

**Name**

Nicola Sorrentino

Role

Ricercatore

Short CV

Nicola Sorrentino is graduated with honours in Industrial Engineering from the University of Calabria in 1994. In the same University, he received the title of Ph.D. in Information Systems and Computer Engineering in 1999 and since 2004 he is a researcher in the Electrical Systems Energy. He has more than one hundred publications in international journals and conference. He has been in charge of research for various projects financed from the national and regional competitive tender (PON and POR), and he is a member of the research team of research projects of national interest (PRIN). He is a promoter of University Spin Off CRETE ES that deals with technologies and systems for the energy production from renewable energy and sustainability. He has played, both as a member of the Scientific Technical Committee that the Director of the Consortium CRETE, implementation activities in the territory of actions for sustainable development from an energy point of view of the same. From 2012, he is an expert for the evaluation of research projects in the electricity sector for the Italian Authority AEEGSI in art. 11 D.M. March 8 2006.

Teaching Activity

Professor of Electrical Systems - Bachelor's Degree in Electronics Engineering

Selected Publications

A Burgio, D Menniti, Sorrentino N, A Pinnarelli, G Brusco (2014). An active resonance damper which avoids the estimation of the line characteristic impedance. *ELECTRIC POWER SYSTEMS RESEARCH*, vol. 107, p. 16-20, ISSN: 0378-7796

G. Brusco, A. Burgio, D. Menniti, Pinnarelli A, Sorrentino N (2014). Energy Management System for an Energy District with demand response availability. *IEEE TRANSACTIONS ON SMART GRID*, vol. 5, ISSN: 1949-3053

Menniti D, Burgio A, Sorrentino N, Pinnarelli A (2011). Implementation of the shunt harmonic voltages compensation approach. *ELECTRIC POWER SYSTEMS RESEARCH*, vol. 81, p. 798-804, ISSN: 0378-7796

Casavola A, Franze G, Menniti D, Sorrentino N (2011). Voltage regulation in distribution networks in the presence of distributed generation: A voltage set-point reconfiguration approach. *ELECTRIC POWER SYSTEMS RESEARCH*, vol. 81, p. 25-34, ISSN: 0378-7796

Menniti D, Scordino N, Sorrentino N (2010). Secure and economic management of a power system in the presence of wind generation. *ELECTRIC POWER SYSTEMS RESEARCH*, vol. 80, p. 1375-1383, ISSN: 0378-7796

Menniti D, Costanzo F, Scordino N, Sorrentino N (2009). Purchase-Bidding Strategies of an Energy Coalition with Demand-Response Capabilities. IEEE TRANSACTIONS ON POWER SYSTEMS, vol. 24, p. 1241-1255, ISSN: 0885-8950

Research lines

- analysis of the static security of electric power systems also through the use of innovative approaches based on recognition techniques and neural networks;
- Integrated solution of optimal dispatching of generating power with the structural safety, through approaches based on non-differentiable optimization algorithms and parallel computing techniques, in light of the liberalization of the electricity market;
- Distributed control systems and application of microelectronics, computer and telecommunication systems for the management of Electrical Distribution in the presence of distributed generation (photovoltaic, wind, etc);
- Numerical techniques for the analysis of power quality problems and adoption of active filtering systems even in the presence of production of energy from a photovoltaic source;
- Stabilisation of Electrical Power Systems through innovative control techniques and power electronic systems (Flexible AC Transmission System);
- Support models of the operators decisions of the Electrical Energy Market (producers, consumers, the network operator).
- Integration of renewable energy plants (wind and photovoltaic) in distribution/transmission network in the Smartgrid environment