

Steffen Hoernig

(JANUARY 2014)



Associate Professor
Faculdade de Economia
Universidade Nova de Lisboa
Campus de Campolide
1099-032 Lisboa, Portugal
<http://docentes.fe.unl.pt/~shoernig/>

shoernig@fe.unl.pt
Phone: +351-213801645
Fax: +351-213870933
mobile: +351-964409677

Personal Information Date of Birth: October 11, 1968 Citizenship: German
Marital status: Married Sex: M
Children: born 2004, 2008

Research Interests Industrial Organization; Oligopoly Theory; Regulation

Teaching Interests Industrial Organization; Game Theory

Present position 2008 – Associate Professor, Universidade Nova de Lisboa, Portugal
2001 – 2008 Assistant Prof., Universidade Nova de Lisboa, Portugal
2001 – CEPR Research Affiliate
2003 – ENCORE Fellow

Editorial and other scientific positions 2013 – Associate Editor, *Review of Economics*
2012, March – June Visiting Scholar at MIT Sloan
2009 – Member of Scientific Committee, Florence School of Regulation, Media and Communications area
2008 – Associate Editor, *Information Economics & Policy*
2004 – 2007 Member of the Editorial Board, *Information Economics & Policy*

Administrative tasks at FEUNL 2010 – Committee for evaluation of assistant professors
2009 – 2012 Member of CCCC responsible for distribution of teaching load and substitute for President
2004 – 2007 PhD programme 2nd-year coordinator
2003 – Organizer of the Informal Research Workshop at FEUNL

Academic Degrees **Agregação in Economics**, Universidade Nova de Lisboa, December 2007. Course in “Telecommunications Economics”
Ph.D. in Economics, European University Institute, Florence, March 2000. Thesis: “Essays on R&D-races and Cournot Oligopoly.” Supervisor: James Dow, London Business School. Co-supervisors:

Karl Schlag and Massimo Motta, EUI, Florence

Diplom-Kaufmann (Master of Science in Business), Universität Bielefeld, July 1995. Thesis on “Tournament Contracts”

Master of Applied Mathematical Sciences, University of Georgia (UGA), Athens, GA, USA (1991-1992), Thesis on “Assembly Line Balancing”

Awards and Scholarships

FCT Research Project PTDC/EGE-ECO/100696/2008, “Fixed-mobile convergence in telecommunications: New modes of competition and regulatory pitfalls” (2010-2012, Project leader)

FCT Research Project PTDC/ECO/66092/2006, “A banda larga em Portugal: difusão, concorrência e desafios regulatórios” (2008-2011, Project leader)

Novaforum Research Grant (2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009)

FCT Research Project POCTI/ECO/44146/2002 (2004-2006), with José Mata, Nuno Garoupa e Pedro Pita Barros

FCT Research Project POCTI/ECO/37925 (2001-2003), project leader; with Pedro Pita Barros

EARIE 2000 Young Economist’s Prize

Post-doctoral fellowship, TMR network “The Evolution of Market Structure in Network Industries” 2000-01, at FEUNL

German Academic Exchange Service Scholarship for study at the EUI 1995-1998 (awarded on merit in national competition).

Awarded membership of honors society Phi Kappa Phi at UGA.

Studienstiftung des Deutschen Volkes Scholarship 1990-1995 (a merit scholarship awarded to approximately 0.5% of German university students nationwide).

German Academic Exchange Service Scholarship to pursue studies at UGA 1991-1992 (scholarship awarded on merit).

Teaching at Nova SBE

Advanced Industrial Organization (MSc), Microeconomic Theory I (PhD), Games and Markets (MSc), Information and Games (undergraduate), Game Theory I and Game Theory II (MSc), Industrial Economics (PhD), Conduct in imperfectly competitive markets (MSc), Cálculo II, Economia Industrial II.

Other teaching

Florence School of Regulation, 2009 -

TA in Microeconomics, Industrial Organization, and Mathematics at Universidade Católica Portuguesa, Lisbon, 1998-1999.

TA in Microeconomics (Ph.D.-level), EUI, Florence, 1997.

TA in Price Theory, Econometrics, Computer Science, and Microeconomics at Universität Bielefeld, 1992-1995.

