

DEPARTAMENTO DE  
INGENIERIA ELECTRICA

## DEPARTAMENTO DE INGENIERIA ELECTRICA

### Áreas de conocimiento:

- INGENIERIA ELECTRICA

## ÁREA DE CONOCIMIENTO: INGENIERIA ELECTRICA

### Actividades de investigación

#### Tesis Doctorales

- Continuidad de suministros de parques eólicos ante huecos de tensión  
*Autores:* RIOS, P. A.  
*Director:* ARNALTES, S. ; RODRIGUEZ, J. L.  
*Año:* 2007
- Integración de energía eólica en mercados competitivos de energía eléctrica  
*Autores:* ANGARITA, J.  
*Director:* USAOLA, J.  
*Año:* 2007

### Publicaciones y actividades de difusión de resultados

#### Artículos en revistas extranjeras

- ANGARITA, J. ; HERNANDEZ ARAMBURO, C.A.; USAOLA, J.  
Analysis of a wind farm's revenue in the British and Spanish markets , *Energy Policy*, Vol. 35, Núm. 10, 2007, pp. 5051-5059, REINO UNIDO.
- ANGARITA, J. ; USAOLA, J.  
Combining hydro-generation and wind energy Biddings and operation on electricity spot markets, *Electric Power Systems Research*, Vol. 77, Núm. 5-6, 2007, pp. 393-400, ESTADOS UNIDOS DE AMERICA.
- ARNALTES, S. ; AMADOR, J.; CARRERO, C.  
A single procedure for helping PV designers to select silicon PV modules and evaluate the loss resistances, *Renewable Energy*, Vol. 32, Núm. 15, 2007, pp. 2579-2589, REINO UNIDO.
- ELOY-GARCIA, J. ; ARNALTES, S. ; RODRIGUEZ, J. L.  
Extended direct power control for multilevel inverters including DC link middle point voltage control, *let Electric Power Applications*, Vol. 1, Núm. 4, 2007, pp. 571-580, REINO UNIDO.
- FONTELA, P.; SORIA, A.; MIELGO, J.; SIERRA, J.F.; DE BLAS, J.; GAUCHIA, L.; MARTINEZ, J. M.  
Airport electric vehicle powered by fuel cell, *Journal of Power Sources*, Vol. 169, 2007, pp. 184-193, ESTADOS UNIDOS DE AMERICA.
- GARCIA PRADA, J. C. ; BURGOS, J. C. ; RIVAS, E.  
Métodos de diagnóstico de averías para transformadores con cambiadores de tomas en carga, *Revista de Ingeniería-Universidad de los Andes*, Vol. 12, 2007, pp. 68-72, COLOMBIA.

- MARTINEZ, J. ; USAOLA, J. ; FERNANDEZ, J. L.  
Optimal security-constrained power scheduling by Benders decomposition, *Electric Power Systems Research*, Vol. 77, Núm. 7, 2007, pp. 739-753, ESTADOS UNIDOS DE AMERICA.
- MARTINEZ, J. M. ; SANZ, J. ; AMARIS, H. E.  
Frequency and time domain characterization of transient voltages through low-voltage motor stator coils fed with inverter pulses, *Electric Power Components and Systems*, Vol. 35, Núm. 6, 2007, pp. 715-731, ESTADOS UNIDOS DE AMERICA.
- MARTINS, M.; PERDANA, A.; LEDESMA, P. ; AGNEHOLM, E.; CARLSON, O.  
Validation of fixed speed wind turbine dynamic models with measured data, *Renewable Energy*, Vol. 32, Núm. 8, 2007, pp. 1301-1316, REINO UNIDO.
- PETIT, J. F. ; ROBLES, G. ; AMARIS, H. E.  
Current reference control for shunt active power filters under nonsinusoidal voltage conditions, *IEEE Transactions on Power Delivery* , Vol. 22, Núm. 4, 2007, pp. 2254-2261, ESTADOS UNIDOS DE AMERICA.
- USAOLA, J. ; MARTINEZ, J. ; CASTRONUOVO, E.D.  
Optimal controllability of wind generators in a delegated dispatch , *Electric Power Systems Research*, Vol. 77, Núm. 10, 2007, pp. 1442-1448, ESTADOS UNIDOS DE AMERICA.

