

# CURRICULUM VITAE

## Krishna Allulakshmi

+49-17680822625

Winkler Str.20, Room No: 227, 09599 Freiberg, Germany.

[krishna.allulakshmi@gmail.com](mailto:krishna.allulakshmi@gmail.com)



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### Education

Oct 2014 – May 2017

**Technische Universität Bergakademie Freiberg**  
*Masters in Computational Material Science*

**Grade: 2.4 (German grading system)**

**Key Subjects:** Discrete Element Method, High Performance Computing, Finite Element Method, Fracture mechanics.

June 2008 – Apr 2012

**SASTRA University, Tanjore, India**  
*Bachelors in Mechanical Engineering*

**Grade: 2.3 (German grading system)**

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### Professional Experiences

Nov 2017 - Jan 2018

**Research Assistant**

*Kinetic data evaluation*

- Developed a graphical user interface based application for evaluating experimentally obtained kinetic data.
- Computational part is programmed in FORTRAN and user interface in PYTHON.

Oct 2016 – May 2017

**Master Thesis**

*DEM based simulation of feeding system out flow process of a tablet press.*

- Modelled feeding system of a tablet press and ring shear tester device in PFC.
- Simulated ring shear tester for determining material input parameters of bulk solid.
- Simulated feeding system with determined material parameters and validated results with real experiment.

Oct 2015 - Apr 2016

**Personal Programming Project**

*Implementation of rolling resistance contact models into PFC as user defined contact models*

- Programmed the rolling resistance contact models in C++ and integrated the program in PFC as user defined contact model.
- Robustness of the contact models in reproducing the rolling resistance effect are assessed.

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Apr 2015 - Aug 2015

## Finite Element Project

*Investigation of a 2D Plate with a hole under external displacements*

- Programmed an element routine in MATLAB to solve a linear static problem.
- Verified the result with analytical solution and performed convergence analysis to optimize.

Nov 2014 - Mar 2015

## Scientific Programming Project

*Development of Graphical user interface for least square polynomial regression using C programming and Qt.*

- Detailed study about various curve fitting techniques was performed.
- Developed an  $n^{\text{th}}$  order polynomial regression technique in 'C' and generated a Graphical User Interface using Qt Creator.

July 2012 – July 2014

## HCL Technologies Ltd., India

*Member Technical Staff*

- Hands on experience on CAD tools such as Creo and Auto CAD.
- Worked in sheet metal design to comply with IP/NEMA ratings.

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## Technical Skills

- Software : PFC, YADE, MATLAB, Qt Creator, Creo
- Languages : C, C++, Python and FORTRAN
- Packages : Ms-Office and Latex

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## Achievements

- Won 1<sup>st</sup> prizes at several robotics competitions held at various universities in India.
- Won 4th place at national level robotics event held at IIT Madras.
- Grant for exceptionally committed "International Student" by IUZ – TU Freiberg, Germany.

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## Extra-curricular Activities

- Member of student council at Institute of Mechanics and Fluid Dynamics, at TU Freiberg, Germany.
- Conducted Inter-Cultural events in Freiberg with the co-operation of IUZ (Internationales Universität Zentrum) at TU Freiberg, Germany.

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## Personal Information

Date of birth 10 May 1991  
Nationality Indian  
Marital Status Single  
Linguistic English (Fluent), Telugu (Native), German (A2).