Organization of Conferences Florence School of Regulation Scientific Conferences 2014, 2013, 2011.

Member of Scientific Committee of the following conferences: EARIE 2013, 2012, 2011, 2006, 2005; “ICT & Economic Growth”, Munich, November 2010; ITS Istanbul 2007; 4th Annual Conference of PEJ; ASSET 2006, Lisbon.

Organizer of Summer School “Market Failures and Regulation in the Telecommunications Industry”, Algarve, September 2009

Local Organizer of 8th Annual SPiE Conference, FEUNL, June 2003.

Organizer of Summer School on Antitrust and Regulation at FEUNL, June 2002.

Co-organizer of “Encontro Nacional de Economia Industrial”, FEUNL, January 2002.

Supervision 2012/09 – Doctoral research by Marta Rocha

2008/09 – 2012/06: Co-supervisor of Doctoral Research by David Henriques

2006/01 – 2010/05: Doctoral Research by Pedro Carreira

2008/10-2009/01: Masters theses of Teresa Martins, Martim Pinto

2007/02 – 2007/06: Masters theses of Marília Araújo, Ana Teresa Paquete, Ana Patrícia Simões

2006/09 – 2007/01: Masters thesis of Sara Alexandre

2004/09 – 2008/04: Doctoral Research by João Vareda

2003/11 – 2004/3: Master’s Thesis “La Privatizzazione del Settore Elettrico in Portogallo” by Deborah Manzi (Università degli Studi di Milano Bicocca)

Doctoral or Masters Juries 2011/07/25: Member of Doctoral Jury of Tong Wang, Toulouse School of Economics

2006/12/19: Member of Jury of Doctoral Thesis by Sílvia Ferreira Jorge, FEUNL

2005/10/21: Arguing member of Jury of Doctoral Thesis by António Marques, FEP, Porto

2005/01/10: Arguing member of Jury of Master Thesis by Patrick Montgomery, IST, Lisboa

Work in progress

“Welfare Analysis of Regulating Mobile Termination Rates in the UK (with an Application to the Orange/T-Mobile Merger),” with David Harbord, October 2012, resubmitted.

“Fixed-Mobile Substitution and Termination Rates”, with Marc Bourreau and Carlo Cambini, December 2013.

“Geographic Access Rules and Investments”, with Marc Bourreau and Carlo Cambini, December 2013.

“Fixed-Mobile Bundling”, with Marc Bourreau and Carlo Cambini, June 2013.

“Cooperative Investments and Access Regulation for Next Generation Networks”, with Marc Bourreau and Carlo Cambini, February 2013.

“The Breakdown of Connectivity Breakdowns”, October 2012.

“Why Mobile Networks Prefer High Termination Rates: An Exploration of Strategic Delegation”, June 2012.

“Keeping Both Eyes Wide Open: The Life of a Competition Authority Among Sectoral Regulators,” with Pedro Pita Barros and Tore Nilssen, revise & resubmit.

“Sectoral Regulators and the Competition Authority: Which Relationship is Best?” 2012, with Pedro Pita Barros, revise and resubmit.

“Asymmetric Broadband Wholesale Regulation”, May 2011.

Publications in peer-reviewed journals

“Calling clubs: Network Competition with Non-Uniform Calling Patterns”, with Roman Inderst and Tommaso Valletti, August 2013, *RAND Journal of Economics*, forthcoming.

[“Competition between multiple asymmetric networks: Theory and applications.”](#) 2014, *International Journal of Industrial Organization*, 32, 57-69.

[“Fixed-Mobile Integration”](#), 2014, with Marc Bourreau and Carlo Cambini, September 2013, *Journal of Regulatory Economics*, 45(1), 57-74.

[“Wholesale pricing, NGA take-up and competition”](#), 2012, with Stephan Jay, Werner Neu, Karl-Heinz Neumann, Thomas Plückebaum and Ingo Vogelsang, *Communications & Strategies*, 86(2), 153-174.

[“Strategic Delegation under Price Competition and Network Effects”](#), 2012, *Economics Letters*, 117, 487-489.

[“Ex-ante Regulation and Co-investment in the Transition to Next Generation Access”](#), 2012, with Marc Bourreau and Carlo Cambini, *Telecommunications Policy*, 36, 399-406.

