

Antonio J. Conejo. Short Curriculum Vitae, February 2010

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B.S. EE U. P. Comillas, Madrid, Spain, 1983.

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BOOKS:

1. E. Castillo, A. J. Conejo, P. Pedregal, R. García, N. Alguacil. "Building and Solving Mathematical Programming Models in Engineering and Science". **John Wiley & Sons**, New York, 2001.
2. A. Gómez, A. J. Conejo, et al. "Analysis and Operation of Electric Energy Systems". **McGraw-Hill**, Madrid, 2002 (in Spanish).
3. A. J. Conejo, A. Clamagirand, J. L. Polo, N. Alguacil. "Electric Circuits for Engineers". **McGraw-Hill**, Madrid, 2004 (in Spanish).
4. A. J. Conejo, E. Castillo, R. Mínguez, R. García-Bertrand. "Decomposition Techniques in Mathematical Programming. Engineering and Science Applications". **Springer-Verlag**, Heidelberg, 2006.
5. A. J. Conejo, et al. "Electricity Distribution Systems". **McGraw-Hill**, Madrid, 2007 (in Spanish).
6. A. Gómez Exposito, A. J. Conejo, C. Canizares. "Electric Energy Systems: Analysis and Operation", **Taylor and Francis**, Boca Raton, Florida, 2008.

BOOK CHAPTERS:

1. A. J. Conejo, J. M. Arroyo, N. Jiménez Redondo, F. J. Prieto. "Lagrangian Relaxation Applications to Electric Power Operation and Planning Problems". Book Chapter from "Modern Heuristic Techniques in Power Systems", edited by Y. H. Song. **Kluwer Academic Publishers**, 1999. Dordrecht.
2. F. D. Galiana, A. L. Motto, A. J. Conejo, M. Huneault. "Decentralized Nodal-Price Self-Dispatch and Unit Commitment". Book Chapter from "The Next Generation of Unit Commitment Models", edited by B. Hobs et al. **Kluwer Academic Publishers**, 2001. Dordrecht.
3. R. Mínguez, A. J. Conejo, A. Hadi. "Non-Gaussian State Estimation in Power Systems". Book Chapter from "Advances in Mathematical and Statistical Modeling" edited by B. C. Arnold et al. **Birkhäuser**, 2008, Boston.
4. E. Caro, A. J. Conejo, R. Mínguez. "A Mathematical Programming Approach to State Estimation". Book Chapter from "Optimization Advances in Electric Power Systems", edited by E. D. Castronuovo. **Nova Science Publishers, Inc.**, 2008. New York.

PAPERS IN Science Citation Index JOURNALS:

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3. A. Conejo, M. J. Aguilar. "Secondary Voltage Control: Nonlinear Selection of Pilot Buses, Design of an Optimal Control Law, and Simulation Results". **IEE Proceedings - Generation, Transmission and Distribution**. Vol. 145, No. 1, pp. 77 - 81. January 1998.
4. J. Medina, V. H. Quintana, A. J. Conejo, F. Pérez Thoden. "A Comparison of Interior-Point Codes for Medium-Term Hydro-Thermal Coordination". **IEEE Transactions on Power Systems**. Vol.13, No. 3, pp. 836-843. August 1998.
5. A. J. Conejo, J. A. Aguado. "Multi-Area Coordinated Decentralized DC Optimal Power Flow". **IEEE Transactions on Power Systems**. Vol.13, No. 4, pp. 1272-1278. November 1998.
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13. F. D. Galiana, A. J. Conejo, I. Kockar. "Incremental Transmission Loss Allocation under Pool Dispatch". **IEEE Transactions on Power Systems**. Vol. 17, No. 1, pp. 26-33. February 2002.
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1. A. J. Conejo, J. M. Arroyo, N. Jiménez-Redondo. Discussion to: S. O. Orero, M. R. Irving. "A Genetic Algorithm Modeling Framework and Solution Technique for Short Term Optimal Hydrothermal

