

# Curriculum Vitae

Prof. Dr.-Ing. Dr. h.c. Detlef Zühlke

Professor for Production Automation  
at the Technical University of Kaiserslautern (emeritus)



## Education

- 1970 Studies in Electrical Engineering and Computer Engineering at the RWTH Aachen
- 1976 Graduated
- 1983 Doctorate at the Laboratory for Machine Tools at the RWTH Aachen on Robot Programming

## Professional life

- 1976 Research Assistant at the Laboratory for Machine Tools (WZL)
- 1983 Chief Engineer / Department Head (WZL) in the areas of CIM and Robotics
- 1985 Assistant to the Director of Airplane Maintenance, Deutsche Lufthansa AG / Frankfurt
- 1986 Boeing Corp. / Seattle Management Exchange Program
- 1987 Senior Head of Department Airplane Maintenance Lufthansa Frankfurt
- 1987 Department Head of Operation Planning and Production Preparation at the workshops Lufthansa Frankfurt 1986 Boeing Corp. / Seattle Management Exchange Program
- 1991 Professor for Production Automation at the University of Kaiserslautern
- 1998 Foundation of the transfer location Center for Man-Machine-Interaction ZMMI at the University of Kaiserslautern
- 2004 Head of the AG for Man-Machine-Interaction at the German Research Center for Artificial Intelligence (DFKI) GmbH
- 2009 Scientific Director of the research area Innovative Factory Systems (IFS) at the German Research Center for Artificial Intelligence (DFKI)
- 2017 Retirement

## Appointments

- 1998 Appointment to Chair for Production Systems at the Ruhr University Bochum
- 2002 Appointment as Head of the Fraunhofer Institute for Information and Data Processing IITB in Karlsruhe in connection with a professorship for Interactive Real-Time Systems at the University of Karlsruhe

## **Areas of Research**

New industrial control systems, communication technologies in industrial application, Analysis and design of Man-Machine-Systems for industrial applications, design of model-based Man-Machine-Interactions

## **Awards**

- 1983** Borchers Plaque of the RWTH Aachen for outstanding doctorate achievements
- 2005** VDI honor plaque for the merits in VDI/VDE Association for Measuring and Automation Technology (GMA)
- 2011** IFAC Outstanding Service Award
- 2013** Honorary Doctorate of the Lucian Blaga University in Hermannstadt/Romania for great merits and research success in the area of SmartFactory Technologies
- 2016** Decoration of the Association of German Engineers (VDI)
- 2016** Top 30 Innovators on smart manufacturing (SME Society of Manufacturing Engineers / USA)
- 2016** Smart Industry´s TOP 50 Innovators of Digital Transformation
- 2017** Visionary Leadership Award (Manufacturing Leadership Council / USA)
- 2017** Manufacturing Leader of the Year Award (Frost & Sullivan´s Manufacturing Leadership Council / USA)
- 2017** Order of Merit of the state of Rhineland-Palatinate

## **Acad. Pursuits**

- 1997** Dean of the Faculty Mechanical Engineering and Process Technology and member of the University Senate
- 2002** Member of the Senate Working Group for Structure and Development Planning of the University of Kaiserslautern

## **Memberships**

VDI/VDE-GMA, IFAC, Manufacturing Leadership Council

## **Honorary Offices**

Honorary member of the Executive Board of Technologie-Initiative SmartFactory KL e.V.  
Knowledge Transfer Ambassador for the potential area Production Technology Automation – Focus on Industrie 4.0 of the State Government Rhineland-Palatinate  
Chairman of the Technologie-Initiative SmartFactory KL e.V.  
Chairman des IFAC CC 4 on Mechatronics, Robotics and Components  
Chairman and Member of Advisory Board of the VDI/VDE Association for Measuring and Automation Technology  
Chairman des IFAC TC 4.5 on Human-Machine-Systems  
Chairman of the VDI/VDE GMA Focus Project „Ambient Intelligence in Automation“  
Scientific Leader of the USEWARE Congress

## **Expert Activities**

DFG, BMBF, several foundations, banks and courts collaboration in many international program committees

## **Advisory Board Activities**

Flanders Mechatronics Technology Centre Leuven

EAE Electronics GmbH Mainz

VDE-ITG Frankfurt

Scientific Advisory Board Industrie 4.0 of the platform Industrie 4.0 Berlin

Member in the Advisory Panel of the Scientific Journal of Engineering Manufacture

Member of the Board of Governors, Manufacturing Leadership Council, USA

Advisory Board of the Austrian Federal Ministry for Transport, Innovation and Technology

## **Lectures (selection)**

**2007** International Federation of Automatic Control (IFAC) Symposium on Analysis, Design and Evaluation of Human-Machine Systems, Seoul

**2008** IFAC World Congress, Seoul

**2008** MESA International Plant-to-Enterprise Conference, Prag

**2009** IFAC Symposium on Information Control Problems in Manufacturing, Moskau

**2009** European Annual Conference on Human Decision-Making and Manual Control, Reims

**2009** International Workshop on Software Convergence Technology, Seoul

**2010** IFAC International Conference on Management and Control of Production and Logistics, Coimbras

**2014** „Industry 4.0 Initiative“  
12th IEEE International Conference on Industrial Informatics (INDIN-2014), Porto Alegre

**2015** „INDUSTRIE 4.0 – the Future Manufacturing Paradigm“  
The International Conference On Missions (INCOM) 2015, Ottawa

**2015** „Smart Factories für eine Industrie 4.0“  
Schaufenster Industrie 4.0, Fellbach

**2016** Manufacturing Leadership Summit, Carlsbad USA

**2017** WTA Global Innovation Forum, Daejeon Korea

**2017** Seoul Forum, Seoul Korea

**2018** Smart Manufacturing & Industrie 4.0 conference, Chicago

**2019** Industrial Pioneers Summit, Hannover Messe 2019

**2019** Big Data Expo and Summit 2019, Guiyang China

## **Books (selections)**

### ***Der intelligente Versager. Das Mensch-Technik-Dilemma.***

Primus 2005; ISBN 389678276-2

### ***Model-Driven Development of Advanced User Interfaces.***

Springer 2011; Herausgeber: Heinrich Hussmann, Gerrit Meixner, Detlef Zühlke (Eds.); ISBN 978-3-642-14562-9

### ***Nutzergerechte Entwicklung von Mensch-Maschine-Systemen. Useware-Engineering für technische Systeme.***

Springer 2011; ISBN 978-3-642-22074-6

### ***Intelligente Vernetzung in der Fabrik.***

#### ***Industrie 4.0 Umsetzungsbeispiele für die Praxis.***

2015; Herausgeber: Gunther Reinhart, Bernd Scholz-Reiter, Wolfgang Wahlster, Manfred Wittenstein, Detlef Zühlke; ISBN 978-3-8396-0930-9

#### ***Handbuch Industrie 4.0: Geschäftsmodelle, Prozesse, Technik.***

Hanser 2017; Herausgeber: Gunther Reinhart; ISBN 978-3-446-44642-7

Artikel: Von CIM zu Industrie 4.0 –Einleitung.

Wandelbare modulare Strategien zur Transformation der Produktionsumgebung. Die Smart Factory für individualisierte Kleinserienfertigung.