Nelson MACULAN

Born in Londrina, Paraná, Brazil, on 19th March 1943.
Home address: Rua Almirante Tamandaré, 63 apt. 501, Rio de Janeiro, RJ 22210-060, Brazil.
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PERMANENT POSITIONS

Professor Emeritus, Dept. of Systems Engineering and Computer Science, Graduate School of Engineering – COPPE – Institute of Mathematics, Federal University of Rio de Janeiro (UFRJ), P.O. BOX 68511, 21941-972 – Rio de Janeiro, Brazil, phone: +55 21 3938-8708, e-mail: maculan@cos.ufrj.br

Full Member of the Brazilian Academy of Sciences
Full Member of the National Academy of Engineering (Brazil)
Full Member of the European Academy of Arts, Sciences and Humanities (Paris)
Fellow of the TWAS – the Academy of Sciences for the Developing World (Italy)
Full researcher (1A) in Computer Science at CNPq (the National Council for Research, Brazil)

DIPLOMAS

Diplôme d'Habilitation à Diriger des Recherches (HDR), Management Sciences, *Université Paris-Dauphine (Paris IX),* 1988.
Livre Docência in Optimization (L.D.), Federal University of Rio de Janeiro – UFRJ, Brazil, 1988.
Ph.D., Production Engineering, Federal University of Rio de Janeiro – UFRJ, Brazil, 1975.
Diplôme d'Etudes Approfondies (Statistics), *Faculté des Sciences de l'Université de Paris (Sorbonne),* France,1967.
B.Sc., Mining and Metallurgy Engineering, School of Mines, Ouro Preto, Brazil, 1965.

PROFESSIONAL EXPERIENCE

Main position held since 1971:
Professor at the Dept. of Systems Engineering and Computer Science, COPPE/UFRJ, and the Institute of Mathematics/UFRJ.

OTHER POSITIONS

President, the International Federation of Operational Research Societies – IFORS (Jan 2013 -)
State Secretary for Education, Rio de Janeiro State, Brazil (Jan 2007-Feb 2008).
National Secretary of Higher Education, Ministry of Education (SESu-MEC), Brasília, Brazil (Feb 2004-Dec2006).
President, Federal University of Rio de Janeiro – UFRJ, Brazil (Jul 1990-Jul 1994).
Visiting Professor at the *Dipartimento di Elettronica e Informazione (DEI), Politecnico di Milano*, Italy (Oct 2002 - Dec 2003).
Visiting Professor *(Directeur de recherche associé), CNRS, Laboratoire d'Informatique de Paris Nord (LIPN), Institut Galilée, Université Paris-Nord (Paris XIII),* France (Sept 2001-Sept 2002).
Scientific Advisor at *France Télécom*, France (1996-1998).
Visiting Professor, Department of Industrial Engineering and Operations Research, University of Massachusetts, Amherst, MA, USA (Sept 1994 - Jun1995).
Visiting Professor, *Département d'Informatique et de Recherche Opérationnelle, Université de Montréal*, Canada (Jan1982-Jan1984).
President, National Association of Presidents of Federal Institutions of Higher Education – ANDIFES, Brazil (1992-1994).
Director, Graduate School of Engineering (COPPE/UFRJ), Brazil (Jan1990-Jun1990).
Deputy Director for Research, COPPE/UFRJ, Brazil (1984-1989).
Deputy Director for Research, the Institute of Mathematics/UFRJ (1977).
Head of Department, Applied Mathematics, the Institute of Mathematics/UFRJ, (1986-1988).
Head of Department, Systems Engineering and Computer Science, COPPE/UFRJ, (1973-1977).
President of the Brazilian Society for Operations Research – SOBRAPO (1974-1976).
Vice-President of the International Federation of Operational Research Societies – IFORS (1983-1986).
President of the Association of Latin-Iberoamerican Operational Research Societies – ALIO (1988-1990 and1998-2000).

Head of the Committee for Scientific Societies, Brazil (1987-1989).
Council Member (elected) of the Brazilian Society of Mathematics, the Brazilian Society of Computational and Applied Mathematics, the Institute of Management Science (USA), and SBPC (2009-2013).
Area Editor *RAIRO-OR* (2011-)
Chief Editor of *InvestigaciónOperativa* (1986-2002).
Associate Editor of the European Journal of Operational Research – EJOR (1986-1992), *PesquisaOperacional* (since 1982), *Revista Portuguesa de InvestigaçãoOperacional* (since 1987), Annals of Operations Research (since 1994), Journal of Global Optimization (1999-2006), Top (since 2000), Discrete Optimization (since 2004).
Computer Science Engineer, *Société de Traitement Automatique des Données*, Paris, France (1969-1971).
Research Assistant in Statistics, *École de Mines*, Paris, France (1968-1969).

