

# **Andrés Félix Weintraub Pohorille**

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## **ACADEMIC DEGREES**

Electrical Engineer, University of Chile, 1967.

M.A. Statistics, University of California, Berkeley, 1970.

Ph. D. Industrial Engineering and Operations Research, University of California, Berkeley, 1971.

## **RESEARCH INTERESTS**

Operations Research, Logistics, Operations Management in Forest and Mining.

## **ACADEMIC AND PROFESSIONAL POSITIONS**

- Professor, Department of Industrial Engineering, University of Chile, 1974-present. (Full Professor since 1985).
- Research Lead, Millennium Institute Complex Engineering Systems 2007-2011. (Annual grant US\$ 1.8 million)
- Research Lead, Millennium Nucleus Complex Engineering Systems 2002-2006. (Annual grant US\$ 350,000)
- Assistant Research Engineer, University of California, Berkeley, 1971-1974 (full time), 1974-1989 (part-time).
- Lecturer, Department of Industrial Engineer and Operations Research, University of California, Berkeley, Jun-Sept. 1977.
- Engineer, National Telecommunications Enterprise, Chile, 1967.

## **ACTIVITIES AND DISTINCTIONS**

- Chilean Forest Engineers Association's Contribution to Forest Engineering Recognition 2007.
- Chilean Engineers Institute's Distinguished Activities Prize 2004.
- Awarded Chile's National Prize in Applied Science, 2000. This is the highest Chilean award that recognizes career achievement, and entails a lifetime endowment.

- Winner of the 2000 Harold Lander Memorial Prize of the Canadian Operations Research Society, awarded yearly for International Achievement in Operations Research.
- Winner of the Edelman Prize Competition 1998 (INFORMS, US Society in Operations Research and Management Sciences) with best applied work in Operations Research in an open worldwide competition, with about 40 competitors. Recent winners include IBM, General Motors, Continental Airlines.
- Member of INFORMS Board (2002-2004). Vice-President for Education and Outreach (2003-2004).
- President of the International Federation of Operational Research Societies (IFORS), 1998-2000 (45 countries; about 20.000 members).
- Member of Chile's Academy of Sciences (36 lifetime members), since 1994.
- Member Council of The Institute of Management Sciences (TIMS, later INFORMS), 1994-1995.
- President of the Latin Ibero-American Association of Operations Research (1986-1988). Co Founder in 1982.
- Main Researcher in FONDECYT Projects (Chile): 1984-1985, 1986-1988, 1989-1991, 1992-1994, 1994-1996, 1996-1998, 2000-2002, 2002-2004, 2004-2006, 2006-2008, 2008-2010. Top ranked projects in Engineering in 1986 and 2004.
- Main Researcher FONDEF Projects (Chile): 1992-1996 and 1998-2000.
- Co-Founder and Chair of the Forestry Group within ORSA/TIMS, 1984-1997 (USA). This group integrates operational researchers and foresters with OR interests and continues intensive activities within INFORMS.
- Member of the Council for Chilean Environmental Certification for Forestry. (Responsible for developing environmental rules for Chilean forest industries. 2003-present).
- Member of Chile's National Council for Scientific and Technological Research, 1994-1997.
- Member of Council for manufacturing area, FONDEF University-Industry grants, 1992-94.
- Chosen “Best Professor” (Department of Industrial Engineering) by students, six times since process started in 1997.

## **MEMBER OF EDITORIAL COMMITTEES**

- Member of Advisory Board of Journals: Operational Research (UK) 1993-present.
- International Journal of Operations and Quantitative Management, 1997-present.
- International Transactions in Operations Research, 1993-present.
- Co-Editor of issues in Natural Resources in the Annals of Operations Research, Kluwer, 2002.
- Co-Editor, Handbook of Operations Research in Natural Resources, Springer, 2007.
- Investigación Operativa (journal of the Sociedad Latinoamericana de Investigación Operativa), 1996-present.
- Journal of the Sociedad Española de Investigación de Operaciones y Estadística 1994-present.
- Journal of the Sociedad Portuguesa de Investigación de Operaciones, 1986–1990.
- International Abstracts of Operations Research, 1977-1984.

- Founder and Editor of the Revista Ingeniería de Sistemas journal, 1975-1982 and 1989 -1993.
- Co-Editor of the Revista del Instituto Chileno de Investigación Operacional journal, 1983 - 1986.