## Ponencias y Comunicaciones a congresos

- AMARIS, H. E.  
*Power Quality Solutions for Voltage Dip Compensation at Wind Farms*, IEEE-Power Engineering Society General Meeting, 2007, FLORIDA, ESTADOS UNIDOS DE AMERICA, 2007.
- AMARIS, H. E. ; ALVAREZ, C.; FLÓREZ, D.M.; LOBOS, T.; JANIK, P.; REZMER, J.  
*Wavelets and prony method for disturbance detection in wind farms*, PSCC 2008, Glasgow, REINO UNIDO, 2007.
- AMARIS, H. E. ; ALVAREZ, C.; SAMUELSSON, O.  
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- ARBI, J.; SLAMA, S.; ARNALTES, S.  
*Control of a DFIG-based Wind System in presence of Large Grid Faults: Analysis of Voltage Ride Through Capability*, EPQC 07: 9 th International Conference on Electrical Power Quality and Utilization, BARCELONA, ESPAÑA, 2007.
- CASTRONUOVO, E.D ; USAOLA, J.  
*Alternatives of revenue for corrective actions of wind generators in a delegated dispatch*, International Conference on Clean Electric Power. Renewable Energy Resources Impact, Capri, ITALIA, 2007.
- CASTRONUOVO, E.D ; USAOLA, J. ; MASSA, P.A.; OCHOA, J.M.  
*Requisitos de controlabilidad de parques eólicos para una integración segura en la red eléctrica*, 2007 International Wind Energy Conference and Exhibition, Mar de Plata, ARGENTINA, 2007.
- RIVAS, E.; BURGOS, J. C. ; GARCIA PRADA, J. C.  
*Off-line and On-line diagnosis methods for power transformer load tap changers*, ARWtr 2007 Advanced Research Workshop on transformers, ESPAÑA, 2007.
- GONZÁLEZ, C.; PLEITE, J. ; SANZ, J. ; VALDIVIA, V.  
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- GONZÁLEZ, C.; PLEITE, J. ; SANZ, J. ; VALDIVIA, V.  
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- LEDESMA, P. ; GALLARDO, C.F.  
*Contribution of variable-speed wind farms to damping of power system oscillations* , Lausanne, SUIZA, 2007.
- LIZÓN-MARTÍNEZ, S.; TELLINI, B.; GIANNETTI, R.; ROBLES, G.  
*Measurement of Asymmetric Minor Loops in Soft Ferrites Up to Medium Frequencies*, 2007 IEEE Instrumentation and Measurement Technology Conference, POLONIA, 2007.
- GAUCHIA, L.; MARTINEZ, J. M. ; CHINCHILLA, M. ; SANZ, J.  
*Test bench for the simulation of a hybrid power train*, European Power Electronic Conference, 2007, Aalborg, DINAMARCA, 2007.
- PETIT, J. F. ; ORTEGA-CALDERON, J.; ACHA, E.; ROBLES, G. ; AMARIS, H. E.  
*Harmonic domain modelling of an arc discharge lamp system*, 2007 IEEE Powertech, 2007.
- ROBLES, G. ; SANZ, J. ; ARGÜESO, M.; GIANNETTI, R.; TELLINI, B.  
*Identification of parameters in a Rogowski coil used for the measurement of partial discharges*, Instrumentation and Measurement Technology Conference, Warsaw, POLONIA, 2007.
- USAOLA, J. ; ANGARITA, J.  
*Bidding wind energy under uncertainty*, International Conference on Clean Electric Power. Renewable Energy Resources Impact., Capri, ITALIA, 2007.
- USAOLA, J. ; MORENO, M. A.  
*A Proposal for Compensation between TSOs for Cross Border Trades*, X Conferencia Luso Espanhola de Engenharia Electrotecnica, Funchal, PORTUGAL, 2007.
- VALECILLOS, B. ; BURGOS, J. C. ; GARCIA, B.  
*Dielectric Response Measurement of a Power Transformer under Variable Temperature*, 15 th International Symposium on High Voltage Engineerin ISH, Ljubljana, ESLOVENIA, 2007.

## Actividades de formación y movilidad de personal investigador

### Estancias en otros centros

- CARLOS ALVAREZ ORTEGA  
*Título:* Convertidores electrónicos de potencias  
*Centro Externo:* Faculty of Engineering LTH Lund  
*País:* SUECIA  
*Duración:* 02/06/2007 a 31/08/2007.
- JULIO USAOLA GARCIA  
*Título:* Impacto de la incertidumbre de la producción eólica en los mercados eléctricos  
*Centro Externo:* Ecole supérieure d'Électricité  
*País:* FRANCIA  
*Duración:* 01/10/2007 a 30/07/2008.