

## Chronological Curriculum Vitae (CV)

<b>Academic Studies</b>	10.1980 - 10.1986	study Electrical Engineering at Aachen University of Technology (RWTH), graduate as Diplom-Ingenieur
<b>Reserach Assistant</b>	01.1984 - 05.1985	student-research-assistant at the institute for electric power engineering and distribution (RWTH Aachen)
	09.1985 - 03.1986	student-research-assistant in the field of electric drives at the "Randse Afrikaanse Universiteit" in Johannesburg, South Africa
<b>Professional Activivites</b>	11.1986 - 11.1992	full-time research assistant at the institute for power electronics and electric drives, RWTH Aachen (at Prof. Dr.-Ing. H.-Ch. Skudelny)
	24.04.1992	Doctoral Degree
	01.1993 – 04.2007	work for Siemens AG in the Automotive Division (later called Siemens VDO), activities, responsibilities and experiences: see next page
	since 05.2007	Professor at the University of Applied Sciences Würzburg-Schweinfurt (FHWS), Germany, teaching and research in power electronics and electric drives
	since 08.2012	head of the technology transfer center for electric mobility

## a) More than 14 years industrial/professional activities at Siemens

### Technical Project Management for Electric Vehicle Drives

- Customer Ford, Detroit, USA: Development of Inverter and Motor for an electric driven Ford Ranger, 50 Kilo-Watt (kW) at a battery voltage of 350 Volt
- Customer Chrysler, Detroit, USA: Development of an integrated electric drive with inverter, DC to DC converter Motor and gear box. 70 kW for an electric vehicle based on a Chrysler Voyager
- Various Drives for Hybrid- and fuel-cell vehicles for DaimlerChrysler, Ford und General Motors

### Development Work for Electric Vehicle Drives

- Development of an electric vehicle inverter for 400 V, 400 A with insulated gate bipolar transistors, drive circuits, controller, cooling circuit etc.: design, industrialization and validation, low-volume production
- Development of a DC/DC converter for supplying energy to the 12V battery from the 400 V traction battery, Design, Industrialization and Validation with partnering Siemens divisions (Siemens A&D Chemnitz)

### Research and Development Manager for High Volume Electric Drives from 08/2000 to 04/2007

- Head of the development group with 30 people for electric drives used in braking-, steering- and gear-box-systems. Motor designs and calculations, simulation, mechanical design, validation, laboratory investigations, industrialization, high volume production support for worldwide operation
- distributed engineering group in Europe (Würzburg) and North America (London, Ontario, Canada)
- electric motors for braking systems: 2 customers worldwide (Continental Teves and TRW), annual volume approx. 10 million motor per year,
- electric motors for gear- and clutch-systems: 3 customers, annual volume approx. 800.000 motors per year
- electric motors for electric power steering systems: 3 customers (ZF-Lenksysteme, Volkswagen, Koyo) annual volume approx. 1,2 million motors per year
- as part of my day to day business I was involved in making samples, answering requests for quotations and visiting potential new customers in the above mentioned areas. During that time I therefore also worked at Siemens on potential motors for TRW steering programs. One was for electro-hydraulic steering systems, the other was for EPAS. However Siemens never succeeded but failed in getting any series production program from TRW.

### Experience Abroad

- 1/2 year Johannesburg, South Africa
- more than ten years projects in North America
- 3 year project with Japanese steering company

## b) More than 12 years at FHWS (University of Applied Sciences)

- teaching in power electronics, simulation and principles of electrical engineering
- various R&D projects in power electronics and electrical drives
- head of R&D department TTZ-EMO at FHWS

## c) Publications, Patents, Research Groups

- for publications see <http://ttz.fhws.de/literaturliste/>
- for research groups see [http://ttz.fhws.de/#section\\_neuigkeiten](http://ttz.fhws.de/#section_neuigkeiten)
- several patents and patent applications