Invited Professor for short periods: *Université Paris-Nord*, *Université Paris-Dauphine*, *Université Pierre et Marie Curie*, *Université de Namur*, *École Polytechnique Fédérale de Lausanne*, University of Tokyo, *Universidad de Buenos Aires*, *UNAM-Mexico*, Carnegie-Mellon University, University of Sheffield, *Université de Montréal*, *France Télécom*, *École Polytechnique (LIX)*, *Universidad Nacional Mayor de San Marcos*, Chinese Academy of Sciences.

PUBLISHED BOOKS

Le problème du plus court chemin avec des longueurs négatives – Formulations et inégaliyés valides, (Ibrahim Mamane Souleye, N. Maculan & M. Minoux) Éditions Universitaires Européennes (EUE), 2015.
Álgebra Linear Numérica e Computacional – Métodos de Krylov para a Solução de Sistemas Lineares (L.M. Carvalho, S. Gratton, R. Lago & N. Maculan), Editora Ciência Moderna, Rio de Janeiro, 2010.
Otimização Linear (N. Maculan& M. Fampa), Editora da Universidade de Brasília (UnB), 2006.
Uma introdução à computação quântica (R. Portugal, C.C. Lavor, L.M. Carvalho & N. Maculan) Notas em Matemática Aplicada (SBMAC), vol. 8, São Carlos (SP), setembro 2004, 62 p.
Algoritmos e Heurísticas: Desenvolvimento e Avaliação de Performance (R. E. Campello & N. Maculan), Editora da Universidade Federal Fluminense (EDUFF / FURNAS), Rio de Janeiro, 1994.
Programação Linear (Nelson Maculan& M.V.F. Pereira), ATLAS, São Paulo, 1980.
Programação Linear Inteira, Editora COPPE/UFRJ, Rio de Janeiro, 1978.

EDITED BOOKS

Applications of combinatorial optimization, C. Ribeiro& N. Maculan (eds), *Annals of Operations Research*, vol. 50, J.C. Baltzer AG, 1994.
Global optimization: from theory to implementation, L. Liberti& N. Maculan (eds), Springer, 2006 and 2010.
Distance Geometry: Theory, Methods and Applications, A. Mucherino, C. Lavor, L. Liberti & N. Maculan (Eds), Springer, 2013.

SCIENTIFIC PAPERS ON JOURNALS

Annals of Operations Research, Discrete Applied Mathematics, INFOR, RAIRO-Operations Research, Annals of Discrete Mathematics, Computational Optimization and Applications (COAP), Physical Review E, Operations Research Letters, Journal of Global Optimization, NETWORKS, Management Science, SIAM Review, Optimization Letters, Journal of Combinatorics Information and System Sciences, European Journal of Operational Research (EJOR), Computers & Operations Research (C&OR), Mathematical Programming, Numerical Algorithms, Vietnam Journal of Mathematics, OR Spektrum, Logique et Analyse, Applied Mathematical Modelling, Journal of Optimization Theory and Applications (JOTA), Computational and Applied Mathematics, Europhysics Letters, International Transaction in Operations Research (ITOR), Optimization Letters, International Journal of Computational Bioscience (IJCB), PesquisaOperacional, RevistaBrasileira de Computação, InvestigaciónOperativa, RevistaBrasileira de Engenharia, Revista Portuguesa de InvestigaçãoOperacional, Revista del InstitutoChileno de InvestigaciónOperativa, CERES, Experientiae, Informática e InvestigaciónOperativa.

PATENT

US Patent # 7978629, Method for network design to maximize difference of revenue and network cost.

