Vorstellung der Forschergruppe “Control of renewable energy systems (CRES)”

Christoph Hackl

www.cres.mse.tum.de

17.05.2016

Kick-off Meeting mit SWM,
Technische Universität München

Gliederung

1 Vorstellung der Forschergruppe “Control of Renewable Energy Systems (CRES)”

Gliederung

1. Vorstellung der Forschergruppe “Control of Renewable Energy Systems (CRES)”
   - CRES Team
   - Herangehensweise
   - Interdisziplinäre Expertise
   - Forschungsblickwinkel und Publikationen
   - Laboraufbau

Gliederung

Group “Control of renewable energy systems (CRES)”

Team

H. Eldeeb, M.Sc.
(CRES,09/2015)

C. Dirscherl, M.Sc.
(CRES,01/2014)

C. Hackl, Dr.-Ing.
(CRES,01/2014)

J. Kullick, M.Sc.
(CRES,10/2015)

K. Schechner, M.Sc.
(CRES,01/2014)

Z. Zhang, M.Sc.
(CRES/EAL,07/2015)

External PhD candidates

S. Krüner, M.Sc.
(SINNPower,11/2015)

A. Birda, M.Sc.
(BMW,04/2016)

. . . and collaborations with EAL (Prof. Kennel)

F. Bauer, M.Sc.
(EAL)

M. Abdelrahem,
M.Sc. (EAL)

A. Ayad,
M.Sc. (EAL)

Vorstellung

Tätigkeitsfelder

Classical wind turbine systems

Focus: Efficiency and reliability

Airborne wind energy systems

Focus: Fault-tolerant control

Small-scale wind turbines

Focus: Use of RSMs ($\leqslant$ 50 kW)

Wave converters (SINN Power)

Focus: Efficiency and reliability

Geothermal power systems

Focus: Fault-tolerant control

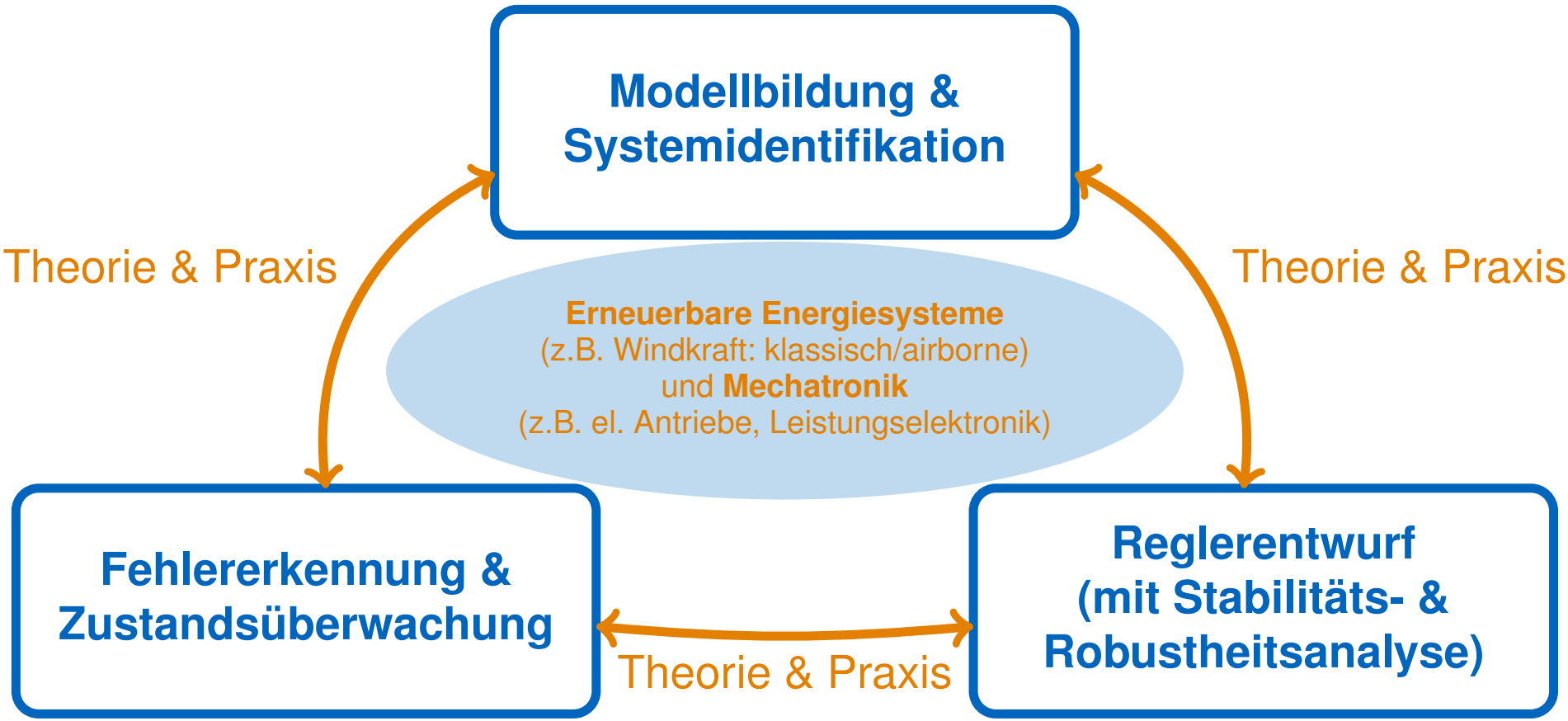
Electric vehicles (BMW)

