

# DIETMAR TOURBIER

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## Education

### ***MBA, UCLA Anderson School of Management, 2004***

Focus on International Business. Final project: Consulting New Zealand firms to expand to the U.S. market.

### ***PhD Aerospace Engineering (Minor: Mathematics), The University of Arizona, 1996***

Thesis: "Numerical Investigation of Transitional and Turbulent Compressible Axisymmetric Wakes"

### ***Dipl. Ingenieur, Aerospace Engineering, University of Stuttgart, 1991***

Thesis: "Numerical Investigation of the Spatial Stability of an Axisymmetric Jet by Solving the Full Navier-Stokes Equations"

## Experience

### ***Commonwealth Scientific and Industrial Research Organisation***

#### ***Director, Energy BU, Dec 2022 – today***

Leading the Energy BU with 300+ staff developing technologies in support of the Australian Energy Transformation towards net-zero emissions.

#### ***Science Director and Deputy Director, Energy, Oct 2020 – Nov 2022***

Supporting a multidisciplinary team of scientists, engineers, economists and business professionals in solving current and future energy challenges to enable the transition to lower emissions energy future.

#### ***Director, Australian Solar Thermal Research Institute (ASTRI), June 2018 – Sep 2020***

Providing overall leadership within ASTRI and providing the vision, direction and strategic oversight for the delivery, adoption and impact of the ASTRI objectives. Responsible for delivering ASTRI's Strategy driving ASTRI's role in enabling the commercial viability of Concentrated Solar Technology (CST) through the development, demonstration and deployment of emerging CST technologies, with a focus on areas where Australia has a comparative advantage.

Responsible for leading and managing ASTRI's world class capability in CST and actively managing key relationships with ASTRI partners, Government, Industry, international stakeholders and other Research institutions to ensure ASTRI outcomes are achieved in the national interest.

### **GE Global Research Europe**

#### **Executive Regional Technology Leader Europe, March 2017 – May 2018**

Leading a team of 90 researchers in the areas of aerodynamics, thermodynamics, power electronics, electric machines, power systems and controls. Key focus areas: same as below plus turbomachinery and advanced heat transfer for compressors and aircraft engines, advanced aerodynamic and structural design for wind turbines.

#### **Teaching**

- 8-10 annual two-hour seminars for external business and technology students and executive MBA about technology development in a global business setting

### **GE Global Research Europe**

#### **Operations Leader Europe Technology Center, February 2016 – May 2018**

Responsible for site operations (Finance, Health & Safety, IT, Facilities) of the GE European Technology Center. (additional role to Technology Leader)

### **GE Global Research Europe**

#### **Executive Technology Leader, Electrical Systems, 2011 - 2017**

Led a team of 60 researchers in the areas of power electronics, electric machines, power systems, controls and mechatronics. Key focus areas: electric power conversion for renewable energy, locomotives & large mining vehicles, power grid technologies for increased penetration of renewables, incorporation of SiC as new semiconductor switch, life science technologies (radiochemical synthesis)

#### **Product Prototype Development:**

- Multi-generation successive DFIG wind converter product upgrades from 1.5MW to 2.8MW (2011 – 2016)
- 5-level and 7-level MV motor drive converter 3+MW, improved cost, volume, availability (2012)
- First GE active magnetic bearing prototype (self-sensing) (2014)
- Mining truck electrified auxiliary system (2015), weight and efficiency improvement over hydraulic-mechanic system
- First GE SiC 99% efficient solar inverter (2016), improved efficiency at reduced cost (air-cooled)
- First GE chip-size radiochemical synthesizer for Positron Emission Tomography (PET)

#### **Teaching**

- 8-10 annual two-hour seminars for external business and technology students and executive MBA about technology development in a global business setting

## **GE Global Research Europe**

### **Lab Manager, High Power Electronics, Electrical Systems, 2007 - 2011**

Grew a new team to 20+ researchers in the area of power electronics. Key focus areas: power electronics for renewable energy, locomotives & large mining vehicles, and electrically driven compressors for the oil and gas industry.

#### **Product Prototype Development:**

- First GE three-level full conversion MV Wind converter prototype (2009), improved grid code compliance
- Compact Inverter for mining vehicles (new devices, 30% volume & weight reduction) (2010)
- First GE MW-class solar inverter based on Wind converter bridges (2011), 50% cost reduction over existing solar inverters

#### **Teaching**

- Bi-Annual 3-day Program Management course for experienced researchers
- Bi-Annual 2-week Six Sigma DFSS and DMAIC courses

## **GE Global Research**

### **Site Leader, Hybrid Power Generation Systems, 2006 - 2007**

Responsible for research site of 60 employees in the area of solid oxide fuel cell technology development. Facility management, strategy, staffing and career development

## **GE Energy**

### **Manager, Hybrid Integration Systems, 2004 – 2006**

Managed a group of 12 Engineers in the area of fuel cell technology electric power generation system development and integration. Staffing, career development and human resource function for engineering group

## **GE Energy**

### **Senior Program Manager, Solid Oxide Fuel Cells, 2002 – 2004**

Management of externally funded Solid Oxide Fuel Cell (SOFC) programs. Development of strategy for internally funded program for SOFC-GT hybrid power generations systems

## **Honeywell Aerospace**

### **System Engineer, Fuel Cells, 2000 – 2002**

Project manager and lead systems engineer on 50 kW PEM fuel cell system development program (customer DOE); lead a group of 5-10 engineers and several technicians

## **Honeywell Aerospace**

### ***System Engineer, Aerospace Technologies, 1998 – 2000***

Project manager and lead engineer on advanced spacesuit glove development program

## **The University of Arizona**

### ***Post Doctorate Research Associate, 1997 - 1998***

Implementation of Large-Eddy Simulation into compressible Navier-Stokes codes; led a team of 5 graduate students in the field of numerical simulation of fluid dynamics

### ***Teaching***

Undergraduate courses in Fluid dynamics and Mathematics as teaching assistant.

## **Languages**

German (native), English (fluent)