

#### **Analysis of broken rotor bar diagnostic techniques for inverter fed induction motor faults**

**Sardar, Muhammad Usman** 22nd International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology III : Pärnu, Estonia, August 23-26, 2023 / p. 39-40 : ill [https://www.ester.ee/record=b5570906\\*est](https://www.ester.ee/record=b5570906*est)

#### **Analysis of common mode and rapidly varying voltage profile on stator current harmonics of an inverter-fed induction motor**

**Sardar, Muhammad Usman; Vaimann, Toomas; Kütt, Lauri; Kallaste, Ants; Asad, Bilal; Kudelina, Karolina; Akbar, Siddique** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 6 p. : ill <https://doi.org/10.1109/RTUCON60080.2023.10413067>

#### **Characterization of high-frequency impedance-based models for transient terminal overvoltage estimation in cable-fed motor drive systems**

**Sardar, Muhammad Usman; Vaimann, Toomas; Kütt, Lauri; Asad, Bilal; Kallaste, Ants; Kudelina, Karolina** 2024 International Conference on Electrical Machines (ICEM) 2024 / 7 p <https://doi.org/10.1109/ICEM60801.2024.10700495>

#### **Design and resonance analysis of tubular structured dual stator linear oscillating actuator**

**Ahmad, Zahoor; Kallaste, Ants; Vaimann, Toomas; Sardar, Muhammad Usman** 2024 International Conference on Electrical Machines (ICEM) 2024 / 7 p <https://doi.org/10.1109/ICEM60801.2024.10700213>

#### **Fault simulation and analysis of high-voltage circuit breaker's spring charging mechanism using a universal motor model**

**Asad, Bilal; Vaimann, Toomas; Kallaste, Ants; Kilter, Jako; Sardar, Muhammad Usman** 2024 IEEE 65th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2024 / 5 p <https://doi.org/10.1109/RTUCON62997.2024.10830846>

#### **High voltage circuit breaker charging motor's condition monitoring - importance, possibilities, and challenges**

**Asad, Bilal; Sardar, Muhammad Usman; Vaimann, Toomas; Kallaste, Ants; Asefi, Sajjad; Kilter, Jako** 2024 International Conference on Diagnostics in Electrical Engineering (Diagnostika) 2024 / 7 p <https://doi.org/10.1109/Diagnostika61830.2024.10693906>

#### **Permanent magnet synchronous machine control performance and analysis for environment-friendly electric vehicle applications**

**Sardar, Muhammad Usman; Yaqoob, Muhammad; Akbar, Siddique; Shah, Syed Imran Ahmad; Shahid, Muhammad Usama; Mutloob, Tayyaba** Engineering Proceedings 2023 / art. 7, p. 1-6 <https://doi.org/10.3390/engproc2023046007> [Journal metrics at Scopus](#) [Article at Scopus](#)

#### **Permittivity and breakdown voltage study of the epoxy-based nanocomposites**

**Siddique, Abubakar; Arshad, Amna; Aslam, Waseem; Fatima, Maham; Sardar, Muhammad Usman; Noon, Muhammad Asim** International review of electrical engineering 2023 / p. 373-382 <https://doi.org/10.15866/iree.v18i5.22518> [Journal metrics at Scopus](#) [Article at Scopus](#)

#### **A review of harmonic detection, suppression, aggregation and estimation techniques**

**Daniel, Kamran; Kütt, Lauri; Iqbal, Muhammad Naveed; Shabbir, Noman; Raja, Hadi Ashraf; Sardar, Muhammad Usman** Applied sciences 2024 / art. 10966 <https://doi.org/10.3390/app142310966> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **State-of-the-Art techniques for fault diagnosis in electrical machines: Advancements and future directions**

**Akbar, Siddique; Vaimann, Toomas; Asad, Bilal; Kallaste, Ants; Sardar, Muhammad Usman; Kudelina, Karolina** Energies 2023 / Art. 6345 <https://doi.org/10.3390/en16176345> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Wideband frequency response analysis for sensitive condition estimation of machine's turn insulation degradation faults**

**Sardar, Muhammad Usman; Vaimann, Toomas; Kütt, Lauri; Asad, Bilal; Kallaste, Ants; Land, Raul** 2025 IEEE Workshop on Electrical Machines Design, Control and Diagnosis (WEMDCD) 2025 / 6 p <https://doi.org/10.1109/WEMDCD61816.2025.11014207>