Dr. Chetan D. Kuthe
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Address: B 603, Om Paradise, Beed Bypass Road, Chhatrapati Sambhajinagar, Maharashtra 431010

OBJECTIVE

To work in an organization where I use my skills and knowledge to deliver value added results as well as further enhance my learning and develop my career in the field of research, teaching.

CAREER OVERVIEW

- Good knowledge in the area of Machine Design, SOM, Bio-Mechanics, Finite Element Method
- **TEQIP grant for international travel to South Korea in 2014.**
- Good knowledge of Analysis software: ANSYS APDL/Workbench.
- Well conversant with design using CAD tools: Pro-E, Creo
- 4 years of research and teaching experience during Ph.D.
- Around 1 year of industrial experience in finite element analysis.

ACADEMIC CREDENTIALS

- **Ph.D. (Full Time), 2016**
  Visvesavaraya National Institute of Technology, Nagpur
- **Post Graduation, 2009-2011**
  *Yashvantrao Chavan College of Engg, Nagpur with **75.5 %***
- ***Bachelor of Engineering, 2005-2009***
  *Anjuman College of Engineering, Nagpur with **74.4%***
- **H.S.S.C, 2005**
  *Maharashtra State Board with **76.67%***
- **S.S.C., 2003**
  *Maharashtra State Board with **84.8%***

WORK EXPERIENCE

- **MIT (Tech), Aurangabad**
  Designation: *Assistant Professor (AGP 8000)*
  Duration: *17th Feb., 2016 to present*
  Courses Taught: Strength of Materials, Machine Design, Finite Element Analysis, TOM, Machine Stress Analysis, Finite Element Method, Advanced Solid Mechanics.
- **Cargotec Engineering India, Pune, India**
  Designation: *Structural Analysis Engineer (Asst. Engg.)*
  Duration: *25th May 2011 to 23rd Dec 2011.*
  Software Used: *Ansys Workbench and APDL, Pro-E*

DETAILS OF PATENTS/PUBLICATIONS

A] SCI/Scopus/Peer Reviewed Journals

1. Chetan D. Kuthe, R.V. Uddanwadiker and Alankar Ramteke. Surface Electromyography Based Method for Computing Muscle Strength and Fatigue of Biceps Brachia Muscle and Its Clinical Validation. Journal of Informatics in Medicine Unlocked (Elsevier), Vol. 12, pp 34-43, 2018. (Scopus)
2. Chetan D. Kuthe and R.V. Uddanwadiker. Investigation of Effect of Fiber Orientation on Mechanical Behaviour of Skeletal Muscle. *Journal of applied biomaterials and functional materials (SAGE),* Vol 14, No. 2, pp. E154-e162, 2016. (SCIE/Scopus)
3. Chetan D. Kuthe and R.V. Uddanwadiker. Assessment and Quantification of Level of Muscle Fatigue during Static Contraction Using Surface Electromyography. *Journal of Biomedical Research,* Vol. 28, No. 2, pp. 1-9, 2017 (Publon/UGC care)
4. Chetan D. Kuthe, R.V. Uddanwadiker and Alankar Ramteke. Experimental Evaluation of Fiber Orientation Based Material Properties of Skeletal Muscle in Tension. *Journal of Molecular & Cellular Biomechanics (TechScience)*, Vol. 11, No. 2, pp. 113-128, 2014 (Scopus)
5. Chetan D. Kuthe, R.V. Uddanwadiker, P.M.Padole and Alankar Ramteke. Mathematical model for skeletal muscle to simulate the concentric and eccentric contraction. *Journal of Molecular & Cellular Biomechanics (Tech Science)*, Vol. 12, No. 1, pp. 1-16, 2015. (Scopus)
6. Chetan D. Kuthe, Radhika Chavan, Nitin Kamble. Mechanical Behavior and Characterization of Soft Tissues. *Journal of Biomedical Engineering and Computational Biology (SAGE)*, Vol. 15, pp 1-11, 2024 (ESCI/Web of Science)
7. Chetan D. Kuthe, S. A. Shaikh, Ashok Keche. Study of cyclic oxidation and hot corrosion of 310 SS under the environmental impurities of Na2 SO4 +V2 O5 at different temperatures. IOP Conference Series: Materials Science and Engineering, 377, 012066, 2018. (Scopus)
8. Chetan D. Kuthe, Kedar Panchal. Enhancement of Wear Resistance of AISI D2 Steel Slitter using Deep Cryogenic Treatment. *International Journal of Manufacturing and Materials Processing*, Vol 7(2) , pp 17-28, 2021 (UGC)
9. Chetan D. Kuthe, Abhijeet Borade and Ashok Keche. Fatigue Failure Analysis of a Railway Wheel Using FEA. *Trends in Mechanical Engineering & Technology*, Vol 11(2) , pp 22-30, 2021 (UGC)
10. Chetan D. Kuthe and Sagar Jadhav. Design and Analysis of Common Injection Mould for Variable Length of Extended Prob Housing Component. *Trends in Mechanical Engineering & Technology*, Vol 11(2) , pp 1-9, 2021 (UGC)
11. Chetan D. Kuthe and R.V. Uddanwadiker. Review of Methods used to Investigate Mechanical properties of skeletal muscle. International Journal of Engineering Research-Online, Vol. 4(2), pp. 385-402, 2016. (Peer Reviewed)

