Lehrveranstaltungsankündigung

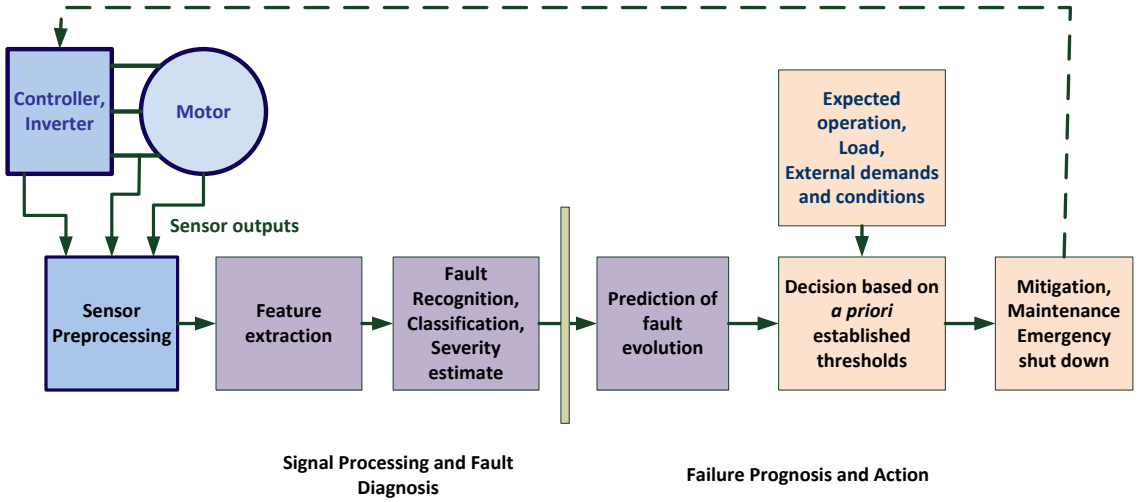
LV 431.314 Ausgewählte Themen der elektrischen Antriebstechnik 2

Reliability and Failure Prognosis of Electrical Drives

(2SWS/3ECTS)

Content:

- Failure causes in electrical machines and power electronics, and modes of failure.
- Design for fault withstand and minimization.
- Measurements and sensors.
- Model- and data-based fault diagnosis.
- Fault characterization and signal processing techniques.
- Failure prognosis and remaining useful life estimation methods.
- Operation under fault and mitigated fault: analysis and control aspects.



Typical Scheme for fault diagnosis, isolation , prognosis and mitigation

Lecturer:
Prof. **Elias G. Strangas** is a full professor at the Department of Electrical and Computer Engineering, Michigan State University, US, where he directs the Electrical Machines and Drives Laboratory and 2015 Fulbright Visiting Professor at TU Graz. He has more than 15 years of experience in the field of reliability of electrical drives: design for fault withstand and mitigation, fault diagnosis, failure prognosis, and operation under faulty conditions.

Prerequisites:
Undergraduate power electronics, electric machines and drives course.

Meeting Times:
Tuesdays, 13:00-16:30h including coffee break:
10.03.15, 17.03.15, 21.04.15, 28.04.15, 19.05.15, 26.05.15, 02.06.15

Assessment:
One hour exam (50%), project with final presentation (50%).