Focus: Optimal control

Gliederung

Vorstellung

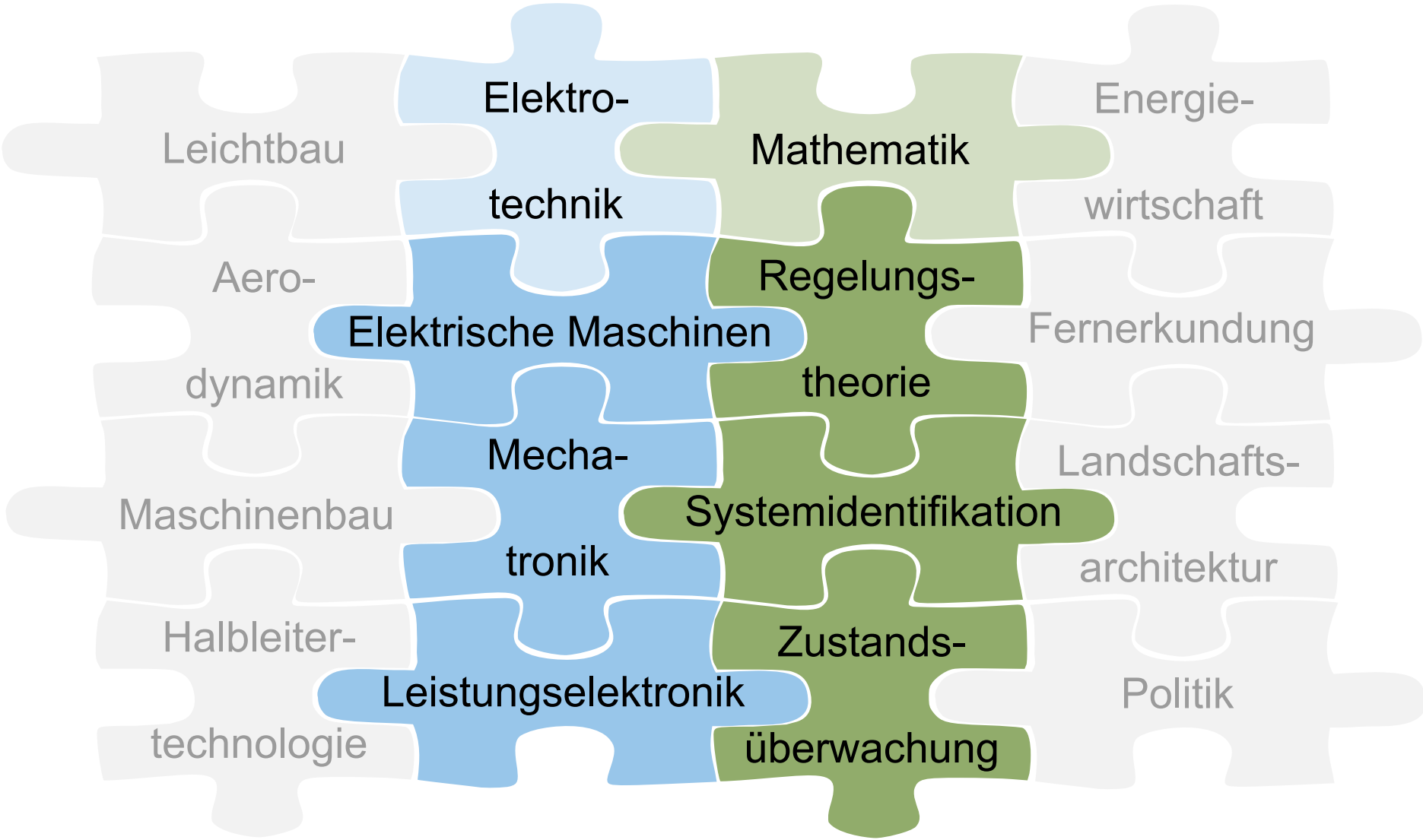
Herangehensweise



Gliederung

Vorstellung

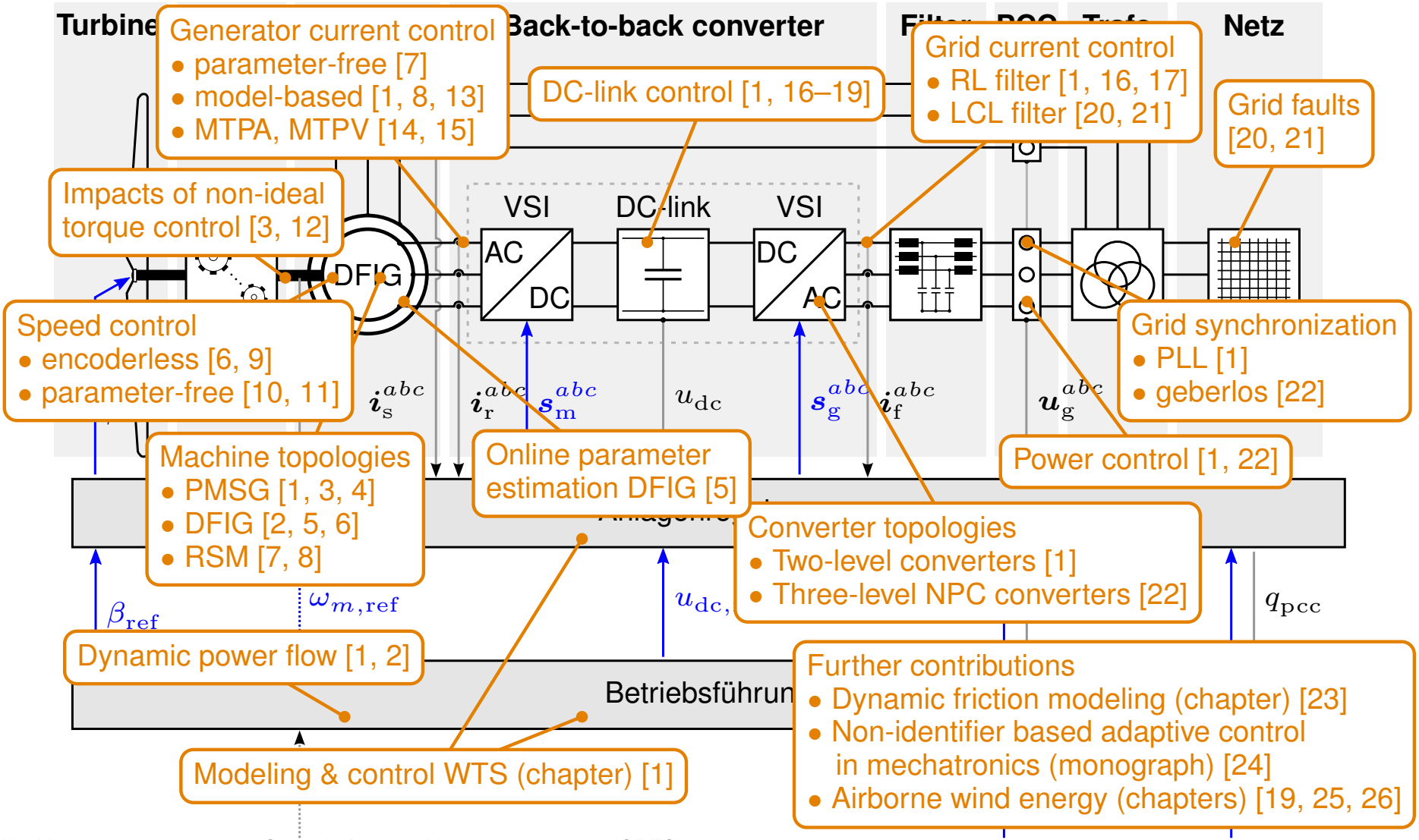
Interdisziplinäre Expertise