- [“The editorial—Regulation and competition in communications markets”](#), 2012, with Carlo Cambini and Erik Bohlin, *Telecommunications Policy*, vol. 36, no. 5, pp. 357-359.
- [“The impact of different fibre access network technologies on cost, competition and welfare”](#), 2012, with Stephan Jay, Karl-Heinz Neumann, Martin Peitz, Thomas Plückebaum and Ingo Vogelsang, *Telecommunications Policy*, 36, 96-112.
- [“When Two-Part Tariffs are not enough: Mixing with Nonlinear Pricing.”](#) 2011, with Tommaso Valletti, *The B.E. Journal of Theoretical Economics* (Contributions), Vol. 11(1), Article 21.
- [“Racing for Investment under Mandatory Access”](#), 2010, with João Vareda, *The B.E. Journal of Economic Analysis & Policy*: Vol. 10: Iss. 1 (Contributions), Article 67.
- [“National FTTH plans in France, Italy and Portugal,”](#) 2010, with Marc Bourreau and Carlo Cambini, *Communications & Strategies*, 78(2).
- [“Mixing Goods with Two-Part Tariffs,”](#) 2007, with Tommaso Valletti, *European Economic Review*, 51, 1733-1750. Previously CEPR Discussion Paper 5437 and Research Paper Series 72, Tor Vergata University, CEIS.
- [“On-Net and Off-Net Pricing On Asymmetric Telecommunications Networks,”](#) 2007, *Information Economics & Policy*, 19(2), pp. 171-188. Previously CEPR Discussion Paper 5588.
- [“Bertrand Games and Sharing Rules,”](#) 2007, *Economic Theory*, 31(3), pp. 573-585. Previously CEPR Discussion Paper 4972.
- [“Should Uniform Pricing be imposed on Entrants?,”](#) 2006, *Journal of Regulatory Economics*, 30(2), pp. 199-216. Previously CEPR Discussion Paper 5052.
- [“Asymmetry, Stability and Growth in a Step-by-step R&D-race,”](#) 2003, *European Economic Review*, 47(2), pp. 245-257.
- [“Existence and Comparative Statics in Differentiated Cournot Oligopolies,”](#) 2003, *International Journal of Industrial Organization*, 21(7), pp. 989-1019.
- [“Universal Service and Entry: The role of uniform pricing and coverage constraints,”](#) 2002, with Pedro P. Barros and Tommaso M. Valletti, *Journal of Regulatory Economics*, 21(2), 169-190. Previously CEPR Discussion Paper 2789.
- “The Interplay between Regulation and Competition: The Case of Universal Service Obligations,” 2002, with Tommaso Valletti, *Ifo-Studien*, 48(1), 57-71.
- [“Mixed Bertrand Equilibria under Decreasing Returns to Scale: An Embarrassment of Riches,”](#) 2002, *Economics Letters*, 74, 359-362.

with Marc Bourreau and Carlo Cambini, CEPR Discussion Paper 9376.

[“Fixed-Mobile Integration”](#), February 2013, with Marc Bourreau and Carlo Cambini, CEPR Discussion Paper 9361.

[“The Ambivalence of Two-Part Tariffs for Bottleneck Access”](#), October 2012, with Ingo Vogelsang, Nova SBE WP 568.

[“Welfare Analysis of Regulating Mobile Termination Rates in the UK with an Application to the Orange T-Mobile Merger”](#), October 2012, with David Harbord, Nova SBE WP 571.

[“The Breakdown of Connectivity Breakdowns”](#), October 2012, CEPR Discussion Paper 9189.

[“Geographic Access Rules and Investments”](#), June 2012, with Marc Bourreau and Carlo Cambini, CEPR Discussion Paper 9013.

[“Asymmetric Broadband Wholesale Regulation”](#), May 2011, CEPR Discussion Paper 8399.

[“Calling clubs: Network Competition with Non-Uniform Calling Patterns”](#), September 2010 (with Roman Inderst and Tommaso Valletti), CEPR Discussion Paper 8114.

[“Competition between multiple asymmetric networks: Theory and applications”](#), October 2010, CEPR Discussion Paper 8060.

[“Welfare Analysis of Regulating Mobile Termination Rates in the UK \(with an Application to the Orange/T-Mobile Merger\)”](#), 2010, with David Harbord, CEPR Discussion Paper 7730.

