RESUME

March 2001

Name: Oscar García

Born: 26 August 1945. Viña del Mar, Chile.

Citizenship: New Zealand and Spain.

Family: Married, one 28 years-old son. Wife Hosly holds M.Sc. in Mathematics, U.T.E., Chile. Son Pablo has a BE in Chemical and Materials Engineering from Auckland University, New Zealand, and is currently finishing his Ph.D. studies (Wood Science) at the University of British Columbia.

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ACADEMIC QUALIFICATIONS:

Ingeniero Forestal. University of Chile, 1968.

Master of Science (M. Sc.), Mathematical Statistics & Operations Research. CIENES / U. of Chile, 1972.

Doctor of Philosophy (Ph.D.), Forest Resources. University of Georgia, 1976.

STUDIES:

Escuela de Ingeniería Forestal (School of Forestry), University of Chile. 1963–1967.

Graduated as *Ingeniero Forestal*, with Distinction, December 1968. Thesis on quantitative approaches to forest plantation management, approved with top marks.

Short courses: Analog Computing, University of Concepción, April–May 1968. IBM System 360, Instituto de Computación y Métodos, December 1968. APL/360 Language, IBM-Chile, December 1969. Topics in Real Analysis, Summer School U. T. E., January 1970.

Course on Modern Algebra and Geometry, School of Sciences, U. of Chile. April–December 1970.

Mathematical Statistics and Operations Research, Centro Interamericano de Enseñanza de Estadística (CIENES) and University of Chile. 1971–1972. Grade average: A+.
M.Sc. degree in Mathematical Statistics and Operations Research obtained in May 1972.

Advanced Term in Mathematical Statistics, CIENES, taking courses in Multivariate Analysis, Advanced topics in Statistical Inference, and Network Theory. May–August 1972.

School of Forest Resources, University of Georgia, U.S.A. March 1974 – March 1976. Grade average: A.
Ph.D. degree obtained in December 1976.

EMPLOYMENT:

Teaching Assistant, Plant Anatomy and Plant Physiology. Escuela de Ingeniería Forestal, University of Chile. 1965–1967.

Teaching Assistant, Physics. Esc. de Ing. Forestal, U. of Chile. 1966–1967.

Summer practice at Maderas Aglomeradas Pinihue (a particleboard factory), Concepción, Chile. January–February 1967.

Researcher under contract at Instituto Forestal (INFOR, the Chilean forestry research institute, Santiago), Logging Section. January–February 1968.

Staff scientist at INFOR: Logging Section, July–October 1968; Silviculture and Management Section, November–December 1968;

Forest Inventory and Mensuration Section, January 1969 – March 1971. On leave at CIENES from April 1971 to August 1972.

Lecturer in *Computing with APL*. CIENES. October 1972.

Head of the Forest Management Section, INFOR. August 1972 to January 1974.

Head of the Computing and Mathematical Statistics Section, INFOR. December 1973 to January 1974.

Graduate Research Assistant, School of Forest Resources, University of Georgia, U.S.A. March 1974 to March 1976.

Scientist (Forest Mensuration and Management Systems), Forest Research Institute, New Zealand. March 1976 to June 1992.

Consultant to FAO (United Nations), lecturing in Forest Economics and providing technical assistance. Eduardo Mondlane University, Mozambique. November 1987.

Consultant to the Forestry Department of Fundación Chile, Santiago, Chile, advising on forest stand modelling. January–February 1990.

Technical Director for FONDEF/INFOR eucalypt biometrics and modelling project. Instituto Forestal, Santiago, Chile. September 1992 to September 1995 (based at Valdivia from October 1993).

Profesor Titular (Full Professor). Chair of Forest Mensuration. Facultad de Ciencias Forestales, Universidad Austral de Chile. November 1993 – September 1996 (on leave the last year.)

Visiting Professor of Forest Biometrics. École Nationale du Génie Rural, des Eaux et des Forêts (ENGREF), Nancy, France. October 1995 to September 1996.

Guest Professor (*Gaesteprofessor*), under grant from the Danish Research Academy. The Royal Veterinary and Agricultural University (KVL), Unit of Forestry, Copenhagen, Denmark. September 1996 to March 1997.

Research Professor (*Forskningsprofessor.*) The Royal Veterinary and Agricultural University (KVL), Unit of Forestry, Copenhagen, Denmark. Since March 1997.

Guest Professor. Escuela Técnica Superior de Ingenieros de Montes, Universidad Politécnica de Madrid. September 1997 to September 1998.

Consultant in modelling and planning for the Empresa Nacional de Celulosas (ENCE), Spain.

Researcher for the Xunta de Galicia and University of Santiago de Compostela, stationed at the Forestry Research Center of Lourizán, Pontevedra, Spain. September 1998 to March 2000.

Professor, FRBC / West Fraser Endowed Chair in Forest Growth and Yield. University of Northern British Columbia, Prince George, B. C., Canada. Since April 2000.