Gliederung

Vorstellung

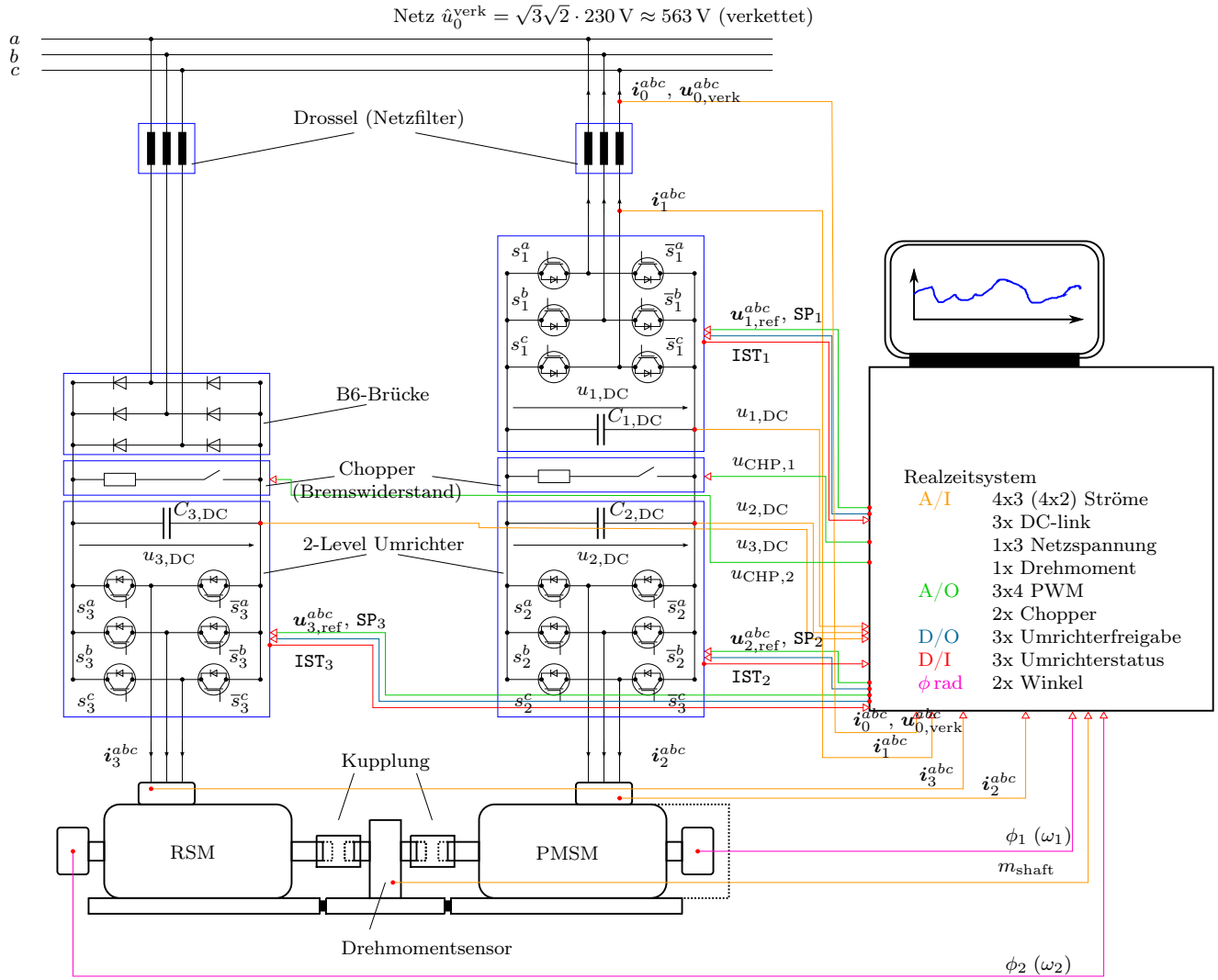
Forschungsblickwinkel und Publikationen



Gliederung

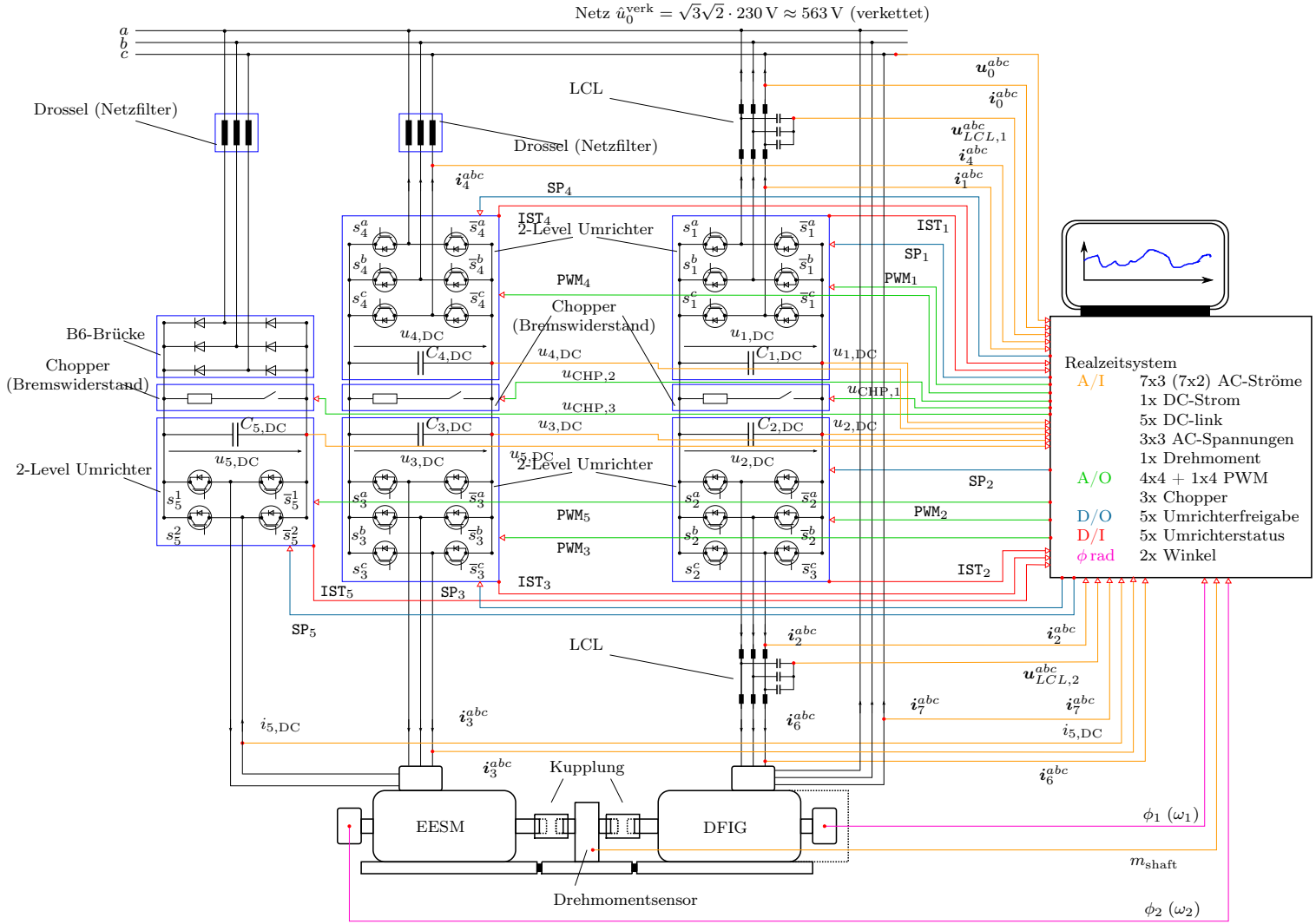
Vorstellung

Laboraufbau 1: Reluktanz-Synchronmaschine und Permanentmagnet-Synchronmaschine



Vorstellung

Laboraufbau 2: Fremd-erregte Synchronmaschine und doppelt-gespeiste Asynchronmaschine



Vorstellung

Laboraufbau (aktueller Stand)

Reluctance and Permanent-magnet SMs

Electrically-excited SM and doubly-fed IM

Real-time system and VSIs

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