## **ACADEMIC ADMINISTRATION**

- Member of University of Chile's Evaluation Board. Since 2006.
  - Member of the Academic Senate, University of Chile, 2003-2005.
  - Director of the Department of Industrial Engineering, University of Chile, 1984-1986.
- Member of the Evaluation Council, University of Chile (5 member board to oversee the University), 2007-2011

## **ACADEMIC DISCIPLES** (Guided Thesis Research). In parenthesis present position.

- Rafael Epstein (Dep. of Industrial Engineering, U. of Chile)
- Susana Mondschein (U. of Yale)
- Felipe Caro (UCLA)
- Francisco Barahona (IBM Research Center, New Jersey)
- Jorge Vera (Catholic University, Chile)
- Jaime Gonzalez (Dep. of Math Engineering, U. of Chile)
- Carmen Ortiz (U. Adolfo Ibáñez, Chile)
- Samuel Varas (U. Adolfo Ibáñez, Chile)
- Marcos Goycoolea (U. Adolfo Ibáñez, Chile)
- Daniel Espinoza (Dep. Industrial Engineering, U. Chile)
- Juan Pablo Vielma ( PhD student, Georgia Tech)
- Martín Quinteros (PhD student, MIT)

### ***Thesis Work***

Since 1991, approximately 48 engineering thesis and 15 master thesis guided.

## **ORGANIZATION OF CONFERENCES**

- Chair, International Symposium on Systems Analysis and Management Decisions in Forestry, Valdivia, 1993, Punta de Tralca, 2002.
- Co-organizer, Workshop on Hierarchical Approaches to Forest Planning, Toronto 1992.
- Program Committee member, Symposium on Systems Analysis in Forest Resources, Charleston, 1991.
- Program Committee member, XII IFORS 90, World Conference on Operations Research, Athens, 1990.
- Chair, Program Committee of the III Latin American Conference in OR, Santiago 1986.

- Organizer of sessions or cluster of sessions in multiple Conferences since 1981. INFORMS (US), ALIO (Latin America), EURO, IFORS and others.

## **RECENT INVITED CONFERENCES AND TUTORIALS**

- INFORMS Practice, Palm Springs (2005), IFORS Distinguished Lecture Plenary (Habana 2004), IFORS Tutorial (Hawaii 2005), New Zealand OR Conference Plenary (2004).

## **APPLIED PROJECTS AND PROFESSIONAL EXPERIENCE**

- MULTIEXPORT (salmon producing firm). Models to optimize production. 2007-present.
- SUDAMERICANA DE VAPORES (sea transport company). Containers management planning. 2005-present.
- CODELCO (mining firm), developing planning models for underground and open pit-copper mines. Since 2000.
- Football Federation. Matches scheduling for the 2005-2008 seasons using mixed integer programming.
- Work on environmental impact of forest harvesting (FONDEF Project 1998-2000)
- Work with Chilean Forest Industries on Operations Models for Transportation and Harvesting. Includes FONDEF project 1993-1996, besides direct support from industry.
- PANELES ARAUCO (forestry firm). Model to schedule production process in panel industry.
- Work with Ministry of Public Works and Railway national company on development of concessions for roads and use of railways to transport timber, 1992-1994.
- IDRC (Canada) / University of Montreal / Catholic University of Chile. Urban traffic models. 1985-1988.
- CONAF (Chile's Forestry Preservation Agency) /FAO/UNDP. Forest Planning models, 1980-81.
- CONAF/FAO/UNDP. Evaluation of goods and services in National Parks. 1981.
- From 1971 to 1974, work full time for the US Forest Service, Pacific Southwest Region office in Berkeley, through grants to the Operations Research Center, University of California Berkeley. After returning to Chile in 1974, continued the same work part-time, with yearly visits to Berkeley until 1988.