[“When Two-Part Tariffs are not enough: Mixing with Nonlinear Pricing.”](#) 2010, with Tommaso Valletti, CEPR DP 7720.

[“Market Penetration and Late Entry in Mobile Telephony.”](#) October 2008, NET Institute Working Paper No. 08-38.

[“Tariff-Mediated Network Externalities: Is Regulatory Intervention Any Good?”](#) June 2008, CEPR Discussion Paper 6866.

[“Keeping Both Eyes Wide Open: The Life of a Competition Authority Among Sectoral Regulators.”](#) June 2008, with Pedro Pita Barros and Tore Nilssen, CEPR Discussion Paper 6861.

[“The Race for Telecoms Infrastructure Investment with Bypass: Can Access Regulation Achieve the First-best?”](#) 2007, with João Varela, CEPR Discussion Paper 6203.

[“On the Community Patent.”](#) January 2005, CEPR Discussion Paper 4883.

[“Sectoral Regulators and the Competition Authority: Which Relationship is Best?”](#), August 2004, with Pedro Pita Barros. CEPR Discussion Paper 4541.

[“Dynamic R&D-Competition with Endogenous Innovation Targets](#)

**Chapters in books
and other
publications**

“The Ambivalence of Two-Part Tariffs for Bottleneck Access”, with Ingo Vogelsang, 2013, in Dewenter, Haucap, Kehder (eds), Wettbewerb und Regulierung in Medien, Politik und Märkten, Nomos.

[“Efectos de la Reducción de Tarifas de Terminación Móvil sobre el Bienestar en el Mercado de las Telecomunicaciones de México”](#), November 2012, with David Harbord, Trimestre Economico, vol. LXXX (3), núm. 319 (Mexico), 2013.

"Mobile Telephony", with Tommaso Valletti, Oxford Handbook of the Digital Economy (ed. M. Peitz, J. Waldfoegel), 2012.

“The relationship between sectoral regulators and the competition authority”, 2005, with Pedro Pita Barros, in Bongardt, Annette, *Competition Policy in the European Union , Experie*, Lisboa, INA, Instituto Nacional de Administração

“The Interplay between Regulation and Competition: The Case of Universal Service Obligations”, 2003, with Tommaso Valletti. In *Spectrum Auctions and Competition in Telecommunications*, ed. Gerhard Illing and Ulrich Klüh, MIT Press.

**Referee for scientific
journals**

Análise Social, Annals of Economics and Statistics, B.E. Journal of Economic Analysis and Policy, B.E. Journal of Theoretical Economics, Bulletin of Economic Research, Canadian Journal of Economics, China Economic Review, Economica, Economic Inquiry, Economic Journal, Economic Theory, Empirical Economics, European Economic Review, Games and Economic Behavior, Information Economics & Policy, International Economic Review, International Journal of Industrial Organization, Journal of Economic Theory, Journal of Economics, Journal of Economics & Management Strategy, Journal of Industrial Economics, Journal of Public Economics, Journal of Regulatory Economics, Managerial and Decision Economics, Manchester School, Manufacturing & Service Operations Management, Netnomics, Network and Spatial Economics, Notas Económicas, Oxford Economic Papers, Portuguese Economic Journal, RAND Journal of Economics, Review of Economic Studies, Review of Law and Economics, Review of Network Economics, Scandinavian Journal of Economics, Southern Economic Journal, Telecommunications Policy, Theoretical Economics, Utility Policy.

**Scientific committee
member at
conferences**

EARIE 2014 (Milan), 2013 (Évora), 2012 (Rome), 2011 (Stockholm), 2006 (Amsterdam), 2005 (Porto)

European Regional Conference of the International Telecommunications Society, Istanbul, 2007.

Invited talks

Keynote speech on Regulation and Investment, 24th European Regional Conference of the International Telecommunications Society, Florence, Italy, 20 - 23 October 2013.

