Research outputs

Robust plug-in repetitive control for speed smoothness of cascaded-PI PMSM drive

A Small-signal Stability Study for Open-loop I-f Control of Permanent Magnet Synchronous Machine Drives

An adaptive proportional-integral-resonant controller for speed ripple suppression of PMSM drive due to current measurement error

A New Position Detection and Status Monitoring System for Joint of SCARA

A New Load Adaptive Identification Method Based on an Improved Sliding Mode Observer for PMSM Position Servo System

Load Adaptive PMSM Drive System Based on an Improved ADRC for Manipulator Joint

New Sensorless Vector Control System with High Load Capacity Based on Improved SMO and Improved FOO

Predictive Control of Low-Cost Three-Phase Four-Switch Inverter-Fed Drives for Brushless DC Motor Applications

An I-f Startup Method for Back-EMF based Sensorless FOC of PMSMs with Improved Stability during the Transition
Design and experiment of a magnetic lead screw for the point-absorbing wave energy conversion system

A Novel Single-Helix Magnetic Lead Screw for Wave Energy Converter

Design optimization of a reluctance lead screw for wave energy conversion

Scavenging power from ultra-low frequency and large amplitude vibration source through a new non-resonant electromagnetic energy harvester

Real-time open-switch fault diagnosis in automotive permanent magnet synchronous motor drives based on Kalman filter

A new short-time high-overload BLDC driving system based on electronic flywheel and time-division switching control

Online Identification of Intrinsic Load Current Dependent Position Estimation Error for Sensorless PMSM Drives

A Fast Estimation of Initial Rotor Position for Low-Speed Free-Running IPMSM

Robust Sensorless Control Against Thermally Degraded Speed Performance in an IM Drive Based Electric Vehicle

A Development Study of a New Bi-directional Solenoid Actuator for Active Locomotion Capsule Robots

An I-f Startup Method with Compensation Loops for PMSM with Smooth Transition

Erratum to: A new load torque identification sliding mode observer for permanent magnet synchronous machine drive system (IEEE Transactions on Power Electronics (2019) 34:8 (7852-7862) DOI: 10.1109/TPEL.2018.2881217)

Design and development of a magnetic lead screw propulsion device for general transport system

Simple and Effective Online Position Error Compensation Method for Sensorless SPMSM Drives

Enhanced Position Sensorless Control Using Bilinear Recursive Least Squares Adaptive Filter for Interior Permanent Magnet Synchronous Motor

An Improved Anisotropic Vector Preisach Model for Nonoriented Electrical Steel Sheet Based on Iron Loss Separation Theory

Initial position detection for Selective Compliance Assembly Robot Arm manipulator joint based on an improved high-frequency injection method

A new high-response self-balancing sensorless control system of induction motor for weft accumulator

Design and Experiment of an Indirect Wave Power Generation Device using Magnetic Lead Screw

Experimental Study of An Active Actuator Applied for Wireless Capsule Robot

Investigation of Current Control for a New Bi-directional Linear Capsule Robot

An Improved Anisotropic Vector Preisach Hysteresis Model Taking Account of Rotating Magnetic Fields

Improved Closed-Loop Flux Observer Based Sensorless Control Against System Oscillation for Synchronous Reluctance Machine Drives

Reduction methods using canceling effect for cogging torque in dual-stator pm synchronous machines

A Flower Pollination Method Based Global Maximum Power Point Tracking Strategy for Point-Absorbing Type Wave Energy Converters
A New Load Torque Identification Sliding Mode Observer for Permanent Magnet Synchronous Machine Drive System

Study of the Frequency Characteristic for a Magnetically Coupled Resonant Wireless Power Transmission System with Changes of the Capacitance

Design optimization of hydraulic energy storage and conversion system for wave energy converters

Voltage Modulation Using Virtual Positive Impedance Concept for Active Damping of Small DC-Link Drive System

Extremum-seeking Control of Wave Energy Converters using Two-objective Flower Pollination Algorithm

Investigation of Various Position Estimation Accuracy Issues in Pulse-Injection-based Sensorless Drives

Pulse-Injection-Based Sensorless Control Method with Improved Dynamic Current Response for PMSM

A New Micro Non-Resonant Electromagnetic Energy Harvester for Low-Frequency Vibration Applications

Mutual Inductance Calculation of Two Coaxial Solenoid Coils with Iron Core

Analysis of System Interharmonics of VSI-Fed Small DC-Link Drive with Varying Power Load

Simple and Effective Position Estimation Error Compensation Method for Sensorless SPMSM Drives

Wave power generation system based on magnetic lead screw

Ring magnets used for improving the vibration response of a micro electromagnetic energy harvester

Micro Electromagnetic Vibration Energy Harvester with Mechanical Spring and Iron Frame for Low Frequency Operation
Identification of Load Current Influences on Position Estimation Errors for Sensorless SPMSM Drives

Design of Position Estimation Strategy of Sensorless Interior PMSM at Standstill Using Minimum Voltage Vector Injection Method

High-Frequency Signal Injection Method Based on Duty Cycle Shifting Without Maximum Fundamental Voltage Magnitude Loss