## PUBLICATIONS (main publications marked with \*)

1. Goycoolea M., Murray A., Vielma J. P., and Weintraub A., “Evaluating approaches for solving the area restriction model in harvest scheduling”. **Forest Science** 55(2): 149-165. 2009.
2. Basnet C. and Weintraub A., “A genetic algorithm for a bicriteria supplier selection problem”. **International Transactions in Operational Research** 16: 173-187. 2009.
3. Schultz X., Pereira M. and Weintraub A. “A Priori and A Posteriori Aggregation Procedures to Reduce Model Size in MIP Mine Planning Models”. **Electronic Notes in Discrete Mathematics** 30: 297-302. 2008.
4. D’Amours S., Rönnqvist M., Weintraub A., “Using operational research for supply chain planning in the forest products industry”. **Information System Operational Research** 46(4):265-281. 2008.
5. Gac I., Martínez F. and Weintraub A., “A deterministic linear optimization model for allocating schools to zones”. **Journal of the Operation Research Society online publication**, June 25, 2008.
6. Weintraub A. “Integer Programming in Forestry”. **Annals of Operations Research** 149 (1): 209-216, 2007.
7. Vielma J.P., Alan T. Murray, David M. Ryan and Andrés Weintraub, “Improving computational capabilities for addressing volume constraints in forest harvest scheduling problems”, **European Journal of Operational Research** 176 (2):1246-1264, 2007.
8. Duran G., Guajardo M., Miranda J. Sauré D., Souyris S., Weintraub A., “Scheduling the Chilean Soccer League by integer programming”. **Interfaces** 37 (6): 539-552, 2007.
9. Palma C., Cui W., Martell D., Robak D., Weintraub A., “Assessing the impact of stand-level harvests on the flammability of forest landscapes”, **International Journal of Wildland Fire** 16 (5): 584-592, 2007.
10. Vielma J.P., Murray A., Ryan D., and Weintraub A., “Improving computational capabilities for addressing volume constraints in forest harvest scheduling problems”, **European Journal of Operational Research**, Vol.176, Nº2, pp.1246-1264, 2007.
11. Díaz Legües A., Jacques A. Ferland, Celso C. Ribeiro, Jorge R. Vera and Andrés Weintraub, “A tabu search approach for solving a difficult forest harvesting machine location problem”. **European Journal of Operational Research**, Vol.179, Nº3, pp.788-805, 2007.

12. Epstein R, Weintraub A, Sapunar P, et al. "A combinatorial heuristic approach for solving real-size machinery location and road design problems in forestry planning". **Operations Research** 54 (6): 1017-1027, 2006.
13. Weintraub A, Romero C. "Operations research models and the management of agricultural and forestry resources: A review and comparison". **Interfaces** 36 (5): 446-457, 2006.
14. Weintraub A. and Murray A., "Review of combinatorial problems induced by spatial forest harvesting planning". **Discrete Applied Mathematics**, Vol.154, N°5, pp.867-879, 2006.
15. Goycoolea M., Epstein R., Weintraub A., Murray A., Barahona F., "Harvest Scheduling Subject to Maximum Area Restrictions: Exploring Exact Approaches", **Operations Research**, Vol. 53, N°3, pp. 490-500, 2005. (\*)
16. Bjorndal T., Lane D., and Weintraub A. "Operational Research Models and the Management of Fisheries and Aquaculture: A Review". **European Journal of Operational Research**, 156, N°3, pp.533-540, 2005.
17. Caro F., Shirabe T., Guignard M. and Weintraub A., "School redistricting embedding GIS tools with integer programming". **Journal of Operational Research Society** 55, pp.836-849, 2004.
18. Murray, A.T., Goycoolea M. and Weintraub A. "Incorporating average and maximum area restrictions in harvest scheduling models." **Canadian Journal of Forest Research**, 34: 456-464, 2004.
19. Caro F., Andalaft R., Weintraub A., Sapunar P., Cabello and Cabellos M. , "Evaluating the Economic Cost of Environmental Measures in Plantation Harvesting through the Use of Mathematical Models", **Production and Operations Management**, Vol. 12, N° 3, 2003.
20. Andalaft N., Andalaft P., Guignard M., Adrian Magendzo, Alexis Wainer, Andres Weintraub. "A Problem of Forest Harvesting and Road Building Solved Through Model Strengthening and Lagrangean Relaxation", **Operations Research**, Vol.51, N°4, pp. 613-628, 2003. (\*)
21. Caro F., Constantino M., Martins I. and Weintraub, A., "A 2 Opt Tabu Search Procedure for the Multi-Period Forest Harvesting Problem with Adjacency, Green-up, Old Growth and Even Flow Constraints", **Forest Science**, Vol. 49, N°5, pp. 738-751, 2003.
22. Vera, J., Weintraub, A., Koenig, M. Bravo G., Guignard M., Barahona F., 2003. "A Lagrangian Relaxation Approach for a Machinery Location Problem in Forest Harvesting". **Pesquisa Operacional**, V. 23, N°1, pp.111-128 , 2003.
23. Murray A. and Weintraub A. "Scale and Unit Specification Influences in Harvest Scheduling with Maximum Area Restrictions". **Forest Science** 48(4), pp.779-789, 2002.

