ductive Coil Geometry Torque: Magnet Spin via Gauge-Imbalanced Dual Windi

Author: Jovonte Marcellino

Date: June 2025

Overview:

This paper explores the use of gauge-imbalanced coil windings to induce rotational torque on a levitating magnet using only direct current and spatial field engineering.

Concept:

Alternating current is often associated with magnetic field rotation. However, this model demonstrates that even with direct current, by stacking coils with different wire gauges wound in opposing directions, you can create an unbalanced spatial magnetic field that induces angular motion.

Proposed Setup:

1. A copper cylinder core.
2. A clockwise primary coil using smaller gauge wire.
3. A counterclockwise secondary coil using thicker gauge wire overlaid on top.
4. Direct current applied only to the primary coil.

Expected Behavior:

- The stronger field from the secondary coil (thicker wire, lower resistance) creates a dominant magnetic vector.
- The spatial opposition between the two windings induces circular magnetic asymmetry.
- A levitated magnet placed in the field may begin to spin - without mechanical motion or AC switching.

Transformer Principle:

Though the coils are not electrically connected, their proximity allows magnetic field interaction (inductive coupling). The secondary winding influences the field without needing an electrical loop, due to near-field effects.

Significance:

- Enables magnetic motion from DC using coil geometry.
- Demonstrates that magnetic waveforms can be embedded physically, not electronically.
- Supports development of solid-state spin motors, programmable magnetic fields, or levitation-control systems.

License:

Inventor: Jovonte Marcellino