Reconfigurable-Winding Electric Drive

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Period: 06-2020 to 06-2025

- Objectives
  - Investigation of reconfigurable multiphase electrical machines for industrial applications (e.g. Marine, Wind, Transport)
  - Dynamic simulation of multiphase machine model, converter and the control to achieve an understanding of the fault conditions
  - Optimization of a conceptual electric drive with capability of on-the-fly reconfigurability of the topology of drive train.

- Funding and collaborations
  - Funding: Stiftelsen för Strategisk Forskning
  - Industrial Partner: ABB

- Results so far
  - On going literature review on the state-of-the-art of fault tolerant multiphase drive system and market analysis for the application of such systems
  - One conference paper in EPE-2020 on "*Comparative assessment of PWM methods for control of asymmetric Six-Phase Permanent Magnet Synchronous Machine*"