

## **Résumé of the curriculum vitae of Manuel Duarte Ortigueira**

Manuel Duarte Ortigueira graduated in Electrical Engineering: Branch Telecommunications and Electronics at Instituto Superior Técnico (IST) of the Universidade Técnica de Lisboa, April 1975, and obtained the PhD and Habilitation degrees at the same Institution in 1984 and 1991, respectively. Nowadays he is an Associate Professor, with Habilitation, at the Electrical Engineering Department of the Faculty of Sciences and Technology of the Universidade Nova de Lisboa in the Signals and Systems area.

- Formerly he was at Instituto Superior Técnico, since 1972 till 2001 and at Escola Náutica Infante D. Henrique from April 1994 to September 2001. He is with the Faculty of Sciences and Technology of the Universidade Nova de Lisboa since 2001.
- From the strictly pedagogical point of view he published a book, 3 integral texts to cover the whole matter of 3 courses and more 6 texts corresponding to chapters of the syllabus and other small texts and presentations. He realized 7 video classes. 6 of them are available at the Moodle platform.
- He participated in several courses of professional formation and promoted and coordinated 4. He was supervisor of 13 graduation projects, 7 Ms thesis, and 1 PhD thesis; he was co-supervisor of 3 Ms thesis and 1 PhD thesis. Presently he supervises 1 PhD student and co-supervises 2.
- His research activity began in 1977 in the Centro de Análise e Processamento de Sinais, (CAPS) continued in the Instituto de Engenharia de Systems e Computadores (INESC), where he belonged to the groups of Digital Signal Processing and Systems of Signal Processing. In 1997, he began working at the Instituto de Desenvolvimento Novas Tecnologias (UNINOVA), where he belongs to the Centre for Technology and Systems.
- He published 58 papers (25 since 2010) in international journals with revision. Other publications include 5 papers in national magazines, 97 (32 since 2010) in international conferences with revision of, at least, a summary, 3 chapters of book besides several communications in panel and for invitation. He has 1560 cites (1158 since 2010). He published 2 books (Calouste Gulbenkian Foundation and Springer).
- He is a regular reviewer of several international journals; he was a member of the Scientific Committee of 30 international conferences and was an invited publisher of 4 special numbers of the journal "Signal Processing".
- He participated in 12 projects, 4 international, having been responsible for 2 national and a person in charge for the Portuguese participation in 1 international project. He has one registered patent.
- Presently, his principal scientific interests are: Fractional Signal Processing, Digital Signal Processing, and Biomedical Signal Processing.
- Some publications:
  1. **"Fractional Calculus for Scientists and Engineers" (book), Springer**, Lecture Notes in Electrical Engineering, Volume 84, 2011.
  2. Ortigueira, M. D., **"An Introduction to the Fractional Continuous-Time Linear Systems"** IEEE Circuits and Systems Magazine, third quarter 2008, pp 19-26.

3. Rato, R. T., Ortigueira, M. D. and Batista, A. G., “**On the HHT, its problems, and some solutions**”, Mechanical Systems and Signal Processing, vol. 22, no. 6, pp. 1374-1394, August 2008
4. Ortigueira, M. D., “**The Fractional Quantum Derivative and its integral representations**” Commun Nonlinear Sci Numer Simulat 15 (2010) 956–962
5. Ortigueira, M.D., Coito, F.V., and Trujillo, J.J., “**Discrete-time differential systems**”, Signal Processing 107 (2015) 198–217.
6. Ortigueira, M.D., Laleg-Kirati, T.-L. and Machado, J.T., “**Riesz potential versus fractional Laplacian**”, Journal of Statistical Mechanics: Theory and Experiment. *J. Stat. Mech.* (2014) P09032.
7. Ortigueira, M.D., Rivero, M., and Trujillo, J.J., “**From a generalized Helmholtz decomposition theorem to the fractional Maxwell equations**”, Commun Nonlinear Sci Numer Simulat 22 (2015) 1036–1049.