24. Weintraub A, Guignard M, Church, R and A Murray "Forest Management Models and combinatorial Algorithms: Analysis of State of the Art", **Annals of Operation Research** 96, pp.41-66. 2000.
25. Weintraub, A., Epstein, R., Chevalier, P., Gabarró, J. "A System for Short Term Harvesting", **European Journal of Operations Research** 119, pp. 427-439, 1999.
26. Weintraub, A., Aboud J., Fernandez C., Laporte G., Ramirez E., "An Emergency Vehicle Dispatching System for An Electric Utility in Chile". **Journal of the Operational Research Society**, Vol. 50, pp.690-696. 1999.
27. Weintraub A., Epstein, R., Murphy G., Manley B. "The Impact of Environmental Constraints on Short Term Harvesting: Use Planning Tools and Mathematical Models". **Annals of Operations Research**, 96, pp. 271-285, 2000.
28. Weintraub A., Murray A., Church R., "Operational Forest Planning and Steiner Tree Extension", **Geographical Systems**. Vol. 5, pp.221-237, 1999.
29. Epstein, R., Morales, R., Serón, J., Weintraub, A. "Use of OR Systems in the Chilean Forest Industries", **Interfaces** 29, Vol. 29, pp. 7-29. 1999 (\*)
30. Weintraub A., Aboud J., Fernandez C., Laporte G., Ramirez E., "An Emergency Vehicle Dispatching System for An Electric Utility in Chile". **Journal of the Operational Research Society**, Vol. 50, pp. 690-696, 1999.
31. Church R., Murray, A., Weintraub, A., "Locational Issues in Forest Management", **Locational Science** 6, pp. 137-153, 1998.
32. Martell, D., Gunn E., Weintraub A., "Forest Management Challenges for Operational Researchers". **European Journal of Operations Research**, pp. 1-17, 1998.
33. Equi, L., Gallo, G. Marziale S., Weintraub A., "A Combined Transportation and Scheduling Problem. **European Journal of Operations Research**, pp. 94-104, 1997.
34. Weintraub A., Saez G., Yadlin M., "Aggregation Procedures in Forest Management Planning Using Cluster Analysis". **Forest Science**, Vol. 43(2), pp. 274-284, 1997.
35. Weintraub A. and Bare Bruce. "New Issues in Forest Management from an Operations Research Perspectives", **Interfaces**, Vol. 26, Nº5, pp. 9/25, 1996.
36. Weintraub A., Epstein R., Morales R., Serón J. and Traverso P. "A Truck Scheduling System Improves Efficiency in the Forest Industries" **Interfaces**, Vol. 26, Nº4, 1996.
37. Weintraub, A., Jones, G., Meacham, M. Magendzo M., Magendzo, A., Malchuk, D. "Heuristic Procedures for Solving Mixed-Integer Harvest Scheduling Transportation Planning Models". **Canadian Journal of Forest Research**, Vol. 25, pp. 1618-1626, 1995.