Unified equivalent MMF concept for torque analysis of AC machines

Active DaMPing control methods for three-phase slim DC-link drive system

Comparative study of low-pass filter and phase-locked loop type speed filters for sensorless control of AC drives

Square-Wave Voltage Injection Algorithm for PMSM Position Sensorless Control With High Robustness to Voltage Errors

Magnetic Field and Thrust Analysis of the U-Channel Air-Core Permanent Magnet Linear Synchronous Motor

Frequency splitting suppression method for four-coil wireless power transfer system

3D magnetic-resonance-coupling (MRC) localization of wireless capsule endoscopy

A new type of axial-flux magnetic lead screw with inherent spring characteristic

A Comparative Study on Pulse Sinusoidal High Frequency Voltage Injection and INFORM Methods for PMSM Position Sensorless Control

Analysis of Harmonics Suppression by Active Damping Control on Multi Slim DC-link Drives
A new application and experimental validation of moulding technology for ferrite magnet assisted synchronous reluctance machine

Synchronous Switching of Non-Line-Start Permanent Magnet Synchronous Machines between Inverter to Grid Drives

Modeling and analysis of current transformer for fast switching power module current measurement

Minimum-Voltage Vector Injection Method for Sensorless Control of PMSM for Low-Speed Operations

Permanent Magnet Flux Online Estimation Based on Zero-Voltage Vector Injection Method

New helical-shape magnetic pole design for Magnetic Lead Screw enabling structure simplification

Stress-based Variable-inductor for Electronic Ballasts

Motor-Driven Giant Magnetostrictive Actuator

Analysis of voltage modulation based active damping techniques for small DC-link drive system

Improved INFORM method by minimizing the inverter nonlinear voltage error effects

A cost-efficient long stroke field modulated linear machine

A new stress-based variable-inductor for electronic ballasts

Transfer Efficiency Analysis of Wireless Power Transfer System under Frequency Drift

A new high frequency injection method based on duty cycle shifting without maximum voltage magnitude loss
Sensorless Control of Low-cost Single-phase Hybrid Switched Reluctance Motor Drive

Current measurement method for characterization of fast switching power semiconductors with Silicon Steel Current Transformer

High Torque Density Transverse Flux Machine without the Need to Use SMC Material for 3D Flux Paths

New helical-shape magnetic pole design for Magnetic Lead Screw enabling structure simplification

Electromagnetic Lead Screw for Potential Wave Energy Application

A general and intuitive approach to understand and compare the torque production capability of AC machines

A New Fault-tolerant Switched Reluctance Motor with reliable fault detection capability

High Bandwidth Zero Voltage Injection Method for Sensorless Control of PMSM

Sensorless control of low-cost single-phase hybrid switched reluctance motor drive

Sensorless control of interior permanent-magnet synchronous motors with compressor load

An Active Damping Technique for Small DC-Link Capacitor Based Drive System
Maheshwari, R. K., Munk-Nielsen, S. & Lu, K., May 2013, In: I E E E Transactions on Industrial Informatics. 9, 2, p. 848-858

Artificial Inductance Concept to Compensate Nonlinear Inductance Effects in the Back EMF-Based Sensorless Control Method for PMSM

Cogging Torque Reduction by Slot-Opening Shift for Permanent Magnet Machines

DC-bus voltage control of grid-connected voltage source converter by using space vector modulated direct power control under unbalanced network conditions
Flux Concentration and Pole Shaping in a Single Phase Hybrid Switched Reluctance Motor Drive

Determination of High-Frequency d- and q-axis Inductances for Surface-Mounted Permanent-Magnet Synchronous Machines

Investigation of Flux-Linkage Profile Measurement Methods for Switched-Reluctance Motors and Permanent-Magnet Motors

Determination of the High Frequency Inductance Profile of Surface Mounted Permanent Magnet Synchronous Motors

An Analytical Equation for Cogging Torque Calculation in Permanent Magnet Motors

A New Low-Cost Hybrid Switched Reluctance Motor for Adjustable-Speed Pump Applications

Fault tolerant motor and inverter: analysis of single motor concept

Fault tolerant motor and inverter: analysis of the winding-isolated permanent magnet motor

Nyt billigt laveffekt drivsystem?

Simulation of Danfoss Thermalstatics HF soldering

Design of a hybrid switched reluctance motor

Design Study for Controllable Electric Motor for Three Wheel Drive, In Wheel Mounting on Professional, Electric, Lawn Mower

Flux Linkage Calculation in Permanent Magnet Involved 2D and 3D Finite Element Analysis

Low cost drives for pump applications

A Simple Method To Estimate Inductance Profile Of A Single Phase Surface Mounted Permanent Magnet Transverse Flux Machine
General Torque Equation Capable of Including Saturation Effects for a Single Phase Surface Mounted Permanent Magnet Transverse Flux Machine

Modeling And Power Factor Analysis Of A Single Phase Surface Mounted Permanent Magnet Transverse Flux Machine

Modelling A Single Phase Surface Mounted Permanent Magnet Transverse Flux Machine Based on Fourier Series Method

Drive motors for electric vehicles - a comparison
Lu, K. & Ritchie, A. E., 2002, In: Electromotion. 9, 1, p. 3-8

Preliminary Comparison Study of Drive Motor for Electric Vehicle Application