

Dr.- Ing. Ralph Bernhardt:

**Education, Scientific Grades and Professional Career:**

- 1987 – 1992 Study Metal forming Sciences @ **Institut of Metal Forming Sciences, Mining Academy of Freiberg**
- 1992 Diploma degree @ **Institut of Metal Forming Sciences, Mining Academy of Freiberg**; Predicate: "excellent"
- 1992 – 1995 Scientific co-worker @ **Institute of Metal Forming Sciences, Mining Academy of Freiberg**; responsible for two public funded AiF projects - finalized 1997 (while working already in industry) with Promotion Dr.- Ing. under supervision of Prof. Lehmann and Lehnert; Thesis "A contribution to the prediction of boundary conditions in the interaction zone between workpiece and tool of closed die forging processes considering special models for the prediction of friction and heat exchange"
- 1995 – 1998 Application Engineer, Division Metals – Technology Hot- and Cold Rolling CEGELEC AEG Anlagen und Antriebssysteme GmbH in Berlin;
- 1998 – 2002 Preß- und Schmiedewerk GmbH in Brand-Erbisdorf (Peddinghaus Group) –Assistant of Management Board; Plant Manager Steel forging shop
- 2002 – 2003 Technical Managing Director @ Umformtechnik Radebeul GmbH; Aluminium Forgings
- 2004 – 2009 Innovation Manager @ cdp Bharat Forge GmbH (former Peddinghaus Group); Worldwide training for simulation users; Two patent applications (new forging processes)
- 2009 – 2011 Technical Managing Director @ EFS GmbH in Bitburg; Tube end forming technologies; Implementation of simulation tools
- since 2011 Direktor R&D @ Simufact engineering GmbH in Hamburg and Head of AMAP- Cluster office @ RWTH Aachen

**Scientific Honors:**

- 1992 Winner Award of the International Students Conference Cracow – Session: Metal Forming Sciences "Modern Simulation tools for closed die forging applications"
- 1992 "Agricola"-Medal of Mining Academy of Freiberg for "Excellence in studying"
- 1996 Winner Award of „Saxon Award of Metal Forming Technologies 1996“

**Scientific Publications:**

Since 1992 Author and Co-author of more than 40 scientific publications and 5 patent applications (three of them approved)

**Recent publications being relevant for this proposal:**

- 2006 Editor and key note of special edition "Forging News" of German Association of Bulk Metal Forming – Simulation in bulk metal forming industries
- 2012 R Bernhardt, M Wohlmuth, G Rothenbacher: Some new trends in simulation of cold forming processes MEFORM 2012 – Werkstofftechnologie und Massivumformung; ISBN 978-3-86012-434-5; 28.-30.03.2012, Freiberg
- 2012 The Simufact R&D Approach – a link between academic research and industrial application; Tagungsband 13. Round Table „Simulation in der Umformtechnik“, Bamberg, 2012; ISBN 978-3-9813814-1-2
- 2012 Forging and more – future requirements of process chain simulation; Session Keynote; Conference notes 13. Round Table "Simulation in der Umformtechnik, Bamberg, 2012; ISBN 978-3-9813814-1-2
- 2012 Entwicklungstrends und Anforderungsprofile an Simulationssysteme; 1. VDI-Fachkonferenz Warmmassivumformung 2012, Köln, 04./05. September 2012
- 2012 R Bernhardt, A Buijk, D Steffes-Lai: Enhanced capability of metal forming simulation tools – a pioneering approach to simulate real process behavior, 29<sup>th</sup> FORGING INDUSTRY TECHNICAL CONFERENCE; Marriott, Downtown Cleveland, Ohio; September 10-12, 2012
- 2012 R Bernhardt, F-D Philipp: "simufact.forming 11.0 – modeling groove rolling and micro-structural effects with modern simulation tools"; 82. Tagung der AIKW (Arbeitsgemeinschaft Internationaler Kalibreure und Walzwerksingenieure e.V), 3.-5.10.2012 in Bitburg
- 2013 Dr.- Ing. Ralph Bernhardt, Dr.- Ing. Hendrik Schafstall, Dr.- Ing. Ulrich Prah, Dipl.-Ing. Sergey Kononov, Dr.- Ing. Markus Bambach, Dipl.-Ing. Thomas Henke: Physical-statistically based multiscale simulation in process chains of bulk metal forming – Int. Conference "New developments in Metal Forming", Stuttgart, 2013