38. Weintraub, A., Barahona, F., J.C. Rozas, Muñoz, E. "Solving Multicommodity Flow Problems", **Investigación Operativa**. Vol.3, pp.01-213, 1993.
39. Weintraub, A., Jones, G., Magendzo, A. Meacham, M. Kirby M. "Heuristic System to Solve Mixed Integer Forest Planning Models", **Operations Research**, Vol. 42, N°6, pp.1010-1024, 1994.
40. Weintraub, A. and Abramovich, A. "Analysis of Uncertainty of Future Timber Yields in Forest Management", **Forest Science**, Vol. 41, N°2, pp.217-234, 1995.
41. Weintraub, A., Barahona, F. and Epstein, R. "A Column Generation Algorithm for Solving General Forest Planning Problems with Adjacency Constraints", **Forest Science**, Vol. 40, pp. 142-161, 1994 (\*).
42. Barahona F., Weintaub, A. and Epstein R., "Habitat Dispersion in Forest Planning and Stable Set Problem". **Operations Research**, Vol. 40, N°1, 1992.
43. Weintraub A. and Cholacky A. "A Hierarchical Approach to Forest Planning". **Forest Science**, Vol. 39 N°5, pp.439-460, 1991.
44. Weintraub A. and J. Vera "A Cutting Plane Approach for Chance Constrained Linear Programs". **Operations Research**. Vol. 39, N°5, pp. 776-785, 1991.
45. Fernandez E., Marcotte P., Mondschein S., Vera J and Weintraub A. "Solution Approaches to the Bus Operator Problem". **Transportation Research**, Vol. 26-B N°53, 1992.
46. Rensi G. and Weintraub A. "Using Dynamic Programming to Determine Efficient Kiln-Drying Schedules". **Wood and Fiber Science**, Vol. 20, pp. 215-225, 1988.
47. Weintraub A., Barros O., Magendzo A., Ibarra F. and Ortiz C. "A Truck Dispatching System For a Large Open Pit Mine". **Operational Research**, pp. 650-662, 1987.
48. Navon D. and Weintraub A. "Operational Model of Supply for Wildland Enterprises". **TIMS Special Issue on Forest Management**, Vol. 21, pp. 353-370, 1986.
49. Barros O. and Weintraub A. "Spatial Market Equilibrium Problems as Network Models". **Discrete Applied Mathematics**, Vol. 13, pp. 109-130, 1986.
50. Weintraub A. and Navon D., "Mathematical Programming in Large Scale Forestry Modeling and Applications". **TIMS Special Issue on Forest Management**, Vol. 21, pp. 337-351, 1986.
51. Weintraub A., Kohn V. and Guitart S. "Strategic Planning in Forest Industries". **European Journal of Operations Research**, Vol. 24, N° 1, pp. 152-168, 1986.
52. Weintraub A., Ortiz C. and González J. "Accelerating Convergence of the Frank-Wolfe Algorithm", **Transportation Research**, Vol. 19, N° 2, pp. 113-122, 1985.

53. Barros O. and Weintraub A. "Planning for Vertically Integrated Forest Industries" **Operations Research**, Vol. 30, N° 5, pp. 1168-1182, 1982.
54. Serra P. and Weintraub A. "Convergence of Decomposition Algorithms for the Traffic Assignment Problem". *Studies on Graphs and Discrete Programming*, P. Hansen. Ed. North Holland, pp. 221-226, 1981.
55. Weintraub A. and Ingram W. "An Efficient Approach to Some Cases of Coefficient Variations in Linear Programs". **Operations Research**, pp. 609-611, 1981.
56. Weintraub A. and González J. "An Algorithm for the Traffic Assignment Problem". **Networks**, Vol. 10, pp. 197-209, 1980.
57. Barros O. and Weintraub A. "Production Planning in the Dairy Industry in Chile", **Operational Research** 78, pp. 267-286, 1978.
58. Weintraub A. and Navon D. "A Forest Management Planning Model Integrating Silvicultural and Transportation Activities", **Management Science**, Vol. 22, N° 12, pp. 1299-1309, 1976.
59. Weintraub A. "A Primal Algorithm to Solve Network Flow Problems with Convex Costs", **Management Sciences**, Vol. 21, N° 1, pp. 87-97, 1974. (\*)
60. Weintraub A. "The Shortest and K-Shortest Routes as Assignment Problems", **Networks**, Vol. 3, pp. 61-73, 1973.

## BOOK CHAPTERS

1. Epstein R., Karlsson J., Ronnqvist M., Weintraub A., "Harvest Operational Models in Forestry". *Handbook of Operations Research in Natural Resources*, Andres Weintraub, Carlos Romero, Trond Bjornald, Rafael Epstein (eds.), 365-377. Springer 2007.
2. Epstein R., Ronnqvist M., Weintraub A., "Forest Transportation". *Handbook of Operations Research in Natural Resources*, Andres Weintraub, Carlos Romero, Trond Bjornald, Rafael Epstein (eds.), 365-377, Springer 2007.
3. Caro R., Epstein R., Santibañez P., Weintraub A. "An Integrated Approach to the Long-Term Planning Process in the Cooper Mining Industry". *Handbook of Operations Research in Natural Resources*, Andres Weintraub, Carlos Romero, Trond Bjornald, Rafael Epstein (eds.), 365-377, Springer 2007.
4. Epstein R., Goycoolea M., Murray A., Weintraub A., "An Adjacency-Modeling Problem Based on Constructing Harvesting Areas". G.J. Arthaud and T.M. Barret (eds.) *Systems Analysis in Forest Resources*, 279-280. Kluwer Academic Publishers, 2003.
5. Weintraub A., Hof J., "Forestry Industry", in *Handbook of Applied Optimization*, Oxford University, pp. 719-728, 2002.

