

## Prof. h.c. Dr.-Ing. Joachim U. Knebel

### Karlsruhe Institute of Technology (KIT)

Head of Division 3  
Division 3 – Mechanical and Electrical Engineering  
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## CURRICULUM VITAE

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### Academic Background and Education

- 10/1983-01/1989      Studies of Theoretical Mechanical Engineering, University of Karlsruhe (TH), now KIT  
01/1993                Ph.D. Thesis: "Experimental Studies in Turbulent Buoyant Jets in Sodium for Fast Reactors",  
Grade: 'Summa Cum Laude', University of Karlsruhe (TH), now KIT  
12/2013                Professor Honoris Causa of Saint-Petersburg State University, Faculty of Applied  
Mathematics and Control Processes

### Professional Career and Activities

#### **Karlsruhe Institute of Technology (KIT)**

- 02/1989 – 01/1993      Scientist at the Institute for Nuclear and Energy Technologies (IKET), former  
Kernforschungszentrum Karlsruhe (KfK), now KIT  
12/1992                Scholar of the German Academic Exchange Service (DAAD) at the University of Manchester  
UK on "Liquid Metal Flow Measurement Techniques"  
02/1993 – 12/1996      Head of Group "Long-term Containment Cooling" within European Pressurized Water Reactor  
(EPR) project, IKET  
01/1997 – 04/1997      Delegation to JAEA Tokai Japan, "Flow Instabilities in Boiling Water Reactors (experiment and  
theory)"  
05/1997 – 04/2002      Head of Group "Studies of Accelerator Driven Systems (ADS) for Transmutation of High Level  
Nuclear Waste", IKET  
05/2002 – 09/2010      Head of Nuclear Safety Research Programme (NUKLEAR), KIT  
10/2007 – 05/2009      Acting Head of Institute of Neutron Physics and Reactor Technology (INR), KIT  
06/2009 – 11/2010      Acting Head of Institute of Radiation Research (ISF), KIT  
10/2010 – 12/2013      Chief Science Officer (CSO-4), and Member of the Enlarged Executive Board, KIT  
Responsibilities: Faculty of Electrical Engineering and Information Technology (ETIT), KIT  
Mobility Systems Center, 3 Helmholtz Programmes: 'Storage and Cross-linked  
Infrastructures', 'Fusion Research' and 'Nuclear Safety Research', 5 institutes: Institute for  
Pulsed Power and Microwave Technology (IHM), Institute for Nuclear and Energy  
Technologies (IKET), Institute for Nuclear Waste Disposal (INE), Institute for Neutron Physics  
and Reactor Technology (INR), and Institute for Technical Physics (ITEP).

#### **Since 01/2014**

#### **Head of Division, Division 3 – Mechanical and Electrical Engineering**

Responsibilities: KIT-Faculty of Mechanical Engineering (MACH) and KIT-Faculty of Electrical  
Engineering and Information Technology (ETIT) and the corresponding 34 institutes,  
3 Helmholtz Programmes: 'Storage and Cross-linked Infrastructures', 'Fusion Research' and  
'Nuclear Waste Management and Safety'.

**Helmholtz Association**

07/1999 – 06/2002	Coordinator of Helmholtz Strategy Fund project, “Innovative Technology for Radiotoxicity Reduction” No. 99/16
05/2002 – 12/2014	Spokesperson of Helmholtz “Nuclear Waste Management and Safety” Programme
Since 01/2015	Co-Spokesperson of Helmholtz “Nuclear Waste Management and Safety” Programme
08/2003 – 07/2007	Coordinator of Helmholtz Virtual Institute VI-VH-036 “Competence Preservation in Nuclear Technology”
09/2009 – 12/2014	Member of the Governing Board of the Research Field “Energy” of the Helmholtz Association (HGF)
Since 03/2011	Member of the Think Tank to the President of the Helmholtz Association (HGF)
<b>Since 07/2012</b>	<b>Spokesperson of the Helmholtz Cross-Programme Activity “Electromobility”</b>
<b>Since 05/2015</b>	<b>Contact Person Helmholtzinitiative “Energy System 2050”</b>

