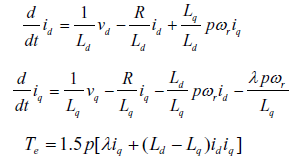
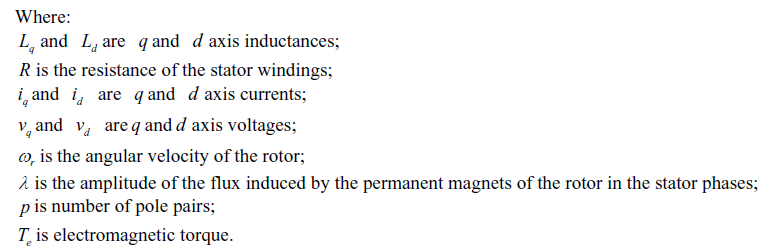
**STATE SPACE REPRESENTATİON OF THE PMSM AND LOAD**

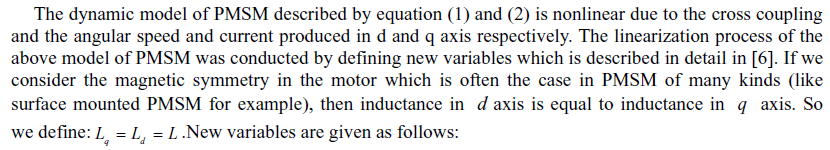
Rearranged by S.Ozkucuk from “Permanent Magnet Synchronous Motor with Linear Quadratic Speed Controller, Wen-Jun Xu”

**Mathematical Model of PMSM**

The equations that govern the electric dynamics of PMSM are expressed in the rotor reference frame (qd frame) as follows:







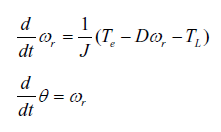
 



**Mechanical Model of PMSM**

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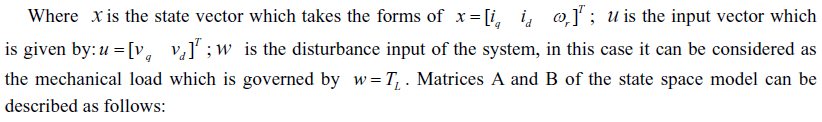
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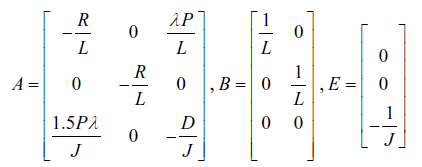
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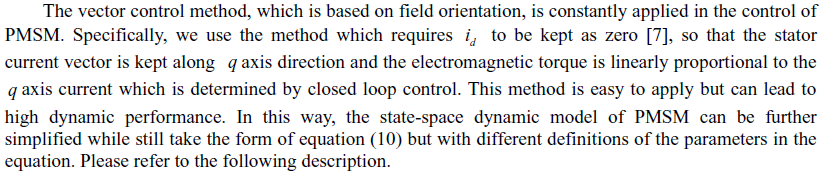
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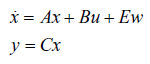
**Continuous State-Space Model of PMSM**

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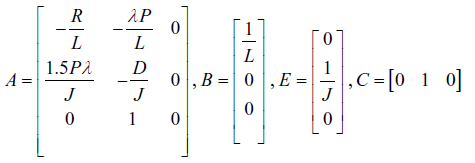
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