6. Weintraub A., Epstein R. "The Supply Chain in the Forest Industry: Models and Linkages", in Joseph Geunes, Panos M., Pardalos and H. Edwing Romeijn (eds.) Applied Optimization, Supply Chain Management Models, Applications, and Research Directions, pp.343-362, Kluwer Academic Publishers, 2002.
7. Weintraub A., "Using Models in the Management of Forest Industries in Applied Decision Analysis", Kluwer , J. Girón (ed.) 85-97 (1998).
8. Weintraub A., "Natural Resources", in S. Gass and C. Harris (eds.), Encyclopaedia of Operations Research and Management Science, pp. 427-431, Kluwer Academic Publishers, 1996.

## **IN ANNALS AND OTHER INTERNATIONAL PUBLICATIONS**

1. Weintraub A. Integer Programming in Forestry, Annals of Operations Research 149 (1): 209-216, February 2007.
2. Weintraub A. and Peter Horner "As the World Turn" , OR/MS Today April 2003, pp.46-54.
3. Weintraub A. and Hof J. "Forestry Industry Handbook of Applied Optimization". Oxford University Press, 2000, pp. 719-728.
4. Weintraub A., "Is OR Global". OR/MS. Today, April 1999, pp: 28-29.
5. Weintraub A., Giron J., "Using Models in the Management of Forest Industries in Applied Decision Analysis". Conferencia Academia de Ciencias de España, Kluwer Academic, Publ. 1998. pp. 85-97.
6. Weintraub, A., Andalaft, N., Andalaft P., Guignard, M., VII CLAIO, Latin-Ibero American Congress on Operation Research and System Engineering, Annals pp.1132/1136, Brazil, August 1996.
7. Guignard, M., Bravo, G., Vera, J., and Weintraub A., A Lagrangean Relaxation Approach to Location Problem in Forest Harvesting, VIII CLAIO, Annals, pp.531-536, Rio de Janeiro, Brazil, August 1996.
8. Weintraub, A., Epstein R., Sapunar P., Nieto E., Sessions J., Sessions B., "PLANEX : A System for Optimal Assignment of Harvesting Proceedings Harvest Planning Conference, November 1995. LIRO, New Zealand.
9. Weintraub, A., Epstein R., Sapunar, P., Nieto, E., Sessions J., Sessions, B. "Planex: A System for Optimal Assignment of Harvesting", Proceedings Harvest Planning Conference, LIRO, New Zealand, November 1995.
10. Weintraub, A. Planning Packages: "Will The Computer Do It All?", Proceedings Harvest Planning Conference, LIRO, New Zealand, November 1995.
11. Weintraub, A., Yadlin, M. and Saez, G. "Aggregation Procedures in Forest Management Planning Using Cluster Analysis", Asilomar Proceedings pp. 410-417, September 6-9, 1994.