12. Chetan D. Kuthe, Radhika Chavan. Factors Affecting Mechanical Response of Soft Tissues. (Accepted for Publication)

B] International Conference

1. Chetan D. Kuthe, R.V. Uddanwadiker. Anisotropic Properties of skeletal muscle: In vitro. *International Conference on Computational & Experimental Engineering and Sciences*, Changwon, Korea, June 12-17, 2014.
2. Chetan D. Kuthe and R.V. Uddanwadiker. Mathematical model for skeletal muscle to simulate the concentric and eccentric contraction *International Conference on Computational & Experimental Engineering and Sciences*, Seattle, USA, May 24 - 28, 2013

C] National Conference

1. Chetan D. Kuthe and R.V. Uddanwadiker. Estimation of precise characteristics of skeletal muscle under various loading. *4th National Symposium for Material Research Scholars*, IIT Bombay, India, May 4-5, 2012.
2. Chetan D. Kuthe and Kedar Panchal. A Review on Cryogenic Treatment of Ferrous Metals. *2nd International Conference on Materials, Manufacturing and Design Engineering*, Aurangabad, 2017
3. Chetan D. Kuthe, R.V. Uddanwadiker and Alankar Ramteke. Non Invasive Method to Monitor the Recovery of Strength of Rectus Femoris Muscle Post Knee Replacement Surgery. *National Conference on Digital Dentistry: CAD, CAM and CAE*, VNIT, Nagpur, August 10-11, 2018
4. Chetan D. Kuthe and Anant Bade. Effect of Deep Cryogenic Treatment on Biomedical Implant: A Review. *National Conference on Digital Dentistry: CAD, CAM and CAE*, VNIT, Nagpur, August 10-11, 2018
5. Chetan D. Kuthe, Hrudaya Joshi and Aditi Deotkar. A Review of Osseo-integration of Dental Implant. *National Conference on Digital Dentistry: CAD, CAM and CAE*, VNIT, Nagpur, August 10-11, 2018
6. Chetan D. Kuthe, Yuvraj K. Narwade and Ashok J. Keche. Design, Development and Performance Analysis of Tube Parting Machine. *National Conference on Industrial Engineering & Technology Management*, National Institute of Industrial Engineering, Vihar Lake, Mumbai, Nov 30-Dec 1, 2018.
7. Chetan D. Kuthe and Anant Bade. Design & Development of Needle Filling Machine. *6th International Conference on Production & Industrial Engineering*, NIT, Jalandhar, Punjab, June 8-10, 2019.
8. Chetan Kuthe, Kedar Panchal and C. L. Gogte. Enhancement of Wear Resistance of AISI D2 Steel Slitter using Deep Cryogenic Treatment. *International Conference on Recent Trends in Mechanical Engineering*, MIT, Aurangabad, Maharashtra, January 22-23, 2021.
9. Chetan Kuthe and Sagar Jadhav. Design and Analysis of Common Plastic injection Mold For Variable length of Extended Prob Housing component. *International Conference on Recent Trends in Mechanical Engineering*, MIT, Aurangabad, Maharashtra, January 22-23, 2021.
10. Chetan Kuthe, Abhijeet Borade and Ashok Keche. Fatigue Failure Analysis of a Railway Wheel

Using FEA. *International Conference on Recent Trends in Mechanical Engineering*, MIT, Aurangabad, Maharashtra, January 22-23, 2021.