- Scheduling". **IEEE Transactions on Power Systems**. Vol. 13, No. 2, pp. 501-518. May 1998. Discussion in **IEEE Transactions on Power Systems**. Vol. 13, No. 2, p. 518. May 1998.
2. N. Jiménez-Redondo, A. J. Conejo. Discussion to: P. B. Luh, D. Zhang, R. N. Tomastik. "An Algorithm for Solving the Dual Problem of Hydrothermal Scheduling". **IEEE Transactions on Power Systems**. Vol. 13, No. 2, pp. 593-600. May 1998. Discussion in **IEEE Transactions on Power Systems**. Vol. 13, No. 2, p. 600. May 1998.
 3. A. J. Conejo, N. Alguacil. Discussion to: D. Chattopadhyay. "Application of General Algebraic Modeling System to Power System Optimization". **IEEE Transactions on Power Systems**. Vol. 14, No. 1, pp. 15-22. February 1999. Discussion in **IEEE Transactions on Power Systems**. Vol. 14, No. 1, p. 22. February 1999.
 4. A. J. Conejo, N. Jiménez-Redondo. Discussion to: C. Greif et al. "Short-Term Scheduling of Electric Power Systems Under Minimum Load Conditions". **IEEE Transactions on Power Systems**. Vol. 14, No. 1, pp. 280-286. February 1999. Discussion in **IEEE Transactions on Power Systems**. Vol. 14, No. 1, p. 286. February 1999.
 5. A. J. Conejo, N. Alguacil, F. J. Prieto, J. Nogales. Discussion to: R. Baldick et al. "A Fast Distributed Implementation of Optimal Power Flow". **IEEE Transactions on Power Systems**. Vol. 14, No. 3, pp. 858-864. August 1999. Discussion in **IEEE Transactions on Power Systems**. Vol. 14, No. 3, p. 864. August 1999.
 6. A. J. Conejo, J. Contreras. Discussion to: J. Alonso, A. Trías, V. Gaitán, J. J. Alba. "Thermal Plant Bidding and Market Clearing in an Electricity Pool. Minimization of Cost versus Minimization of Consumers Payments". **IEEE Transactions on Power Systems**. Vol. 14, No. 4, pp. 1327-1334. November 1999. Discussion in **IEEE Transactions on Power Systems**. Vol. 14, No. 4, p. 1334. November 1999.
 7. A. J. Conejo, J. Contreras. Discussion to: I. Otero-Novas et al. "A Simulation Model for a Competitive Generation Market". **IEEE Transactions on Power Systems**. Vol. 15, No. 1, pp. 110-115. February 2000. Discussion in **IEEE Transactions on Power Systems**. Vol. 16, No. 4, p. 952. November 2001.
 8. A. J. Conejo, F. D. Galiana. Discussion to: A. M. Leite da Silva and J. G. de Carvalho Costa, "Transmission Loss Allocation: Part I - Single Energy Market," **IEEE Transactions on Power Systems**. Vol. 18, pp. 1389-1394, November 2003. Discussion in **IEEE Transactions on Power Systems**. Vol. 19, No. 4, p. 2111. November 2004.

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1. A. J. Conejo, M. Carrión, R. García-Bertrand, "Medium-Term Electricity Trading Strategies for Producers, Consumers and Retailers". **International Journal of Electronic Business Management**. Vol. 5, No. 3, pp. 239-252. 2007.

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1. A. J. Conejo. "Optimal Reservoir Utilization in Probabilistic Production Costing". Proceedings of the Twelve Power Systems Computation Conference, **PSCC'90**. Graz, Austria, August 1990.
2. J. Medina, A. J. Conejo, N. Jiménez, F. Pérez, J. González. "An LP Based Decomposition Approach to Solve the Medium-Term Hydro-Thermal Coordination Problem". Proceedings of the Twelve Power Systems Computation Conference, **PSCC'96**. Dresden, Germany, August 1996.
3. J. Perez, A. J. Conejo. "Long-Term Hydro-Thermal Coordination Model Based on the Equivalent Load Method". Proceedings of the Twelve Power Systems Computation Conference, **PSCC'96**. Dresden, Germany, August 1996.
4. J. Medina, V. H. Quintana, A. J. Conejo, F. Pérez Thoden. "A Comparison of Interior-Point Codes for Medium-Term Hydro-Thermal Coordination". Proceedings of the 1997 Power Industry Computer Applications, **PICA'97**. Columbus, Ohio, May 1997.
5. J. M. Arroyo, A. Conejo, N. Jiménez-Redondo. "A Genetic Algorithm Approach to Solve the Unit Commitment Problem". Proceedings of the Intelligent Systems Applications to Power Systems, **ISAP'97**. Seoul, Korea, July 1997.
6. F. J. Nogales, F. J. Prieto, A. J. Conejo. "The Multi-Area AC Optimal Power Flow: A New Decomposition Approach". Proceedings of the 13th Power Systems Computation Conference, **PSCC'99**. Trondheim, Norway, July 1999.
7. R. Espínola, J. Contreras, F. J. Nogales, A. J. Conejo. "Day-ahead Electricity Price Forecasting Based on Time-series Models: A Comparison". Proceeding of the 14 Power Systems Computation Conference, **PSCC'02**. Seville, Spain, July 2002.
8. R. Garcia-Bertrand, D. Kirschen, A. J. Conejo. "Optimal Investments in Power Generation Capacity under Uncertainty". Proceeding of the 16 Power Systems Computation Conference, **PSCC'08**. Glasgow, U.K., July 2008.
9. I. Kockar, A. J. Conejo, J. R. McDonald. "Influence of the Emission Trading Scheme on Unit Commitment". Proceeding of the 16 Power Systems Computation Conference, **PSCC'08**. Glasgow, U.K., July 2008.
10. R. Mínguez, A. J. Conejo, R. García-Bertrand, E. Castillo. "Reliability-Based Risk-Metric Computation for Energy Trading". Proceeding of ESREL 2008 and 17th SRA-Europe Conference. Valencia, Spain, September 2008.

