation? Evidence from the Community Innovation Survey Results for Portugal. (IST; Co-Supervision)
- H. Meng, 2001: Fostering the Digital Economy: Perspectives for Internet Clustering. (IST; Co-Supervision)
- J.P. Taborda, 2001: On the use of Offsets to foster Technological Innovation: A Methodology for Case Analysis. (IST; Co-Supervision)
- D. Rubini, 2002: A Critical Analysis of Science and Technology Parks: Learning from the Italian Experience. (IST; Co-Supervision)
- A.L. Alves, 2003: Alternative transport solutions: on the use of high-speed boats. (IST; Co-Supervision)
- N. Ávila, 2004: Industry-Science Relationships: evidence from Portugal. (IST; Co-Supervision)
- M. Leocádio, 2004: "RAMS" – Reliability, Availability, Maintainability, Safety: Application to Railway Vehicles. (IST; Co-Supervision)
- J.L. Moutinho, 2004: *Digital Cities* and the challenges for a Knowledge-Based View of the Territory: evidence from Portugal (IST)
- A.M. Oliveira, 2005: Valores Acrescentados Não-Energéticos de Sistemas Fotovoltaicos Centralizados de Larga Escala: Desenvolvimento de um Sistema de Observação. (IST; co-supervisão)
- M.R. Bravo, 2005: Sparks of Innovation: Facing Change as a Constant. The effects of Human Capital on Economic Growth. Focus on Science, Innovation and Technology policies. A Global Research Study within the Multinational Automotive Industry. (IST; co-supervisão)
- P.A. Rebelo, 2005: The productivity increase through the value analysis. (IST; co-supervisão)
- A. Espada, 2005: How to design trends and scenarios on a context of uncertainty? - Learning from Service Stations. (IST; co-supervisão)

### **Main recent publications:**

#### Books (co-authorship):

- P. Conceição, M. V. Heitor, (2005), *Innovation for All? Learning from the Portuguese path to technical change and the dynamics of innovation*. Westport and London: Praeger.
- Conceição, P., Heitor, M.V. e Santos, F. (1998), *New Ideas for the University* (in Portuguese), Lisbon: IST Press.

#### Books (edition):

- M. van Geenhuizen, D. Gibson and M. V. Heitor (eds.), (2005), *Regional Development and Conditions for Innovation in the Network Society*. New York: Purdue University Press.
- Heitor, M. (ed.), (2004), "Ciências Experimentais", (in portuguese), Nova Activa Multimédia – Enciclopédia de Consulta, Lexicultural Editores
- Heitor, M. (ed.), (2004), "Tecnologias", (in portuguese), Nova Activa Multimédia – Enciclopédia de Consulta, Lexicultural Editores
- M. Heitor (ed.), (2004), "Pensar e fazer engenharia com os mais novos: *um ensaio sobre cultura tecnológica para pais e educadores*" (in Portuguese), Lisboa: Dom Quixote
- D. Gibson, M. V. Heitor and A. Ibarra (eds.), (2004), *Knowledge and learning for the Network Society*. New York: Purdue University Press.

- J.M.B. Brito, M. Heitor, M.F. Rollo (eds.), (2004), "Engineering in Portugal in the 20<sup>th</sup> century" (in Portuguese), Lisboa: Dom Quixote
- J. Bento, J. Duarte, M. Heitor and W. Mitchell, (eds.), (2004), *Collaborative Design and learning: competence building for innovation*. Westport and London: Praeger.
- D. Gibson, C. Stolp. P. Conceição, and M. V. Heitor (eds.), (2003), *Systems and Policies for the Global Learning Economy*. Westport and London: Praeger.
- M. Heitor, J.M.B. Brito, M.F. Rollo, H. Cayatte, J. Pessoa, R. Trindade (eds), (2003), "*Engenho e obra: memory of an exhibition*" (in Portuguese), Lisboa: Dom Quixote
- P. Conceição, M. V. Heitor, B.-A. Lundvall (eds.), (2003), *Innovation, Competence Building, and Social Cohesion in Europe- Towards a Learning Society*, London: Edward Elgar.
- P. Conceição, D. Gibson, M. V. Heitor, G. Sirilli, F. Veloso (eds.), (2002), *Knowledge for Inclusive Development*. Westport and London: Quorum Books.
- J.M.B. Brito, M. Heitor, M.F. Rollo (eds), (2002), "*Engenho e obra: an approach to the history of engineering in Portugal in the 20<sup>th</sup> century*" (in Portuguese), Lisboa: Dom Quixote
- M. Heitor and J. Duarte (2001). GLASS CHAIR: Competence Building for Innovation. Lisbon: IST Press.
- M. Heitor (2001), "National evaluation of R&D Units in Portugal" (in Portuguese), Portuguese Ministry of Science and Technology.
- P. Conceição, D. Gibson, M. Heitor and S. Shariq (2000). Science, Technology and Innovation Policy: Opportunities and Challenges for the Knowledge Economy. QUORUM Publ., New York.
- R. Adrian, D. Durão, F. Durst, M. Heitor, M. Maeda and J. Whitelaw (2000). Laser Techniques Applied to Fluid Mechanics, Springer Verlag.
- M. Heitor (1999) "National evaluation of R&D Units in Mechanical Engineering in Portugal" (in Portuguese), Portuguese Ministry of Science and Technology.
- R. Adrian, D. Durão, F. Durst, M. Heitor, M. Maeda and J. Whitelaw (1997). Developments in Laser Techniques and Fluid Mechanics, Springer Verlag.
- R. Adrian, D. Durão, F. Durst, M. Heitor, M. Maeda and J. Whitelaw (1996). Developments in Laser Techniques and Applications to Fluid Mechanics, Springer Verlag.
- F. Culick, M. Heitor and J. Whitelaw (1996). Unsteady Combustion, Kluwer Academic Publishers, NATO/ASI Series.

