

CURRICULUM VITAE- PROF. UDAY KUMAR

Date of Birth: April 2, 1956
Director , Luleå railway Research Center
Professor & Head, Div of Operation & Maintenance Engineering
Luleå University of Technology, Luleå,
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A PROFESSIONAL PREPARATION

- IIT-BHU, Varanasi, India, BTech, **1979**
- Luleå University of Technology, Reliability and Maintenance Engineering, Lic **1989**
- Luleå University of Technology, Reliability and Maintenance Engineering, PhD, **1990**
- Luleå University of Technology(Terotechnology), Docent, **1995**

B. POSITIONS AND APPOINTMENTS

- Director Research and Innovation (Sustainable Transport) , Luleå Univ of Technology (**2012-**
- Director Luleå Railway Research Center (**2002-**
- Chair Professor of Operation and Maintenance Engineering, Luleå Univ. of Technology, **2001-**
- Professor of Mechanical Engineering (Operation and Maintenance Eng) **1997-2001** University of Stavanger, Stavanger, Norway,
- Assist/Associate Professor (Maintenance Engineering) Luleå University of Technology-**1991-1996.** .
- Research Assistant/PhD Scholar 1986-1990
- Exec Trainee Production Engineer & Maint Planning Eng), NMDC Ltd , India (**1979- 1986**

OTHER AFFILIATIONS

- Distinguished Visiting Professor Tsinghua University, Beijing (2017-2020)
- Guest Professor at National Science Foundation (NSF) sponsored Center of Excellence for Intelligent Maintenance Systems at University of Cincinnati, **USA** since April 2011-
- External examiner for Reliability Engineering and Asset Management(REAM) Program of the University of Manchester, **UK.** 2014-2017
- Visiting Professor University of Tromsø, **Norway** 2012-2014
- Visiting Professor University of Stavanger, Dept of Mechanical Eng, **Stavanger** 2001- 2005
- Visiting Faculty Helsinki University (automation and maintenance-EMC program) 1997-2007
- Visiting Faculty, (Automation and Maintenance) Imperial College London, 2001-2002

C. KEY ACADEMIC ASSIGNMENTS

- Member of the Scientific Advisory Council of RAILENIUM – Technological Research Institute Railway Research Center, Jointly funded by Government of France and French Rail Industries (2014-
- Member of the Swedish delegation on High Speed Train 2013-
- Member of the Swedish delegation to Tokyo (led by the Swedish Infrastructure minister) as a part of the Working Group on Railway Maintenance for bilateral discussion with Japanese Ministry of Land , Infrastructure and transport(MLIT) May 2016
- Member of the Swedish delegation to India (led by the Swedish Infrastructure Minister) as a part of the Working Group for bilateral discussion with Indian Railway, April 2015
- Member of the Research Council of SwedTrain – Association of Swedish Railway industry 2013-
- Chairman of Thesis Award Committee, European Federation of National Maintenance Societies (EFNMS), Brussels 2010-2016
- Chairman of the Scientific Council of Swedish National Maintenance Society 2006-
- Co-opted member to Technology Mission of Indian Railway as an Adjunct member 2015-
- Co-opted member to Advisory Group of Expert(AGE) for Railway Make in India 2016
- Swedish National Representative to the Council of European Safety and Reliability Association(ESREL) 2008-
- Member of the Swedish Govt Working Group led by Royal Academy of Engineering Sciences(IVA) on Transport 2030 as a Representative of the Transport Research Community.
- Research Program Reviewer for National Research Council of Canada (Reliability) 1999-
- Research Program Reviewer Strategic Research Council of Belgium, 2007 –
- Research Program Reviewer for University of Leuven, Research Council (Operation and maintenance) , Belgium 2006-
- Have been participating as steering committee member, advisory board member and Investigator of several European Framework Program for the Railway under EU FP 7 and Horizon 2020.

OTHER ASSIGNMENTS

- Board member , Center of Operation and Maintenance (CDU) Royal Institute of Technology (KTH)) -2003-2007

- Steering Board member Advanced Center for Mining and Metallurgy 2010–2016
- Steering Board Member SKF-UTC for Advanced Condition Monitoring 2011–
- Board member Bergforsk- Research in Rock Engineering 2011–
- Board member of LKAB- HLRC Research Foundation 2004–2014
- Member Steering Committee for Energy Efficient System Effsys-KTH-Elforsk (2001–2005)
- Worked as a principal investigator, consultant and expert adviser to many industrial projects financed by the Swedish industries (ABB, LKAB, Boliden, SAAB Logistics Support –Military Aviation, Atlas Copco, ALSTOM Transport France, Airbus, Swedish Rail administration, Swedish Transport Administration, Sandvik AB.) , Swedish Council for Strategic Research (SSF), VINNOVA Govt Agency for Innovation, EU Framework Program(FP) 6 and EU FP 7 related to Railway sector (Total worth ca 15 MEURO) .

