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Ludwigshafen am Rhein  
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## Curriculum Vitae

### Functions:

- Spokesperson of the board of management of the Institute of Production Science (wbk)
- Member of the board of management of the Institute for Applied Materials - Materials Science and Engineering (IAM–WK)
- Head of the section Manufacturing and Materials Technology of the wbk
- Responsible for Manufacturing and Materials Technology at the IAM-WK

### Professional Career

since 2013	Associate Member of International Academy for Production Engineering (CIRP)
since 2013	Member of Wissenschaftlichen Gesellschaft für Produktionstechnik (wgp)
since 2012	Subject Editor Machining of Journal of Materials Processing Technology
2010	Appointment as professor “Manufacturing technology” at the Institute of Production Science (wbk)
2009	Deputy of the department of Mechanical Engineering concerning the postgraduate studies “Mechanical Engineering” Deputy of the department of Mechanical Engineering in the examining board of Engineering Pedagogics
2008	Appointment as representative of Prof. Fleischer as Head of the Institute of Production Science (wbk) of the University of Karlsruhe (TH), member of the board of management of the Institute of Production Science (wbk) and the Institute of Materials Science I Head of Section “Manufacturing and Materials Technology” of the Institute of Production Science (wbk) Member of the governing board of the KIT NanoMicro Center, responsible for Nanoscale and Microscale Fabrication Speaker of the graduate school 1483 “Process Chains in Manufacturing” together with Prof. Britta Nestler of University of Applied Sciences Karlsruhe
2007	Appointment as „außerplanmäßiger Professor“ (extraordinary professor) at the department of Mechanical Engineering at the University of Karlsruhe (TH)

2004	Habilitation with the thesis "Stability of surface layer states in mechanically surface treated metallic materials and its effects at thermal and mechanical loadings" Head of the technical committee „Mechanical Surface Treatments“ of the German Association for materials science (DGM)
2003	Member of the scientific advisory council in the consortium Association for Heat Treatment and Materials Technology (AWT)“
2002	Chairman International Scientific Committee on Shot Peening ; 2005 Chairman Int. Conf. on Shot Peening 9 in Paris
1994 – 2008	Direction of the department Manufacturing and Component behavior at the Institute of Materials Science and Engineering I (IWK I)
1993	Promotion „Effects of shot-peened surface layers on the quasistatic and one- or two-step cyclic deformation behavior of quenched and tempered AISI4140“
1990 - 1994	Scientific employee at Institute of Materials Science and Engineering I (IWK I) of the University of Karlsruhe (TH)
1985 - 1990	Studies of Mechanical Engineering at University of Karlsruhe (TH)
1984	Higher School Certificate at secondary school in Eppingen

#### **Memberships:**

- Deutsche Gesellschaft für Materialien (DGM)
- International Scientific Committee on Shot Peening (Chairman 9/2002 – 9/2005, Vice-Chairman 9/2005 – 9/2008)
- Arbeitsgemeinschaft Wärmebehandlung und Werkstofftechnik (AWT), Scientific Advisory Board since 4/2003
- Advisory board of Schweißtechnische Lehr- und Versuchsanstalt Mannheim since 2008
- Associate Member of International Academy for Production Engineering (CIRP) since 1/2013
- Member of Wissenschaftlichen Gesellschaft für Produktionstechnik (wgp) since 5/2013

#### **Reviewer & Editor:**

- Subject Editor “Machining” Journal of Materials Processing Technology (JMPT), since 01/2012
- Editorial Board Journal of Heat Treatment and Materials (HTM)
- Editorial Committee Production Engineering

#### **Awards:**

1994	Young Talent Award of Deutsche Gesellschaft für Materialkunde (DGM)
1990	Redtenbacher-Award of the Department of Mechanical Engineering of the University of Karlsruhe (TH)
1990	Höfler-Award of the Department of Mechanical Engineering of the University of Karlsruhe (TH)
1987	Grashof-Award of the Department of Mechanical Engineering of the University of Karlsruhe (TH)

## Lectures:

- Manufacturing Technology
- Production development Manufacturing and Materials Technology
- Simulation of Production Systems and Processes
- Simulation of Production Systems (Hector-School)
- Technology of Steel Components
- Experimental Welding Laboratory
- Project Micromanufacturing
- Werkstoffkunde I/II (till 2000)
- Materials Science and Engineering I/II (till 2007)

## Areas of Research:

### Processes

Process Design  
Machining  
Micro-Machining (Cutting, Ablation)  
Heat Treatments  
Surface Treatments  
Process Planning/ Control  
Simulation of Processes  
In-Process Control  
Process-Machine Interaction  
Process Integration/ Chains  
Hybrid Processes  
Process Chains

### Surface Engineering

Tools  
Tool Optimization  
Tool Wear Analyses  
Surface Integrity  
Topography  
Microstructure  
Residual Stresses  
Work Hardening  
Simulation of Workpiece States  
Component behavior  
Fatigue Strength  
Tribological Behavior

## a) Publications

1. M. Klemenz, V. Schulze, I. Rohr, D. Löhe  
Application of the FEM for the prediction of the parameter influence on the surface layer after shot peening.  
Journal of Materials Processing Technology 209(2009), 4093-4102.
2. Schulze, V., Autenrieth, H., Deuchert, M., Weule, H.  
Investigation of surface near residual stress states after micro-cutting by finite element simulation.  
CIRP Annals-Manufacturing Technology 59(2010), 117-121.
3. V. Schulze, C. Becke, K. Weidenmann, S. Dietrich  
Machining strategies for hole making in composites with minimal workpiece damage by directing the process forces inwards..  
Journal of Materials Processing Technology 211(2011), 329-338.
4. V. Schulze, C. Becke, R. Pabst  
Specific machining forces and resultant force vectors for machining of reinforced plastics.  
CIRP Annals – Manufacturing Technology 60(2011), 69-72.
5. J. Rögner, K.-H. Lang, G. Baumeister, V. Schulze  
Microstructure and mechanical properties of micro tensile specimens made of CuAl10Ni5Fe4 produced by micro casting.  
Microsystem Technologies 17(2011), 301-311.
6. A. Cuba Ramos, H. Autenrieth, T. Strauß, M. Deuchert, J. Hoffmeister, V. Schulze  
Characterization of the transition from ploughing to cutting in micro machining and evaluation of the minimum thickness of cut.  
Journal of Materials Processing Technology 212(2012), 594-600.

7. V. Schulze, P. Weber, C. Ruhs  
Increase of process reliability in the micro-machining processes EDM-milling and laser ablation using on-machine sensors.  
Journal of Materials Processing Technology 212(2012), 625-632.
8. M. Helu, B. Behmann, H. Meier, D. Dornfeld, G. Lanza, V. Schulze  
Impact of green machining strategies on achieved surface quality.  
CIRP Annals – Manufacturing Technology 61(2012), 55-58.
9. V. Schulze, F. Zanger, N. Boev, J. Michna, U. Maas, C. Faltin, J. Schneider, P. Bollig  
FE-Simulation of Machining Induced Phase Transformations Considering Friction as a Function of Temperature and Sliding Speed and Detailed Modeling of the Heat Transport.  
Advanced Engineering Materials(2014), Vol. 16, Issue 2, 137-141.
10. Schulze, V., Zanger, F., Hoppen, P.  
Broaching  
CIRP Encyclopedia of Production Engineering,  
DOI; <http://www.springerreference.com/docs/html/chapterbid/369316.htm> (2014) 1-12.