LANGUAGES:

Speaks, reads and writes: English, Spanish.

Reads, understands: French, Portuguese, Italian.

OTHER:

Scholarship from the Organization of American States for study at CIENES, 1972.

Selected to participate by the U. of Georgia in the *International Leadership Seminar "Environmental Quality: U.S. Perspectives"*, Washington, D.C., April 1975, sponsored by the Foreign Student Service Council.

Elected to The Honor Society of Phi Kappa Phi, 1976.

Participation in conferences and substantial travel in New Zealand, U.S.A., Australia, Japan, Sweden, Greece, Chile, Spain, Portugal, Korea, South Africa, Finland, France, Germany, Denmark, Indonesia.

Nominated for the IUFRO Scientific Achievement Award, 1986.

Invited by the Society for Industrial and Applied Mathematics (SIAM) to participate in a *Workshop on Automatic Differentiation of Algorithms*, in Breckenridge, Colorado, January 1991.

Ex-Chairman, IUFRO Working Party 4.04.06 "Planning and Economics of Fast-growing Plantation Forests", 1990–2000.

Keynote speaker at the IUFRO symposium on *Integrated Forest Management Information Systems*. Tsukuba, Japan, October 1991.

Lectures on System-Theoretical Approaches in Forestry, at the universities of Tokyo, Utsunomiya, and Mie. Japan, October 1991.

Invited as keynote speaker at the International Symposium on System Analysis and Management Decisions in Forestry. Valdivia, Chile, March 1993.

Lectures at the Escuela de Ingenieros de Montes ("Topics in modelling for forest management"), and at the Facultad de Informática ("Automatic or computational differentiation, and its use in optimization algorithms"), Universidad Politécnica de Madrid, Spain, July 1993.

Conducted Course/Seminar for company executives "Introduction to Management Models in the Forestry Enterprise". Universidad Mayor, Santiago, Chile. August 1993.

Invited as keynote speaker at the IUFRO Conference "Advancement in Forest Inventory and Forest Management Sciences" in Seoul, Korea, September 1993.

Invited as keynote speaker at the IUFRO Conference "Minimum Data Requirements for Sustainable Forest Management", Stellenbosch, South Africa, November 1994.

Associate Editor for the *Canadian Journal of Forestry Research*, 1993–1998.

Member of the edtorial boards of *Forest Ecology and Management*, *Bosque* (Chile), and *Revista de Investigación Agraria* (Spain).

Nominated as "Research Pioneer" in the Production Forestry category for the New Zealand Forest Research Institute 50th Jubilee Awards, April 1997.

Contributor to CIFOR's *Forest Land Oriented Resource Envisioning System* (FLORES), participating in the Bukittinggi Workshop in Sumatra, Indonesia, January–February 1999.

Member of the British Columbia Forest Productivity Council.

PUBLICATIONS:

Problemas y modelos en el manejo de las plantaciones forestales [Problems and models in forest plantation management]. Esc. de Ingeniería Forestal, U. of Chile (Thesis). 1968.

Indices de sitio para pino insigne en Chile [Site indices for radiata pine in Chile]. Instituto Forestal, Chile. Serie de Investigación, Publ. No. 2. 1970.

Algunos programas en APL [Some programs in APL]. Instituto Forestal, Chile. Informe Técnico 41. 1971.

Perspectivas del abastecimiento de pino insigne a la industria en la región del Bío- Bío [Prospects for the supply of radiata pine to the industry in the Bío-Bío Region]. Presented at the *Meeting of Experts in Paper and Cellulose*, Santiago, December 1972 (Mimeo.)

Ecuaciones altura-diámetro para pino insigne [Height-diameter equations for radiata pine]. Instituto Forestal, Chile. Nota Técnica 19. 1974.

Sobre modelos matemáticos de rodal [On mathematical stand models]. Instituto Forestal, Chile. Informe Técnico 48. 1974.

Processing of map information in a minicomputer. University of Georgia (Dissertation). 1976

Modelling stand development with stochastic differential equations. In: Elliott,D.E. (ed) *Mensuration Systems for Forest Management Planning.* New Zealand Forest Service. Forest Research Institute Symposium No. 20, p.315–334. 1979.

IFS, an interactive forest simulator for long range planning. **New Zealand Journal of Forestry Science 11**, 8–22. 1981.

Simplified method-of-moments estimation for the Weibull distribution. **New Zealand Journal of Forestry Science 11**, 304–306. 1981.

A stochastic differential equation model for the height growth of forest stands. **Biometrics 39**, 1059–1072. 1983.

FOLPI, a forestry-oriented Linear Programming interpreter. In: Nagumo, H. et al (ed), *Proceedings IUFRO Symposium on Forest Management Planning and Managerial Economics.* University of Tokyo. 1984.