Presentations at conferences

2014

Conference on the Economics of Information and Communication Technologies, Telecom Paris Tech, January, “Fixed-mobile Substitution and Termination Rates”

2013

4th Workshop “Economics of ICTs”, Universidade de Évora, “Fixed-mobile integration”

2012

Xmas Meeting of German Economists Abroad, Köln, December, “Why Mobile Networks Prefer High Termination Rates: An Exploration of Strategic Delegation”

Conference on the Economics of Information and Communication Technologies, Telecom Paris Tech, October, “Why Mobile Networks Prefer High Termination Rates: An Exploration of Strategic Delegation”

EARIE, Rome, September, “Asymmetric Broadband Wholesale Regulation”

CRRI Eastern Conference, Shawnee, May. “Asymmetric Broadband Wholesale Regulation”

2011

2nd Workshop “Economics of ICTs”, Universidade de Évora, “UK Welfare”

2010

Workshop on “Competition with nonlinear pricing and loyalty discounts”, University of Bologna, October (invited), “Nonlinear Mixing”

Conference “Quantitative Analysis in Competition Assessments”, ZEW, Mannheim, October. (UK Welfare)

EARIE 2010, Istanbul, September. (UK Welfare)

4th Annual Conference of the Portuguese Economic Journal, Faro, June, “Calling Circles”.

1st Workshop “Economics of ICTs”, Universidade do Porto, March, “Multiple networks”

2009

EEA (Barcelona) and EARIE (Ljubjana): papers accepted but unable to attend for personal reasons

COST IS0605: Second Meeting of Working Group 3 Policy and Regulation (Contribution to the Swedish Presidency Preparation for an EU ICT Policy toward 2015), Stockholm, October: “Your Fibre or My Fibre? Joint Investment in New Generation Access Networks”

7th ZEW Conference: The Economics of Information and Communication Technologies, Mannheim, July, “Competition between Multiple Asymmetric Networks: a Toolkit and Applications”

Workshop on Telecommunications Economics, COST Action IS0605 Econ@Tel, Working Group 3 (“Regulation and Public Policies”) Meeting, Telecom ParisTech, Paris, April: “Competition between Multiple Asymmetric Networks: a Toolkit and Applications”

2008

5. Weihnachtstreffen deutscher Wirtschaftswissenschaftler im Ausland, Bonn, Germany, “Tariff-Mediated Network Externalities: Is Regulatory Intervention Any Good?”

ACE 2008 Annual Conference, Budapest, Hungary: Roundtable on the PT/Sonaecom merger

ITS 19th European Regional Conference, Rome, Italy: “Tariff-Mediated Network Externalities: Is Regulatory Intervention Any Good?”

35th EARIE Conference, Toulouse, France: “Tariff-Mediated Network Externalities: Is Regulatory Intervention Any Good?”

2nd Annual Conference of the Portuguese Economic Journal, Évora: “Tariff-Mediated Network Externalities: Is Regulatory Intervention Any Good?”

2007

ASSET, Padova, Italy: “Keeping both eyes wide open: A Multi-Tasking Approach to Competition-Authority Attention”

1st Annual Conference of the Portuguese Economic Journal, Ponta Delgada: “The Race of Telecoms Infrastructure Investment with Bypass: Can Access Regulation Achieve the First Best?”

ITS 18th European Regional Conference, Istanbul, Turkey: “The Race of Telecoms Infrastructure Investment with Bypass: Can Access Regulation Achieve the First Best?”

34th EARIE Conference, Valencia, Spain: “The Race of Telecoms Infrastructure Investment with Bypass: Can Access Regulation Achieve the First Best?”

2006

“Conferência sobre Telecomunicações”, Universidade Lusófona, Lisbon, “On-net and off-net pricing on asymmetric telecommunications networks”

7th CEPR conference in Applied IO, Funchal: “Mixing media with two-part tariffs”

ESEM, Vienna: “On-net and off-net pricing on asymmetric telecommunications networks”

EEA, Vienna: “Mixing media with two-part tariffs”

ASSET, Lisbon: “On-net and off-net pricing on asymmetric

telecommunications networks”

2005

EARIE, Porto: “Bertrand Equilibria and Sharing Rules”

ITS, Porto: “On-net and off-net pricing on asymmetric telecommunications networks”

EUI Competition Day: “Services of General Economic Interest”

2004

IIª Conferência “Desenvolvimento Económico Português no Espaço Europeu” of the Portuguese Central Bank, March 11th and 12th, Lisbon: “Sectoral Regulators and the Competition Authority: Which Relationship is best?”, with Pedro Pita Barros

EARIE, Berlin: “On the Community Patent”

2003

EARIE, Helsinki: “Word-by-Mouth Diffusion and Entry”

SPiE, Lisbon: “On the Community Patent”

3rd ZEW Conference on the Economics of Information and Information Technologies, Mannheim: “Word-by-Mouth Diffusion and Entry”

2002

ESEM, Venice: “Bertrand Equilibrium and Sharing Rules”

SPiE, Aveiro: “Collusion and Confusion”

2001

EARIE, Dublin: “Universal Service Obligations: Should they be imposed on entrants?”