#### Technical Journals Edited:

- *Technological Forecasting and Social Change, Elsevier Science Inc.*
- *Intl. Journal of technology, Policy and Management, Inderscience Publishers*

#### Main Papers in Technical Journals and Books:

- M. Heitor and M. Bravo (2009), "Portugal on the crosstalk of change, facing the shock of the new: People, knowledge and ideas fostering the social fabric to facilitate the concentration of knowledge integrated communities", *Technological Forecasting and Social Change*, submitted.
- M. Heitor (2009), "The European Research Universities and the Challenge for Science and Technology in Europe", in: Charles F. Bonser (ed.), *Adapting Universities to the Global Society - A Transatlantic Perspective*, Münster: LIT-Verlag, February 2009.
- M. Heitor (2009), "Tertiary Education Institutions in Times of Change: A Systems Approach to Institutional Transformation", in ""The Future of the Research University: Meeting the Global Challenges of the 21st Century", Kauffman Foundation, pp. 55-67. Also presented at The 2008 Kauffman-Max Planck Annual Summit on "Rethinking the Role of the University and Public Research for the Entrepreneurial Age", Munich, June 8-11, 2008.
- M. Heitor (2008). "A system approach to tertiary education institutions: towards knowledge networks and enhanced societal trust". *Science and Public Policy*, 35 (8), pp. 607-617.
- H. Horta, J. Huisman and M. Heitor (2008). Does a competitive research funding encourage diversity in higher education? *Science and Public Policy*, 35(3), pp. 146-158.
- P. Conceição, M. V. Heitor and H. Horta (2008), "R &D funding in US universities: from public to private support or public policies strengthening diversification?", in J. Enders, B. Jongbloed (eds.), "Public-Private Dynamics in Higher Education: Expectations, Developments and Outcomes", pp. 301-328., Bielefeld, Transcript Verlag.
- J.M. Gago and M. Heitor (2007), "A commitment to science for the future of Portugal", in J.M.Gago, ed., "The Future of Science and Technology in Europe", Portuguese Ministry of Science, Technology and Higher Education, pp. 403-416.
- P. Conceição and M.V. Heitor (2007), "Do we need a revisited policy agenda for research integrity? ...an institutional perspective", "World Conference on Research Integrity", Calouste Gulbenkian Foundation, Lisbon, Portugal, 16-18 September 2007.

- G.P.J. Dijkema, P. Ferrão, P.M. Herder and M. Heitor (2006), "Trends and Opportunities framing Innovation for Sustainability in the Learning Society", *Technological Forecasting and Social Change*, 73(3), pp. 215-227.
- P. Conceição, M. V. Heitor, P. Vieira (2006), "Are Environmental Concerns Drivers of Innovation? Interpreting Portuguese innovation data to foster environmental foresight", *Technological Forecasting and Social Change*, 73(3), pp. 266-276.
- M. van Geenhuizen, D. Gibson and M. V. Heitor (2005) "Fostering Innovation and Regional Development in the Global Learning Economy", in M. van Geenhuizen, D. Gibson and M. V. Heitor (eds.), *Regional Development and Conditions for Innovation in the Network Society*, pp.1-13. New York: Purdue University Press.
- P. Conceição and M. Heitor (2005) "Mapping Networks of Excellence and S&T Competencies for Europe: Building on the Portuguese Experience in evaluating research excellence", in M. van Geenhuizen, D. Gibson and M. V. Heitor (eds.), *Regional Development and Conditions for Innovation in the Network Society*, pp.241-271. New York: Purdue University Press.
- J. Moutinho and M. Heitor (2005), "Building Human Centered Systems Based on Communication Infrastructures: Evidence from Portugal", in Marshall, S., Taylor, W. and Yu, X., (eds.), "The Encyclopedia of Developing Regional Communities with ICT", Hershey, Idea Group.
- S. I. Shtork, C.E. Cala, E.C. Fernandes, and M.V. Heitor (2005) "Coherent Helical Structures in Swirl Flows. Technical Physics Letters", Vol. 31, Issue 8, pp. 660-662.
- S.I. Shtork, O. Comas, E.C. Fernandes, and M.V. Heitor (2005) "Aerodynamic structure of unsteady swirling flow downstream of a sudden expansion". *Thermophysics and Aeromechanics*, Vol. 12, No. 2, pp. 217-228.
- C.E. Cala, E.C. Fernandes, M.V. Heitor and S.I. Shtork (2005), "Coherent structures in unsteady swirling jet flow". *Experiments in Fluids*; available online at <http://dx.doi.org/10.1007/s00348-005-0066-9>.
- E.C. Fernandes, M.V. Heitor M.V. and S.I. Shtork (2005), "An analysis of unsteady highly turbulent swirling flow in a model vortex combustor". *Experiments in Fluids*; available online at <http://dx.doi.org/10.1007/s00348-005-0034-4>.
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  - 1990 – 2005 (every two years)
- Chairman of the Intl. Conferences on “*Technology Policy and Innovation*”, <http://in3.dem.ist.utl.pt/conf.policy/>:
  - 1997 – 2005 (every year)

- Coordinator, IST's Workshops on "Science, technology and Society", <http://in3.dem.ist.utl.pt/adv/workshops/>, 1999-2005.
- *Chairman* Intl. Conference on "*Towards a learning society: Innovation and competence building with social cohesion for Europe - a seminar on socio-economic research and European policy*", Guincho, 28-30 Maio, 2000.
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