New class of growth models for even-aged stands: Pinus radiata *in Golden Downs Forest.* **New Zealand Journal of Forestry Science 14**, 65–88. 1984.

Forest estate modelling (Part 2). In: Levak, H. (ed), *1986 Forestry Handbook.* NZ Institute of Foresters (Inc.), Wellington. 1986.

SEESAW, a visual sawing simulator — Part II: The SEESAW computer program. In: Kininmonth, J. A. (comp), *Proceedings of Conversion Planning Conference.* Ministry of Forestry, FRI Bulletin No. 128. 1987.

Experience with an advanced growth modelling methodology. In: Ek,A.R., Shifley,S.R. and Burke,T.E. (eds), *Forest Growth Modelling and Prediction.* USDA Forest Service, General Technical Report NC-120. 1988.

Growth modelling — A (re)view. **New Zealand Forestry 33**(3), 14–17. 1988.

Strategic planning for forest management with FOLPI (by O. García, B. Manley, and J. Threadgill). FRI, Rotorua, NZ, What's New in Forest Research No. 177. 1989.

Growth modelling — New developments. In: Nagumo, H. and Konohira, Y. (eds), *Japan and New Zealand Symposium on Forestry Management Planning.* Japan Association for Forestry Statistics. 1989.

Growth of thinned and pruned stands. In: James, R.N. and Tarlton, G.L. (eds.) *New Approaches to Spacing and Thinning in Plantation Forestry: Proceedings of a IUFRO Symposium.* Ministry of Forestry, FRI Bulletin No. 151. 1990.

Linear Programming and related approaches in Forest Planning. **New Zealand Journal of Forestry Science 20**, 307–331. 1990.

A system for the differentiation of Fortran code and an application to parameter estimation in forest growth models. In: Griewank, A.

and Corliss, G. F. (eds.) *Automatic Differentiation of Algorithms: Theory, Implementation, and Application.* Society for Industrial and Applied Mathematics. 1991.

What is a diameter distribution? In: Minowa, M. and Tsuyuki, S. (eds.) *Proceedings of the Symposium on Integrated Forest Management Information Systems.* Japan Society of Forest Planning Press. 1992.

Sampling for tree-ring analysis. In: Wood, G. and Turner, B. (eds.) *Integrating Forest Information Over Space and Time, Proceedings of the International IUFRO Conference.* ANUTECH Pty Ltd, Canberra, Australia. 1992.

Stand growth models: Theory and practice. In: "Advancement in Forest Inventory and Forest Management Sciences — Proceedings of the IUFRO Seoul Conference". Forestry Research Institute of the Republic of Korea. 1993.

Un método simple para evaluar técnicas de establecimiento [A simple method for evaluating establishment techniques]. In: Barros A., S., Prado D., J. A., and Alvear S., C. (eds) *Actas Simposio Los Eucaliptos en el Desarrollo Forestal de Chile*. Instituto Forestal. 1994.

The state-space approach in growth modelling. **Canadian Journal of Forest Research 24**, 1894–1903. 1994.

Indices de sitio preliminares para eucalipto [Preliminary site indices for eucalypt]. **Ciencia e Investigación Forestal 9**(1), 5–21. 1995.

Evaluating forest growth models (by J. Vanclay, J. P. Skovsgaard, and O. García). In: Köhl, M. and Gertner, G. Z. (eds.) *Caring for the Forest: Research in a Changing World — Statistics, Mathematics and Computers*, Proceedings of the Meeting of S4.11-00 at the IUFRO XX World Congress (pp. 11–22.) Swiss Federal Institute for Forest, Snow and Landscape Research (WSL/FNP), 1996.

Easy evaluation of establishment treatments. In: Klemperer, W. D. (ed.) *Proceedings of the S4.04 Meetings on Forest Management Planning and Managerial Economics*, IUFRO 20th World Congress, Tampere, Finland, August 6–12, 1995 (pp. 89–94.) Vir-

ginia Tech, College of Forestry and Wildlife Resources. Publication No. FWS 1-96. 1996.

Estimating top height with variable plot sizes. **Canadian Journal of Forest Research 28**, 1509–1517. 1998.

Realized gain and prediction of yield with improved Pinus radiata in New Zealand (by S. D. Carson, O. García and J. D. Hayes). **Forest Science 45**(2), 186–200. 1999.

Height growth of Pinus radiata *in New Zealand* **New Zealand Journal of Forestry Science 29**(1), 131–145. 1999.

Functional differential equations in sustainable forest harvesting **Journal of Forest Planning 6**(2), 49–63. 2001.

Aproximación a la dinámica de los montes gallegos. Existencias y evolución de los tipos forestales en la provincia de Pontevedra [Approximation to the dynamics of the Galician forests. Status and change in the forest types of Pontevedra province] (submitted).

A growth model for eucalypt in Galicia, Spain (by O. García and F. Ruiz) (submitted).