INVITED CONFERENCES

France: *Université Paris-Nord (Paris 13), Université Pierre et Marie Curie (Paris 6), Université Paris-Dauphine (Paris 9), Université Joseph Fourier (Grenoble), CNET – France Télécom, INRIA, Université Paul Sabatier (Toulouse), CERFACS (Toulouse), Université d'Avignon, Université de Versailles, Université Paris-Sud (Orsay), Université de Bordeaux, Université Blaise Pascal (Clermont Ferrand), École Polytechnique (X), Université Technologique de Troyes, École Centrale de Lille*. **Belgium**: *Université de Namur, Université de Mons, Université de Liège*. **Italy**: *Politecnico di Milano, Università degli studi di Modena e Reggio Emilia, Università di Roma 1, Università di Pisa*. **Germany**: University of Bonn, University of Hamburg. **Holland**: Eindhoven University of Technology. **Switzerland**: *Université de Genève, École Polytechnique Fédérale de Lausanne*.**Portugal**: *Universidade de Coimbra, Universidade de Aveiro, Universidade de Lisboa*.**Canada**: *Université de Montréal*, McGill University, Concordia University, *Université d'Ottawa, Université du Québec à Montréal, École Polytechnique de Montréal, Université de Sherbrooke, HEC de Montréa*l, Technical University of Halifax. **USA**: Massachusetts Institute of Technology, University of Massachusetts at Amherst, Rutgers University, Carnegie Mellon University, NYU, Columbia University. **Brazil**: *Universidade Federal de Minas Gerais (UFMG), UNICAMP, USP, UNESP, Universidade Federal Fluminense (UFF), Universidade Federal do Espírito Santo, Universidade de Brasília (UnB), Universidade Federal de Mato Grosso do Sul, Universidade do Estado do Rio de Janeiro (UERJ), Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio), IMPA, INPE, ITA, IME, LNCC, CBPF, Universidade Federal do Ceará (UFC), Universidade Estadual do Ceará (UECE), Universidade Federal da Santa Catarina, Universidade Federal de Pernambuco, Universidade Federal do Pará, Universidade Federal de Goiás, Universidade Federal de Sergipe, Universidade Federal de Lavras, Universidade Estadual do Norte Fluminense (UENF), Universidade Federal de Ouro Preto (UFOP), Universidade Federal do Piauí*. **Argentina**: *Universidad de Buenos Aires, Universidad de La Plata*.**Chile**: *Universidad de Chile, Universidad Católica de Chile, Universidad de Concepción, Universidad de Tarapacá, Universidad Católica de Valparaiso, Universidad de Talca*. **Mexico**: *UNAM, Universidad de Morelia*.**Japan**: University of Tokyo, Kyoto University, Nagaoka University of Technology. **England**: University of Sheffield, Imperial College (London). **Peru**: *Universidad Nacional Mayor de San Marcos (Lima)*.**China**: Chinese Academy of Science (Beijing), Xi'an Jiaotong University, Shanghai Jiao Tong University, Shanghai University, Yanan University. **Ireland**: Dublin City University. **Paraguay**: *Universidad Nacional de Asunción*. **Cuba**: *Universidad de La Habana*.**Ecuador**: *Escuela Politécnica Nacional*. **Austria:** *Wien Universität*.

SUPERVISED THESES
68 Ph.D. theses and 155 M.Sc. dissertations

RESEARCH INTERESTS

Mathematical Programming, Optimization, Operations Research, Computer Science, Numerical Analysis, Applied Mathematics, Bioinformatics.

HONORS & AWARDS

Medalha da Ordem Nacional do Mérito Educativo, *Grau de Comendador*(a national medal for Education awarded by the President of Brazil), Brazil, October 14, 1994.
Chevalier dans l'Ordre des Palmes Académiques, République Française, September 3, 1998.
IFORS Distinguished Lecturer, Mexico, September 04, 2000.
Medalha da Ordem Nacional do Mérito Científico, Grau de Comendador, (a national medal for scientific acknowledgement awarded by the President of Brazil), August 15, 2002.
Doctor Honoris Causa, *Universidad Nacional Mayor de San Marcos*, Lima, Peru, January 27, 2004.
Giulio Massarani Academic Merit Medal, COPPE/UFRJ, Brazil, May 20, 2005.
Docteur Honoris Causa, *Université Paris 13*, France, December 13, 2005.
Doctor Honoris Causa, *Universidad Ricardo Palma*, Lima, Peru, April 19, 2006.
Honoris Causa Professor, *Universidade Federal de Lavras*, Brazil, September 04, 2006.
Chevalier dans l'Ordre National du Mérite(National Order of Merit),France, November 09, 2006.
Medalha Bernardo Pereira de Vasconcellos, awarded by the City Council of Ouro Preto, Brazil, August 25, 2007.
Grand Cross for scientific merit (the most important medal for scientific acknowledgement awarded by the President of

Brazil), November 2007.

Prêmio Mérito Científico, awarded by the Brazilian Computing Society in acknowledgement for the scientific contributions in the area, July 2010.

Prêmio Mérito Universitário, awarded by *Universidade Federal Rural do Rio de Janeiro* for outstanding achievements as National Secretary of Higher Education (Ministry of Education, SESu/MEC, Brazil), September 2010.

Prêmio Anísio Teixeira, awarded by CAPES-Ministry of Education, Brazil, July 2011.

Honoris Causa Professor, *Universidade Federal do Ceará*, Brazil, November 28, 2012.

Premio KONEX Mercosur 2013: Ciencia y Tecnología, Fundación Konex, Argentina, November 12, 2013.

Professor Emeritus, *Universidade Federal do Rio de Janeiro* – UFRJ, April 3, 2014.

Doctor Honoris Causa, *Universidade Federal do Piauí*, Brazil, April 14, 2015.

LANGUAGES

Portuguese (mother tongue), French (reads, speaks, writes), English (reads, speaks, writes), Spanish (reads, speaks, writes), Italian (reads, speaks, writes).

September, 2015.