12. Weintraub, A., Guignard, M. and Epstein, R. "Exact and Approximate Algorithms For Forest Management Problems", Asilomar Proceedings pp. 372-377, California, September 6-9, 1994.
13. Weintraub, A., R. Epstein, Morales, R., Serón, J. OR/MS Boosts Productivity in Chile's Timber Industry. OR/MS Today, Oct. 1994, pp. 40-42.
14. Weintraub, "A. Data and Decision Aggregation Processes in Hierarchical Planning". Proceedings of Workshop on Hierarchical Planning in Forest Enterprises, pp. 171-176, Toronto 1993.
15. Weintraub, A., and L. Davis. "Hierarchical Planning in Forest Resource Management: Defining the Dimensions of the Subjects Area", Proceedings of Workshop on Hierarchical Planning in Forest Enterprises, Toronto 1993.
16. Weintraub A., Morales R., Serón J., Epstein R., "Managing Operations in Pine Forest Industries". Systems Analysis in Forest Resources, Charleston, USA, Proceedings pp. 31-34, March 1991.
17. Weintraub A., Morales R., "A Model for Strategic Planning in the Management of Pine Forest Industries". Symposium Systems Analysis in Forest Resources, Charleston, USA, Proceedings, pp. 114-117, March 1991.
18. Weintraub A., Jones Greg, J., Meacham, M.L., Magendzo A., "A Heuristic Process for Solving Large-Scale, Mixed-Integer Mathematical Programming Models for Site-Specific Timber Harvest and Transportation Planning". Symposium Systems Analysis in Forest Resources, Charleston, USA, Proceedings pp. 192-198, March 1991.
19. Jones G., Weintraub A., Meacham M., Magendzo A. "A Heuristic Process for Solving Mixed-Integer Land Management and Transportation Planning Models", U.S.D.A. Forest Service Research Paper INT 447. pp. 39. July 1991.
20. Morales R. y Weintraub A. "Growth Prediction and Management Models for Pine and Eucalyptus Plantations", IUFRO Newsletter Working Group S-4.0406. 1988.
21. Jones G., Meacham M., Magendzo A., Cahoon R. y Weintraub A. "An Automated Heuristic Process for Solving Integrated Resource Planning Model (IRPM) and TRANSCHIP Formulation: User's Guide". USDA Forest Service, Intermountain Research Station, Ogden, Utah, 1988.
22. Weintraub A., "Report on the book Building Models for Conservation and Wildlife Management", Interfaces Vol. 18, N°5, pp. 93-94, 1988.
23. Weintraub A., G. Jones, and others. "IRAS; A System for Site-Specific Land Management and Transportation Planning". Meeting Society of American Foresters (1988), pp. 355-360.
24. Hrubes R., Navon D., Veiga G. y Weintraub A. "Max-Loss An Automated Procedure for Calculating the Maximum Loss in Optimality in Aggregated FORPLAN Problems". Proceeding of the Workshop on Lessons from Using Forplan. Denver, Colorado, pp. 90-96, 1986.

25. Hrubes R., Navon D., Veiga G. y Weintraub A. "Lowering Forest Planning Costs Through LP Column Aggregation: How Great is the Associated Optimality Loss". Proceedings of the System Analysis in Forest Resource Management Symposium, Athens, Georgia, pp. 20-28, 1985.
26. Weintraub A. "Planificación Jerárquica de la Producción: Un Enfoque de Agregación de Columnas". 2nd. Latin American Meeting in Operation Research. Buenos Aires, Proceedings (Advances in Operations Research). pp. 288-296, August 1984.
27. Morales R. y Weintraub "A. Mathematical Models for Pine Timber Production Planning". Proceedings IFIP Working Conference, Santiago, Springer Verlag, pp. 148-158, 1984.
28. Weintraub A. "A Class of Primal Algorithms with Linear Rate of Convergence", Proceedings 1st Latin American Meeting in Operations Research, Río de Janeiro, pp. 462-467, 1982.
29. Weintraub A., Adams D. and Yelling L. "Land Management Planning. A Method of Evaluating Alternatives", U.S. Forest Service Research Paper PSW-167 (Refereed), 1981.
30. Barros, O. y Weintraub A. "Planning in Forest Enterprises", Proceedings IUFRO, Symposium in Management Sciences, Blacksburg, Virginia, pp. 150-163, 1980.
31. Weintraub A. "A Methodology for Decision Making in Project Evaluation in Land Management Planning". Proceedings IUFRO, Bucharest, pp. 109-117, 1978.

## NATIONAL PUBLICATIONS

1. Hernández P., Alonso A.; Escudero L., Guignard M., Marinov V., Weintraub A. Localización de recintos penitenciarios bajo incertidumbre. Revista de Ingenierías de Sistemas, Vol XX, Diciembre 2006.
2. Gac I., Martínez F., Weintraub A., Modelo de Optimización líneal determinístico para la localización de colegios. Revista de Ingenierías de Sistemas, Vol XX, Diciembre 2006.
3. Quinteros M., Alonso A., Escudero L., Guignard M., Weintraub A., Una aplicación de programación estocástica en un problema de gestión forestal. Revista de Ingenierías de Sistemas, Vol XX, Diciembre 2006.
4. Epstein, R., Weintraub, A., Caro, R., Guajardo, M. "Optimización de la planificación estratégica en empresas mineras". Trend Management 8 (2006), 56-63.
5. Epstein, R., Catalán, J., Henriquez, L., Weintraub, G., Martinez, C. "Licitación combinatorial de las raciones alimenticias de los colegios públicos en Chile". Trend Management 8 (2006), 112-117.

6. Epstein, R., Weintraub, A., Catalán, J., Serón, J., Hermosilla, R. "Sistemas de la optimización de la logística en la industria forestal". Trend Management 8 (2006), 146-155.
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