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Links for Faculty

Alfredo Garcia



Position: Professor
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Degrees:
 Ph.D, University of Michigan
 D.E.A., Université de Toulouse III
 Ing. Elec., Universidad de los Andes

Biography:

Alfredo Garcia received a B.Sc. degree in Electrical Engineering from Universidad de los Andes (Colombia) in 1991, a Diplome d'Etudes Approfondies DEA in Control Systems in 1992 from Universite Paul Sabatier (Toulouse) in 1992 and Ph.D. in Operations Research from University of Michigan. During 1996-99, he worked for the Colombian Government (Energy and Gas Regulatory Commission CREG) and Fundesarrollo, a think tank, in a number of public policy issues including the deregulation of electricity & natural gas industries and taught courses in Game Theory, Optimization and Stochastic Processes at Universidad de los Andes (Bogota) and Universidad del Norte (Barranquilla).

Research Interests:

- Theoretical issues in dynamic programming and dynamic games
- The economic regulation of network industries (electricity, gas, telecom)
- The analysis of decentralized algorithms for complex network optimization
- Systems coordination

Research Groups:

- [Optimization and Control](#)

Research Centers:

- [Wireless Internet Center for Advanced Technology](#)

Representative Publications:

1. M. Hong and A. Garcia (2011). Equilibrium Pricing of Interference in Cognitive Radio Networks. *IEEE Transactions on Signal Processing (forthcoming)*.
2. M. Hong and A. Garcia (2011). Averaged Iterative Water-Filling Algorithm: Robustness and Convergence. *IEEE Transactions on Signal Processing, Vol. 59 No. 5* pp. 2448-2454.
3. A. Garcia and E. Stacchetti (2011). Investment Dynamics in Electricity Markets. *Economic Theory Vol. 46, No. 2*, pp. 149-187.
4. A. Garcia and J. Shen (2010). Equilibrium Capacity Expansion under Stochastic Demand Growth. *Operations Research, Vol. 58* pp. 30-42.
5. A. Garcia, F. Pedraza and Ch. Li (2010). A Bio-Inspired Scheme for Coordinated Online Search. *IEEE Transactions on Automatic Control, Vol. 55 No. 9* pp. 2142-2148.
6. G. Davis, A. Garcia and W. Zhang (2009). Empirical Analysis of the Effects of Cyber Security Incidents. *Risk Analysis, Vol. 29, No. 9*, pp. 1304-1316.
7. E. Campos, A. Garcia and C. Li (2008). A Game Theoretic Approach to Efficient Power Management in Sensor Networks. *Operations Research, Vol. 56, No. 3* pp. 552-561.

Other Activities:

- Chair, SIE Graduate Committee
- Visiting Professor, Universidad Carlos III, Madrid (2010)

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Graduate Students:

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