RESEARCH INTERESTS:

Control, operations, planning, economics and regulation of electric energy system. Electricity markets. Large scale optimization. Mathematical programming. Stochastic Programming. Statistics. Optimal control.

RESEARCH PROJECTS:

1. **DGICYT** PB91-0215 Large-scale optimal control. Principal investigator. National Science Foundation of Spain. 1992-1994
2. **DGICYT** PB95-0472 Power system operations planning. Principal investigator. National Science Foundation of Spain. 1996-1999.
3. **FEDER/CICYT** 1FD97-0545 ELCOGAS power plant market strategy. Principal investigator. National Science Foundation of Spain and European Union. 1999-2001
4. **FEDER/CICYT** 1FD97-1598 Electricity price forecasting. Principal investigator. National Science Foundation of Spain and European Union. 2000-2001.
5. **European Union** EU IST-1999-12088. Open market energy generation allocation, OMEGA. Principal investigator. European Union. 2000-2002
6. **CICYT** DPI2000-0654. Equilibrium of electricity markets. Principal investigator. National Science Foundation of Spain. 2000-2003.
7. **Castilla – La Mancha** GC-02-006. Electric Energy System Group. Principal investigator. Government of Castilla – La Mancha. 2002-2005.
8. **CICYT** DPI2003-01362. Optimal response to the electricity market by producers, retailers and large consumers. Principal investigator. National Science Foundation of Spain. 2004-2006.
9. **Castilla – La Mancha** PBI-05-053. Risk and security analysis in electric energy systems. Principal investigator. Government of Castilla – La Mancha. 2005-2007.
10. **CICYT** DPI2006-08001. Production, procurement and trading strategies in electricity markets via stochastic programming. Principal investigator. National Science Foundation of Spain. 2007-2009.
11. **Castilla – La Mancha** PCI08-0102. Integration of renewable electric energy sources in a power system: Technical and economic impact. Principal investigator. Government of Castilla – La Mancha. 2008-2010.
12. **CICYT** DPI2009-09573. Risk Management in Electricity Markets (RiskMEM). Principal investigator. National Science Foundation of Spain. 2010-2012.

Principal investigator of more than 19 project financed by the electric power industry including all major utilities in Spain.

EDITOR FOR:

1. **INFORMS Operations Research**: Associate Editor, June 2002 to January 2006.
2. **IEEE Transactions on Power Systems**: Editor, January 2003 to date.
3. **Electric Power Systems Research**: Member of the Editorial Board, January 2007 to date.
4. **IET Generation, Transmission and Distribution**: Member of the Editorial Board, June 2008 to date.

REVIEWER FOR:

5. **IEEE Power Engineering Society**.
6. **Operations Research** (2000 Operations Research Meritorious Service Award).
7. **IET Generation, Transmission and Distribution**.
8. **Electric Power Systems Research**.
9. **International Journal of Electric Power and Energy Systems**.
10. **National Science Foundation of Spain**.
11. **National Science Foundation of Canada**.
12. **Science and Engineering Research Council of Singapore**.

GRADUATE STUDENT SUPERVISION:

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08/83 - 11/83. Research Associate. Instituto Tecnológico Postgraduados, Madrid, Spain
11/83 - 10/84. Research Engineer. Instituto de Investigación Tecnológica, Madrid, Spain
11/85 - 11/86. Visiting Engineer. **Massachusetts Institute of Technology** (MIT), Cambridge, USA.
09/86 - 09/87. M.S. Student. **Massachusetts Institute of Technology** (MIT), Cambridge, USA.
10/87 - 10/88. Visiting Lecturer. **Royal Institute of Technology**, Stockholm, Sweden
10/88 - 12/90. Research Associate. **Royal Institute of Technology**, Stockholm, Sweden
01/91 - 03/93. Assistant Professor. Universidad P. Comillas, Madrid, Spain
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INDUSTRIAL EXPERIENCE:

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PROFESSIONAL SOCIETY MEMBERSHIP:

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2. **INFORMS**.
3. Registered engineer in Spain

MOST RECENT COURSES TAUGHT:

UMA Power system analysis. UMA Power system computational methods. UMA Optimization theory and applications. UCLM Electric circuits. UCLM Power system analysis. UCLM Electricity generation, transmission and distribution. UC3M Linear programming and decomposition techniques. USCh Electric power markets.

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