Biography of Federico Caricchi

Federico Caricchi received the Electrical Engineering and Ph.D. degrees from the University of Rome “La Sapienza,” Rome, Italy, in 1988 and 1994, respectively. Since 1991 he is with the Department of Electrical Engineering, University of Rome “La Sapienza”, where he currently is Full Professor.

He is author of approximately 100 papers published either in magazines or international conferences with peer review. He is inventor/co-inventor in 12 patents, 6 of which are international.

His research interests include analysis and design of unconventional electric machines, power electronic equipment and permanent magnet motor drives. The research activity is mainly focused on the study of high torque density permanent magnet machines, especially of the axial flux type, for those applications where space and weight are the main project constraints. This activity has led to the development of design criteria which have been practically verified by means of the construction and laboratory tests of more than 100 prototypes in the range from 1 Nm to 10000 Nm. In addition to the development of electromagnetic design criteria, other crucial problems related to the design of rotating electrical machines, as torque reaction solutions for stator connection and efficient direct liquid cooling systems have been investigated; some original solutions have originated international patents.