EDITORIAL BOARD MEMBER OF JOURNALS

- **Editor- in-Chief (Maintenance)** -International Journal of system Assurance engineering and Management,
- **Editor Europe** (International Journal of Quality in Maintenance Engineering). Also member of the Editorial Advisory Board of several Journals

D. PUBLICATIONS

- Have more than 350 publications in Peer Reviewed International Journals, **National journals**, International Conferences and workshops (www.ltu.se/maintenance).
- Co-author of **4 books on maintenance Engineering**
 - Introduction to Maintenance Engineering: , published by Wiley, London , 2016
 - Hand Book of Maintenance Audit published by CRC Press, Canada, 2016
 - Maintenance Costs and Life Cycle Cost Analysis , CRC Press, Canada), 2017
 - eMaintenance: Essential Electronic Tools for Efficiency: Elsevier Academic Press, 2017
- Co-Edited 2 books
 - Current Trends in Reliability, Availability, Maintainability and Safety: An Industry Perspective **Springer, Switzerland 2016**
 - Quality , IT and Business Operations, Springer Nature Singapore, 2018
- **Co-Edited more than 6 Proceedings of International Congress /Conferences**
- Guest Editors for 8 Special Issues on Reliability and Maintenance for International Journals
- Contributed to **World Encyclopedia on Risk** (2008) published by Wiley, London
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E. TUTORING AND TEACHING EXPERIENCES

- Supervised 25 students for PhD Theses and 16 as Co-Supervisor in the subject area of Operation and Maintenance topics ranging from Maintenance Engineering, Condition monitoring, RAMS (Reliability, Availability, Maintainability and Safety analysis), Risk analysis, LCC, Service Engineering, Product Support Strategy, eMaintenance etc related to railway and aviation sector
- Developed and taught many courses for undergraduate, postgraduate and continuing education programs at Luleå University, Stavanger University, Helsinki University and Imperial College London and also specially developed courses for developing countries sponsored by SIDA, Sandvik, Atlas Copco, etc) in the subject areas of Reliability and Maintenance since 1991

F. RESEARCH MANAGEMENT, ACADEMIC LEADERSHIP & ENTREPRENEURSHIP

- Have successfully established and developed the subject area of Operation and Maintenance Engineering as an academic discipline at LTU. Starting 2002 with a minimal resources the Division within the span of 5 years, has established itself as an internationally recognized “Research Group” with 45 research staff/ faculty and attracting researchers and scientists from many countries USA, Canada, UK, Belgium, the Netherlands, India, Spain, Portugal, China and Australia for cooperation and collaboration. Visit www.ltu.se/maintenance
- Have successfully structured and developed Lulea Railway Research Center with strategic Research and Innovation focus on maintenance of Railway System and industrial applications after taking over as Director since 2002. The Center is a model for interaction with industry and delivering industrially relevant research output. This has motivated the Swedish national rail administration to adopt it as a Strategic Center for R&D for operation and maintenance of railway system. Some of the R& Innovation work within the Center have resulted in a successful commercial products for spin off companies from the Center like Damill AB, eMaintenance365 AB, Performance in Cold AB, OMICOLD AB (Operation and Maintenance of Railway in Cold Climate AB and innovative products like ReRail which has attracted global attention (attracting companies from countries like, India, China, Spain, UK to rethink rail maintenance) <https://www.ltu.se/centres/jytc>
- Founding member of SKF-UTC Advanced Center for Condition Monitoring and Smart Bearing at Luleå University of Technology, Luleå.

I. AWARDS/RECOGNITION

- Elected member of the Swedish Royal Academy of Engineering Sciences (2015-
- Distinguished Alumni Award IIT –BHU, India for 2017-2018
- Distinguished Professor of Industrial Engineering, Tsinghua University, Beijing, China

- Honorary Professor Beijing Jiaotong Univ 2016 on the occasion of 120th anniversary of the Univ
- The Nordeas Norrlands Science Foundation Award for significant contributions to Science, Region and Society for the year 2014 (Luleå University).
- Invited by Swedish Parliamentary Committee on Transport to address Swedish Parliament and representatives of Railway Industry during the “public hearing on “State of Swedish Railway Technology” in Swedish Parliament as an expert Expert on Maintenance Technology in Sweden , Dec 11, 2014, (see riksdag.se)
- International exceptional leadership Award in applied research in operation and maintenance of Rail Transport System by the Society for Reliability Engineering, Quality and Operation Management of India, 2010
- Life Time Achievement award by Society for Reliability and Safety, 2015
- APCOM (Application of Computers and Operations Research In The Mineral Industry) Council Recognition Award 2015
- Distinguish Alumnus Award Department of Mining Engineering, IIT BHU, 2014