

# Narendar Balaji M.Sc.

## Master of Science in Computational Engineering.

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## EDUCATION

### Master of Science in Computational Engineering

Friedrich Alexander University Erlangen, Germany (Oct 2019 – Oct 2024)

Finite Element Methods, Basics of Materials, Solid Mechanics, Linear Continuum Mechanics, Turbulence Physics & Turbulence Modeling, Optimization for Engineers, Functional Analysis for Engineers, Commercial Open-Source Startups (Agile Methodology), Industry 4.0.

### Bachelor of Mechanical Engineering

REVA Institute of Technology & Management (VTU), India (May 2012 – Sep 2016)

Mechanics of Materials, Design of Machine Elements, Manufacturing Processes, Operations Management, Material Science & Metallurgy, Management & Entrepreneurship, Computer Integrated Manufacturing, Engineering & Machine Drawing.

## WORK EXPERIENCE

### Master Data Manager (Operations and Supply chain management), Resorba Medical GmbH (Advance Medical Solution Group plc 11.2023 – Present)

- Conception and implementation of processes to maintain master data compliance and data quality.
- Responsible for creating articles and production data in the ERP system (formulas, routings, recipes).
- Optimization and updation of production data, parts list and product related data into oracle ERP system.
- Responsible in cross-departmental projects for implementing new software such as PUMA (master data integration tool with ERP system) and Prisym (Label management system LMS) for master data maintenance in collaboration with IT.
- Central contact and consultant for the cross functional teams related to master data management.
- Evaluation and creation of current business key figures (Back orders, OTIF, capacity utilization, forecast analysis) & provide technical support to the forecast team.

### Working Student Quality Management System, Valeo eAutomotive Germany GmbH (09.2022 – 10.2023)

- Support in Programming and automation of business applications and interfaces.
- Creation and revision of reports and evaluation. Support for processes and process related documents.
- Assisting in the organization of training courses and creation of training materials.
- Support in the creation and visualization of Process-Related KPI's.

### Student Research Assistant, Friedrich Alexander University, Erlangen (10.2020 – 12.2020)

- Evaluation of the minimal sheet thickness for the materials using VK-Analysis Module.
- Literature research on the topic of recrystallization mechanism in steel.
- Literature research on the topic Laser Ablation.

### Student Assistant, Technische Hochschule Nürnberg Georg Simon Ohm (04.2020 – 09.2020)

- Design and simulations of Models like Simple Pendulum, Shear Kinematics (Jack Mechanism) and Modular System (Conveyor Project) using Mechatronic Concept Designer in Siemens NX 12.
- Create, Edit and Improve content of the models designed in the online learning platform i.e., NCT-Wiki pages and Moodle.
- Research focus on automation technology with Digital planning of automation system and preparation of scientific tasks & experiments for the DATAePump project.
- Programming of tools in VBA and support with system administration under Linux.

### Graduate Engineer Trainee and Engineer-Procurement & Supply Chain Management, LeeBoy India Construction Equipment Pvt Ltd (A Group of ST Engineering), Bangalore-India. (10.2016 – 08.2019)

Mechanical Engineer having experience in the field of heavy machineries equipment. Involved in hydraulic design, Structural design, product testing, cost estimation & Negotiation, Materials management with exposure to planning and procurement, vendor development & evaluation.

#### Tasks:

- Root Cause analysis on DFMEA and PFMEA for machine models Motor Graders and Excavators.
- Responsible for development and amending of Structural, Hydraulic components & Block diagrams using CAD tool.
- Calculated the time required (time study) for production of sub-assemblies of Motor Grader Models and Responsible for preparing assembly process sheets for Motor Grader & Excavators Models to streamline production process.
- Planning, Procurement, Cost finalization, Negotiation & Supply chain of Heavy fabrication structures, sheet metal parts, Hydraulic hoses & Fittings, Tubes and Cabins for excavators, BHL and motor grader models.

- Alternate source development for heavy fabrication structures, sheet metals and hydraulic fitting components in view of capacity creation and cost reduction.
- Assisted in cost optimization and benchmarking, dual sourcing analysis and capacity analysis for cost saving.
- Work with SAP ERP system for material management, Inventory management and warehouse management.
- Active participation in the cross functional team to address supplier issues and warranty replacements.
- Involved in monitoring Six-Sigma Projects, Daily Work Management Meetings & Quality control Initiatives. Involved in the Quality control groups to control KPIs in order to ensure continual improvements (Kaizen) by implementing the aspects of Lean Production and Management.
- Implementing standardization and Quality Assurance with regular inspection, documentation & auditing as per QMS systems.

## INTERNSHIPS

### **Volvo Buses India Private Limited**, Bangalore-India (15.07.2015 – 22.07.2015)

During this tenure, have undergone training Program on Production, Quality, Maintenance, Green OK and Paint Shop.

### **Rishi Consfab Private Limited**, Bangalore-India, (07.06.2014 – 07.08.2014)

- During this tenure, I had been trained in departments like Design, Production and Quality.
- Responsible for Design of Structural Metal products like tanks, reservoirs and small sheet metal fabricated parts.
- Worked with production and quality teams in solving design failure problems.

## ACADEMIC PROJECTS

### **Bachelor Thesis Major:**

**Topic:** Simulation and Analysis of Hydraulic Telescopic Cylinder on Tipper Body Assembly using Finite Element Analysis (FEA).

**Company:** WIPRO Infrastructure Engineering-Bangalore, India

**Tool:** Ansys

**Abstract:** The main effort of this project is to present study and analysis of results for Strength, Fatigue Limit and Linear Buckling of a cover type Hydraulic Cylinder on tipper body assembly using FEA.

### **Master Thesis Major:**

**Topic:** Thermomechanical Simulation and Optimization for the Sintering process of FFF-Printed Alumina.

**Institute:** Lehrstuhl für Fertigungsautomatisierung und Produktionssystematik (FAPS), FAU Erlangen.

**Tool:** Ansys

**Abstract:** The main effort of this thesis is to perform thermo-mechanical analysis of sintering process in order to predict Strength and Warpage of FFF-printed alumina ceramic and obtain an optimal and better parameter for real experiments.

## PUBLICATIONS

### “An Process Planning for Subtractive Rapid Prototyping”

*Journal of Engineering Today Quarterly August 2015 Volume 17 ISSN: 0974-8377.*

## SKILLS and SOFTWARE'S

<b>Modelling &amp; Simulation Packages</b>	Auto CAD, Solid Works, Creo, Siemens NX 12, Ansys.
<b>Programming</b>	C Programming, C++ Programming, MATLAB, Python (PyCharm), VBA.
<b>Resource Planning Software</b>	SAP ERP, Oracle ERP (Super user).
<b>Data Management Software</b>	PUMA, Prisym
<b>Office Package</b>	Microsoft Word, Excel, PowerPoint.

## LANGAUGES

English (C1)  
*Full Professional Proficiency*

German (A2)  
*Limited Working Proficiency*

Hindi (C1)  
*Professional Working Proficiency*

Tamil  
*Professional working Proficiency*

Kannada  
*Full Professional Proficiency*

Telugu  
*Native*

**NARENDAR BALAJI**  
**Place: Nürnberg, Germany**