The IEEE Ottawa Section, Instrumentation and IEEE Measurement Society (IMS) Ottawa Chapter, IEEE Power and Energy Society (PES) Ottawa Chapter, IEEE Reliability Society (RS) Ottawa Chapter, IEEE Ottawa Section Educational (EA) Activities and IEEE Algonquin College Student Branch are inviting all interested IEEE members and other engineers, technologists, and students to a technical seminar on

AC Current Measurements

The Applications, Design, and Calibrations of Rogowski Coils

by
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DATE: Thursday October 21, 2010.
TIME: Refreshments, Registration and Networking: 06:30 p.m.; Seminar: 07:00 p.m. – 08:00 p.m.
PLACE: Algonquin College, 1385 Woodroffe Ave., School of Advanced Technology, Building-T, Room T324
PARKING: No fee after 5:00 p.m. at the Visitors' Parking Lots 8 & 9. Please respect restricted areas.
Admission: Free. Registration required. To ensure a seat, please register by e-mail contacting:
Wahab Almuhtadi almuhtadi@ieee.org or Raed Abdullah raedabdullah@ieee.org.

Abstract

Rogowski coils have been used for a long time for monitoring or measurements of high, impulse, and transient currents. Rogowski coils are used for monitoring and control, protective relaying, power distribution switches, electric arc furnaces, electromagnetic launchers, core testing of large rotating electrical machines, partial-discharge measurements in high-voltage cables, power electronics, resistance welding in automotive industry, and plasma physics. Since their nonmagnetic cores do not saturate, they can operate over wide current ranges with inherent linearity. The applications entail low and high accuracy coils, measuring currents from a few amperes to tens of MA, at frequencies from a fraction of hertz to hundreds of MHz. The increased interest in Rogowski coils over the last decades has led to significant improvements in their design and performance. Their development has included innovative designs, new materials, machining techniques, and printed circuit board structures. This presentation will cover the principles of operation, design, calibration, standards, and applications of Rogowski coils.

Bio

Branislav Djokić (IEEE M'90-SM'97) received Dipl.Ing. degrees in Power Systems Engineering in 1981, in Electronics in 1984, M.Sc. and Ph.D. in Electrical Engineering in 1988 and 1993, respectively, from the University of Belgrade, Yugoslavia. From 1982-1990, he was with R&D Institute Mihajlo Pupin, Belgrade. From 1990-1994 he was a Staff Member of the School of Electrical Engineering, Belgrade University. In 1994 he joined the Institute for National Measurement Standards, National Research Council of Canada.

Dr. Djokić is a registered Professional Engineer in the Province of Ontario. He is IEEE PES Emerging Technologies Coordinating Committee Chair, past IEEE Canada Other-Societies Committee Chair, IEEE Ottawa Section Educational Activities Chair and past Section Chair. In 2007, he received IEEE Regional Activities Board (RAB) Award for leadership in support of IEEE Ottawa Section. For his papers on the calibration of Rogowski coils, he received 2010 Editors' Choice Award for a paper published in the NCSLI Measure Journal, and the best paper award in the international track at National Conference of Standards Laboratories International 2008. In 2009, he was appointed a Distinguished Lecturer of the IEEE Instrumentation and Measurement Society for his expertise in the area of calibration of Rogowski coils.