1st ZEW Conference on the Economics of Information and Information Technologies, Mannheim

CEPR/TMR-conference “Evolution of Market Structure in Network Industries”, Lisbon

Jornadas de Economia Industrial, Barcelona

CESifo Venice Summer Institute

Jornadas da Economia Industrial, Leiria

2000

EARIE, Lausanne

ITS (International Telecommunications Society), Lausanne

EEA, Bolzano

CEPR/TMR-conference “Evolution of Market Structure in Network Industries”, Heidelberg

IV Jornadas sobre Economía de las Telecomunicaciones, Complutense, Madrid

1999

EARIE, Turino

ESEM, Santiago de Compostela

Jornadas de Economia Industrial, Madrid

Jahrestagung des Vereins für Socialpolitik, Mainz

Seminars

Universidade do Porto, Janeiro 2012

University of Copenhagen, May 2011

Autoridade da Concorrência, January 2011

ICP-ANACOM, Lisbon, January 2009

Telecom-ParisTech ENST, Paris, January 2009

Autoridade da Concorrência, Lisbon, July 2008

IST, CMU Seminar Series on ICT, Lisbon, March 2008

“Lisbon Seminar”, FEUNL/ICS, Lisbon, March 2008

ISEG, Lisbon, February 2008

University of Tromsø, Norway, December 2007

University of Oslo, Norway, November 2007

Norwegian School of Management, Oslo, Norway, November 2007

ICP-ANACOM, Lisbon, May 2007

Universidade de Évora, March 2007

Autoridade da Concorrência, Lisbon, May 2006

Università Ca' Foscari, Venezia, May 2005

FEUNL (SATPEG), October 2004

FEUNL (IRW), December 2003

FEUNL(SATPEG), 2001/2

Universidade do Minho, November 2001

Universität Mannheim, June 2001

Universidade Católica Portuguesa, Lisbon, October 2000

INSEAD, Fontainebleau, Mai 2000

**Non-academic
publications**

“O mercado das telecomunicações em Portugal”, *Jornal de Negócios*, 10/11/2005.

“A relação entre os Reguladores Sectoriais e a Autoridade da Concorrência”, *Jornal de Negócios*, 2/6/2005.

“A Maioria Qualificada na União Europeia: Comparação entre o Tratado de Nice e a Proposta da Constituição“, *Economia Pura*

(Janeiro 2004)

Services to the community and connections to business world

Member of “Comissão de Acompanhamento da Reforma do Sector Audiovisual” at the Ministério Adjunto e do Desenvolvimento Regional, October 2013 – (Diário da República, 2.^a série, N.º 208, 28 de outubro de 2013, Despacho n.º 13681/2013)

Economic Consultant for European Commission: participation in study for Revision of Regulatory Framework for Telecommunications, 2013; participation in “Support for the preparation of an impact assessment to accompany the Commission’s review of the Roaming Regulation”, 2011

Economic Consultant for companies and regulators in Belgium, Colombia, Ireland, Mexico, Netherlands, New Zealand, Portugal, UK.

Juri member of competition for regional high-speed broadband investments in Portugal, 2009-2010 (Ministério das Obras Públicas e Transportes)

Economic Consultant for ICP-Anacom, 2004-2006

Member of jury for doctoral grants in companies by Fundação de Ciência e Tecnologia (FCT), January 2007

Member of jury for research grants (post-doc, doctoral, masters) by Fundação de Ciência e Tecnologia (FCT), May 2006

Member of jury for admission exam in “General knowledge” at Centro de Estudos Judiciários, 2001

Hobbies

Piano, Cycling, Sailing (still on hold for lack of boat, though)