**EURATOM and European projects (selection)**

11/2001 – 12/2002	European Coordinator of “MEGAwatt Pilot Experiment-TESTing (MEGAPIE TEST)” FP5 project
04/2005 – 10/2004	Spokesperson of “TEchnical Support for TRAnsmutation (TESTRA)” FP5 cluster
04/2005 – 03/2010	European Coordinator of “EUROpean Research Program for the TRANsmutation of High Level Nuclear Waste in an Accelerator Driven System (EUROTRANS)” FP6 project (the largest EURATOM project in the 6th European Framework Programme)
02/2008 – 07/2010	Elected Member of Executive Committee, European Sustainable Nuclear Energy Technology Platform (SNETP)
06/2009 – 07/2010	Acting Coordinator of EERA Joint Programme on Nuclear Materials (JPNM), European Energy Research Alliance (EERA)
11/2010 – 12/2013	Member of the Consultative Committee for the Euratom Specific Research and Training Programme in the Field of Nuclear Energy - Fusion (CCE-FU)
Since 11/2010	German Contact Person for Joint Implementation of Broader Approach (BA) Activities in the field of Fusion Energy Research

**Other Duties and Honorary Functions**

Since 1993	Author or co-author of more than 160 scientific publications  More than 110 invited papers, lectures at scientific conferences, public hearings and interviews, press events, specialist and project meetings in Europe, Russian Federation, Japan, Canada, USA, India, PR China, South Korea and Malaysia. Organizer and co-organizer of conferences in the field of nuclear energy, nuclear waste transmutation and mobility systems.
01/2001 – 12/2004	Elected member of the Supervisory Board of Forschungszentrum Karlsruhe (FZK)
2004 – 2007	Member of Energy Advisory Board, Jülich Research Center (FZJ)
05/2006 – 04/2012	Member of Federal Executive Board, German Nuclear Society (KTG) – re-elected in 2009
2006 – 2012	Member of the German Nuclear Committee (KTA)
2006 – 2011	Member of Scientific Board, KIT-CEA Frederic Joliot – Otto Hahn Summer School
Since 08/2006	Member of Editorial Board of Journal “Kerntechnik”
05/2007 – 12/2010	Member of Administrative Council, German Atomic Forum (DAtF)
10/2007 – 03/2013	CEO of Southwest German Research and Teaching Alliance Nuclear Technology
01/2008 – 12/2011	Vice President of European Nuclear Society (ENS) - re-elected in 2010
06/2008 – 12/2014	Chairperson of Steering Committee, International MEGAPIE Initiative
Since 06/2008	Member of the Working Group of the European Atomic Energy Society (EAES)
07/2008 – 06/2011	Member of Scientific Advisory Board, Helmholtz-Centre Dresden-Rossendorf (HZDR)
09/2008 – 08/2016	Member of the Board of Trustees, University of Applied Sciences, Karlsruhe – re-nominated in September 2012
05/2009	Member of the OECD MYRRHA International Review Team (MIRT)
Since 03/2010	Member of the International Evaluation Panel “European Centres of Excellence” for the Ministry of Education, Youth and Sports of the Czech Republic

Since 06/2010	Member of the Nuclear Science and Technology Peer Review Committee, Idaho National Laboratory (INL) USA; Chair in 2011
03/2011 – 04/2014	Spokesperson of the Working Group on Fukushima, set up by the Federal Ministry of Education and Research (BMBF)
<b>05/2011</b>	<b>European Science-Culture-Award of the European Foundation for Culture PRO EUROPA</b> , awarded on May 17, 2011 in Berlin, for merits in “Partitioning & Transmutation Research”
01/2012 – 11/2012	Member of the Board of the International Economic Forum Baden-Baden: “The Automobile of the Future”.
Since 10/2010	Member of the German Fusion Development Agreement
Since 10/2013	Member of the Project council Wendelstein W7-X
Since 05/2014	Spokesperson of the German Alliance for Competence in Nuclear Technology (KVKT)
09/2015	Co-Founder of the international Initiative ‘Affordable Energy for Humanity’ (AE4H), <a href="http://ae4h.org">http://ae4h.org</a>
Since 09/2016	Representative of the KIT in the Board of Directors of the national Kopernikus project New Power Grid Structures for the Energy Turnaround (ENSURE)

### Languages

English	Business fluent
French	Very good
Japanese	Basic knowledge