

# KARTEEK RAGHU

## CURRICULUM VITAE

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### MY CAREER ASPIRATION:

To secure a challenging position in the aerospace/mechanical industry where I can effectively contribute my skills as an engineer, possessing competent technical and communication skills. I have received extensive training in CNC machining, programming and designing. I have acquired fundamental and advanced knowledge in Lab View, solid edge solid works, Mat Lab and Ansys CFX.

### TECHNICAL AND FUNCTIONAL COGNITION:

- C, C++
- **Mathematical and Design software:** Mat LAB, Lab View, Pro Engineer, AutoCAD, ANSYS CFX
- **Documentation software:** Microsoft Office
- Computational Metallurgy, Microstructure, Total quality management, Fundamentals of Machining and Manufacturing, materials science, strength of material

### INTER-PERSONAL TRAITS:

- Highly motivated and willingness to learn new skills and applications
- Ability to interact with people from different environments and backgrounds
- Self regulated and capable of doing independent work
- Excellent written and technical skills and good group management skills
- Excellent listening skills; able to actively participate in discussions and draw appropriate conclusions when required

### BOOK LEARNING:

Master of Aerospace Engineering  
Carleton University, Ottawa, ON, Canada

September 2010-June 2012

Bachelor of Mechanical Engineering  
The National Institute of Engineering, India

June 2006-May 2010

### NINE TO FIVE (WORK EXPERIENCE):

- ❖ Stats-Marketing analyst at AVW TELAV audio visual solutions **August 2011-October 2011**  
Customer database development of Government of Canada for market study and fiscal year reports. I used Rosella CRMS marketing analysis software for development of project.
- ❖ Communications Officer for Graduate Residence Caucus (GRC) **September 2011-May 2012**  
Organization of various social & cultural events for graduate students living on university residence

### MASTER OF ENGINEERING RESEARCH PROJECT (May 2011-December 2011):

Study on Ti 48-2-2 Light Weight Beta-Gamma Titanium-Aluminide Inter-Metallic's for gas turbine applications in collaboration with Institute of Aerospace Research.

## **Materials Research:**

Heat treatment analysis of various material parameters such as Ductility, Forgeability, Stress/strain analysis of beta-gamma Titanium Aluminides and optimization/improvement of the material with alloys such as Vanadium, Tungsten, Molybdenum and Chromium. Analysis of microstructure of the material and development of new Beta-Gamma Titanium Aluminides alloys with enhanced properties and determination of alloying composition effects. This project provided a better overall understanding of the fundamental Composition - processing - microstructure - property relationships, which are required to overcome the Processing, Cost, and property barriers that currently prevent the more widespread application of these Alloys.

## **UNDERGRADUATE INDUSTRY TRAINING:**

### **1) Bosch Germany-Rexroth India**

- Received hands-on training in Hydraulic and Pneumatic control systems for light vehicles

### **2) Eicher trucks India**

- Technical on the job training in vehicle brake systems and engines

## **UNDERGRADUATE OPUS:**

- Presented a journal paper on vibrations of cracks in cantilever beam in a national level contest-cognisance 2010
- Participated in Heat Exchanger Design project for ISHRAE (Indian society of Heating, Refrigerating and Air-Conditioning engineers)
- Team Management Board member for organization of South India's largest Car and Bike expo during 2009-2010

## **APPLIED ACADEMIC UNDERGRADUATE PROJECT:**

Maintenance project: (February 2010–June 2010)

Analysis and Amelioration of energy consumption in a heavy trucks manufacturing plant (BEML INDIA LTD.) under Ministry of Defence, India

## **PRESENCE:**

1. Active member for SAE (Society of Automobile Engineers) Canada/India and participation in various college events such as grease monkeys and engine testing mechanic volunteer for Carleton Ravens FSAE racing team.
2. Active member for ISHRAE (Indian Society of Heating, Refrigerating, Air-Conditioning for Automotive Engineers)

## **REFERENCES:**

- Prof. Henry M.J. Saari, Associate Professor, Associate Chair Undergraduate, B.Eng., M.Eng., Ph.D., Carleton University
- Ms. Diane King, General Manager, AVW Telav, telecommunications services

## **INTERESTS & EXTRA CURRICULAR ACTIVITIES:**

- Play for University Intramurals soccer/football team
- Swimming, reading and cooking
- Travelling, Photography, cycling

## **CNC Machining Experience:**

- ❖ Master of Engineering- Aerospace engineering ( **September 2010-June 2012**): Materials research project
  - a) We used an EPSON PRO SIX PS3L-AS10, Pro six, 6 AXIS ROBOT & Epson 'EZ Module' Linear Slide CNC robot for manufacture of Ti 48-2-2 Beta-Gamma Titanium Aluminides alloy panels for use in heat treatment analysis. These specimen panels were later heat treated and tested in Lab View software using MTS test frames for analysing true stress and true strain curves. They were also used for creep analysis. This project provided a better overall understanding of the fundamental Composition - processing - microstructure - property relationships, which are required to overcome the Processing, Cost, and property barriers that currently prevent the more widespread application of these Alloys.
- ❖ Bachelor of Mechanical Engineering mandatory academic courses ( **June 2006-May 2010**):
  - b) Basic and intermediate course in CNC milling and CNC lathes: Using G-codes and M-codes for programming end-to-end operations for machining simple pressure valve components.
  - c) Basic and advanced course in CNC programming: Learning G-codes and M-codes for basic and advanced input programming for machining operations

## **Design Software Experience:**

- ❖ Master of Engineering- Aerospace engineering
  - d) Lab View (Laboratory Virtual Instrumentation Engineering Workbench) software for true stress and true strain analysis as part of my materials research project
  - e) Pro-Engineer CREO and MathCAD for designing an aircraft wing-box for a academic course in light weight structures (course code-MECH 5603)
- ❖ Bachelor of Mechanical Engineering mandatory academia courses:
  - f) I am proficient in Solid Edge- Solid Works computer aided design (CAD) for designing components as part of academic course curriculum.
  - g) I have taken advanced course in Ansys Workbench version 11 as part of academic course curriculum
- ❖ **Programming Software:**
  - h) I am well versed with Mat Lab programming. I have used it for heat conduction analysis in a drilling machine tool as part of Heat Conduction and Radiation academic course (course code-MECH 5407). I have also used Mat Lab for running Monte Carlo simulations for radiation analysis as part of same course.
  - i) I am proficient in all Microsoft Office products including Microsoft Excel, Word and PowerPoint.

## **References:**

<http://www.robots.epson.com/products/prosixps3l.htm>