



# DITEN

Dipartimento di Ingegneria Navale, Elettrica, Elettronica e delle Telecomunicazioni  
Scuola Politecnica, Università degli Studi di Genova

## Corsi di Studio in Ingegneria Elettrica

### Francesco Guastavino

Qualifica: Professore Associato, tempo pieno

Settore Scientifico-Disciplinare: ING-IND/32

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### Ambiti di insegnamento e ricerca

Costruzioni Elettromeccaniche – Diagnostica dei componenti e materiali innovativi

### Breve Curriculum Vitae

Francesco Guastavino has graduated in 1988 and in the same year he joined the staff of the CMTE laboratory (Components, Materials and Electrical Technologies) of the Electrical Engineering Department of the University of Genova, firstly as external collaborator and then as PhD student. He has obtained the PhD in Electrical Engineering in 1993. Since the 1994 he is Junior Researcher in the same laboratory. In 2001 he qualifies as winner in a contest to become Associate Professor. He developed his research activity mainly in the area of the insulating system degradation phenomena in presence of different stresses; he published more than one hundred and fifty papers concerning these topics. He studied in depth the partial discharge (PD) phenomena focusing his interests not only on the physical behaviour but also on the electrical and acoustic measurement methods. About this subject, he studied test and analysis procedures to define phenomenological models capable of predicting the life time considering particular test conditions. Furthermore he explored the behaviour of different polymeric materials, also containing different kind of nano-fillers, subjected to high electrical fields, studying the effects of different influence parameters (i.e. applied test voltage amplitude, distance between electrodes et al.) on the inception and on the growth of the electrical treeing phenomena. He has been responsible of several collaborations with Italian and international industries and he has been responsible of research studies financed or co-financed by the Italian University Ministry and by the European Commission. He is Associated Editor of the IEEE Transactions on Dielectrics and Electrical Insulation. He is reviewer of IEEE Transactions and other important Journals. Since 2003 he is active in the field of Standards: he is secretary of CT 15/112 and he is part of the WG 29 of the CT 2 Italian CEI. He is promoter and President of the academic spinoff Diasol S.r.l. ([www.diasol.it](http://www.diasol.it))

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### Pubblicazioni significative

1. F. Guastavino, A. Dardano, E. Torello, "Measuring partial discharges under pulsed voltage conditions". IEEE Transactions on Dielectrics and Electrical Insulation, Volume: 15, Issue: 6, Page(s): 1640 – 1648, December 2008. DOI [10.1109/TDEI.2008.4712668](https://doi.org/10.1109/TDEI.2008.4712668) ISSN 1070-9878
2. F. Guastavino, P.Tiemblo, M. Hoyos, J. M. Gomez-Elvira, J. Guzman, N. Garcia, A. Dardano. "The development of electrical treeing in LDPE and its nanocomposites with spherical silica and fibrous and laminar silicates". JOURNAL OF PHYSICS. D, APPLIED PHYSICS, vol. 41, Issue 12, 2008, DOI [10.1088/0022-3727/41/12/125208](https://doi.org/10.1088/0022-3727/41/12/125208) ISSN: 1361-6463
3. M. Hoyos, N. Garcia, R. Navarro, A. Dardano, A. Ratto, F. Guastavino, P. Tiemblo, "Electrical strength in ramp voltage AC tests of LDPE and its nanocomposites with silica and fibrous and laminar silicates". JOURNAL OF POLYMER SCIENCE. PART B, POLYMER PHYSICS, vol. 46, Issue 13, 2008, p. 1301-1311, DOI: [10.1002/polb.21464](https://doi.org/10.1002/polb.21464) ISSN: 0887-6266 ELECTRONIC ISSN:1099-0448
4. A.S. Thelakkadan, G. Coletti, F. Guastavino, A. Fina, "Effect of the Nature of Clay on the Thermo-Mechanodynamical and Electrical Properties of Epoxy/Clay Nanocomposites". POLYMER COMPOSITES, Volume 32, Issue 10, October 2011, Pages: 1499–1504, WILEY DOI [10.1002/pc.21176](https://doi.org/10.1002/pc.21176) Online ISSN: 1548-0569
5. F. Guastavino, A. Dardano, "Life Tests on Twisted Pairs in Presence of Partial Discharges: Influence of the Voltage Waveform". IEEE Transactions on Dielectrics and Electrical Insulation, Volume: 19, Issue: 1, Publication Year: 2012, Page(s): 45 – 52. ISSN: 1070-9878 DOI: [10.1109/TDEI.2012.6148501](https://doi.org/10.1109/TDEI.2012.6148501)
6. A.S. Thelakkadan, G. Coletti, F. Guastavino, A.Fina, "Thermomechanical and Electrical Characterization of Epoxy-Organoclay Nanocomposite". Wiley Polymer Engineering and Science, vol 52, Issue 5, p. 1037-1046, May 2012, Online ISSN: 1548-2634 DOI: [10.1002/pen.22164](https://doi.org/10.1002/pen.22164)
7. F. Guastavino, A. Ratto, "Comparison between Conventional and Nanofilled Enamels under Different Environmental Conditions", IEEE Electrical Insulation Magazine, vol 28, issue 4, p 35-41, July 2012, DOI: [10.1109/MEI.2012.6232008](https://doi.org/10.1109/MEI.2012.6232008) ISSN: 0883-7554
8. A.S.Thelakkadan, G.Coletti, F.Guastavino, A.Fina, "Effect of clay dispersion methods on the mechano-dynamical and electrical properties of epoxy-organoclay nanocomposites". Polymer Bulletin. 08/08/2012, DOI: [10.1007/s00289-012-0815-x](https://doi.org/10.1007/s00289-012-0815-x) ISSN: 1436-2449 (electronic version)
9. F. Guastavino, E. Torello, S. Squarcia, P. Tiemblo, N. Garcia, "Insulation properties of LDPE nanocomposites obtained by the dispersion of different nanoparticles", IEEE Transactions on Dielectrics and Electrical Insulation, Volume: 21, Issue: 2, 2014 , Page(s): 444 – 451, DOI: [10.1109/TDEI.2013.004222](https://doi.org/10.1109/TDEI.2013.004222)