

PERSONAL INFORMATION

Sidhartha Kumar Peyyila



- Willi Wien Str 31, 80999 München, Deutschland
- +49 – 15166959452
- pecsidha@gmail.com
- <https://www.linkedin.com/in/sidhartha-kumar-peyyila-034a7424>

Sex Male | Date of birth 27/04/1980 | Nationality Indian

POSITION CAE | FEA | SIMULATION | VIBRATION | DURABILITY |
PROJECT MANAGEMENT | (15 years' experience)

WORK EXPERIENCE

Job Skills

- Experienced Finite Element Analysis engineer (**Strength, Durability, Vibration and Fatigue**) of Heat exchangers like Radiators, Charge Air Coolers, EGR and HVAC systems.
- Performed FEA **cooling module simulations** for Trucks and Passenger cars
- Expert in Independent execution of **Meshing, analysis, report preparation**
- Cross-functional** team meetings with Design, Tooling and manufacturing teams for design evaluation
- Co-ordinated with German teams for **FEA Methods development** and **Product Development**
- Provided recommendations** based on FEA simulations for design improvements
- SPOC** for FEA simulation projects across all MAHLE location
- Experience in product design in the automotive components

March 2012
to October 2019

CAE / FEA / SIMULATION Sr. Project Manager

MAHLE Engineering Services, Pune, India

Clients – All Major OEMs (BMW, Porsche, Volkswagen, MAN, FORD, etc.)

- Collaborated and lead a team of 15 engineers for FEM simulation for projects across different global MAHLE locations
- Understand the failures and perform Dynamic analysis** (frequency response, Modal analysis), **Static analysis** (Linear and Non-linear)
- Expert in **Thermo cycle simulations** (Heat up – cool down) of EGR, Radiator and Charge air coolers
- Handled project delivery from initiation to monitoring and controlling (Planning, estimation, scheduling, execution and coordinating with customers)
- Conducted **FEA and Test / Field failure** results Co-relation analysis studies
- Performed **Fatigue Life calculation** of Cooling Components for pressure / thermal loads
- Maintained **FE quality** for all deliverables

MAHLE GmbH, Stuttgart, Germany (Onsite Deputation) – FEA expert

- Test facility visit** for FEA – Test results co-relation of CAE simulation (Durability and Vibration)
- Finite element analysis Durability, vibrational and Thermal simulations **according to benchmark**
- Vibration analysis **test bench simulations (single and Multi-axis)**
- Advanced simulation like **(Fluid Structure Analysis, PSD, Thermal) analysis** of cooling components
- Onsite – Offshore Project Coordination

October, 2005
to March, 2012

FEA – PROWER-TRAIN NVH Development Team Leader

Tata Consultancy Services, Pune, India

Clients – Fiat Chrysler Automobiles (FCA)

- Powertrain NVH** FEA analysis of Engine, Transmission, Alternator, and Exhaust system
- Exhaust System Structure** borne analysis and **Powertrain bending** analysis
- Topology Optimization** of engine mounts and **Topography optimization** of Oil pans

and sheet metal with **OPTISTRUCT** software

- Responsible for meshing and FE analysis for **NVH** performances of Powertrain components (**Engine block, Transmission, different engine configuration**)
- Perform engine **mount excursion** analysis to find the mount forces for engine forces
- Conduct **Frequency response analysis** to check the critical frequencies based on response plots
- Conduct **Modal analysis**
- Created reports to showcase the FE analysis and discuss with customer for improvements

February, 2004
to October, 2005

CAE Engineer

DSI Technologies Private Limited, Trivandrum, India

Client – Mitsubishi, MAZDA

- Meshing and analysis BIW components and assemblies
- FE Meshing the **locomotive (train)** and perform modal analysis
- Meshing of **Engine Block, Transmission** case with Tetra elements
- Responsible for Meshing for quality checks of the team
- Meeting Customer Quality requirements

TECHNICAL SKILLS

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|------------------------------|---|--------|
| Analysis Software | NASTRAN, PERMAS, ABAQUS, FEMFAT, OPTISTRUCT | Expert |
| Preprocessor Tools | ANSA, HYPERMESH, MEDINA | Expert |
| Post Processing Tools | META POST, MEDINA -POST, HYPERGRAPH, HYPER VIEW | Expert |
| Operating Systems | LINUX / WINDOWS | Expert |
| Software language | MATLAB, SIMULINK, PYTHON | Basic |

EDUCATION

March 2020
to June 2020

Data analytics using Python

(ReDI School of Digital Integration, Munich, Germany)

March, 2015
to April 2017

Master of Technology (Design Engineering) – 7.1 CGPA

(Birla Institute of Technology and Science, Pilani, India)

August 1997
to March 2001

Bachelor of Technology (Mechanical Engineering) – 63%

(Pondicherry Engg. College, Pondicherry University, Pondicherry, India)

November 2002
to June 2003

Master Certificate in CAD/CAM/CAE – 78%

(Central Institute of Tool Design, Hyderabad, India)

Language Skills

- German – B2Level
- English – Business Fluent

Paper presentations/ Achievements

- Presented papers of FEA projects in MAHLE Internal FEA workshop, Stuttgart, Germany (years 2014, 2016)
- Presented paper **Life time prediction of EGR coolers using FEMFAT** at FEMFAT user conference January 2015, Pune India
- Presented paper **Life time prediction of cooling system under constant acceleration load using FEMFAT** at FEMFAT user conference February 2017, Pune India
- Presented paper **Finite element modelling and analysis using ANSA v18.0.0** at 2018 BETA CAE Systems India Open Meeting at Pune, India