

Pr. Lotfi BAGHLI



BIOGRAPHY

Lotfi BAGHLI (IEEE Senior Member 2012) was born in 1971. He received the Electrical Engineering Diploma degree (Hons.) in 1994 from the Ecole Nationale Polytechnique of Algiers, Algiers, Algeria. He received the DEA and PhD degrees in electrical engineering from the Université Henri Poincaré, Nancy, France, in 1995 and 1999, respectively. From 2000 to 2009, he was an Assistant Professor at Nancy University, Nancy. From 2009 to 2021, he was a Professor at Tlemcen University, Tlemcen, Algeria. Currently, he is an Assistant Professor at ENSEM, Nancy, and a member of Groupe de Recherche en Energie Electrique de Nancy. His research interests include digital control of electrical machines, metaheuristic algorithms applied to the control and identification of electrical machines, renewable energy and microgrids.

PLENARY TITLE

“Implementing a wind-turbine emulator with a double fed induction generator”

ABSTRACT

To study wind energy turbines and associated generators, we need emulators. Simulations are already implemented and well known by researchers, but we need real benches with proper digital control and drives in order to master the control loops, estimators and test different power extraction algorithms. The synchronization with the power grid is mandatory in order to control the active and reactive power injection. This presentation will focus on how we can implement such a bench in order to achieve current, speed and power control on a DFIG driven by a controlled DC motor, all of them controlled by a single dSPACE DS1104 board with one Semikron Semitech inverter and chopper, lessening the investment to its minimum without compromising the study objectives. The choices, the preparation steps and the experimental results will be discussed.