

## Switched Reluctance Motor dynamic eccentricity modelling

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*Abstract:* SRM is a brushless electric motor built of iron. It is used in places where durability and efficiency are important. This is related to its increased resistance to damage than in other electric motors. Due to these applications, proper diagnostics of such a motor is a very important factor. Like any other electric motor it can be susceptible to various mechanical and electrical damages. One of the most common faults is dynamic eccentricity which occurs when the center of the rotor is not at the center of rotation and minimum air gap revolves with the rotor. This phenomenon will be simulated using the finite element method of the FEMM software. And then the data from this method is used in the Matlab program for dynamic simulations. Then it will be possible to see how this mechanical fault affects the motor's performance. This study can also be compared with experimental research on a test stand that had been performed before.

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