SUMMARY OF Ph.D. RESEARCH [FULL TIME]

Title of Thesis: Estimation of precise characteristics of human skeletal muscle

Supervisor : Dr. R.V.Uddanwadiker

Department : Mechanical Engineering, **Period:** Jan 2012-June 2016

Funding Agency : Department of Science & Technology, Govt. of India

Short summary of work:

1. Main objective is to quantify the muscle strength and muscle fatigue in different types of contraction under different modes of loading.
2. Mathematical model is developed to compute the tension in the muscle in isotonic contraction considering hyper elastic behaviour of the muscle. The mathematical model is based on EMG and material parameter.
3. In-vitro test performed on the muscle to get the material parameter required in mathematical model.

ADDITIONAL CURRICULAR ACTIVITIES

- **Associate Dean Quality Assurance at MIT, CSN since Dec 2023**

- **Expert Talk on The Attainment Flow from Course Outcomes to Institute Mission in OBE on 24th June 2024 at SVERI College of Engineering Pandharpur in FDP on Outcome Based Education**
- **Organizing Secretary of International Conference on Recent Trends in Mechanical Engineering 2021 organized by Maharashtra Institute of Technology, Aurangabad on 22nd and 23rd January, 2021.**

- **Expert Speaker for six days STTP on Finite Element Method & ANSYS software at Maharashtra Institute of Technology, Aurangabad on Saturdays & Sundays from 25th March to 9th April 2017.**

- **Course Coordinator of six days STTP on Finite Element Method & ANSYS software at Maharashtra Institute of Technology, Aurangabad on Saturdays & Sundays from 25th March to 9th April 2017.**

- **Reviewer of Science Citation Indexed (SCI) International Journals**
  1. Medical & Biological Engineering, Springer Publication
  2. Journal of Applied Physiology, American Physiological Society
  3. Medical & Biological Engineering & Computing

- **NBA coordinator** in the Department of Mechanical Engineering, Maharashtra Institute of Technology, Aurangabad
- **Module coordinator** for design in the Department of Mechanical Engineering, Maharashtra Institute of Technology, Aurangabad.

- **M. Tech Coordinator** in the Department of Mechanical Engineering, Maharashtra Institute of Technology, Aurangabad.

- Delivered one day training on **finite element analysis and software training** at **YCCE, Nagpur, Feb., 2016**

- Member of organizing committee of **one week STTP on importance of statistics and design of experiments in engineering** at **VNIT, Jan., 2016**
- Institute representative of **VNIT** in **Indian Science Congress, Mumbai, 2015.**
- Participation in 2 days workshop on **statistics** at **NIVEDI, Bangalore, 2015**
- Member of organizing committee of 3 days workshop on **advanced training on Finite Element Analysis** at **VNIT, 2014**
- Participation in one week training program on **Non Destructive Testing at VNIT, 2014**
- Member of organizing committee of TEQIP **Sponsored one week STTP program Research Avenues in Bioengineering** at **VNIT, 2013**
- Training and project on "Fatigue Failure Analysis Of 1st Stage Compressor Disc of R29B Air Craft Engine" at **Hindustan Aeronautics Ltd, Engine Division, Koraput, Orissa, 2010**
- Attend the one day workshop of NPTI on CFD.

ACHIEVEMENTS

TEQIP grant for International Travel to South Korea in 2014.

PERSONAL/GENERAL DETAILS

Date of Birth	: 10th of Sep, 1987
Mother Name	: Sharada
Gender	: Male
Marital Status	: Married

DECLARATION

I declare that the forgoing information is correct & complete to the best of my knowledge and belief.

Place: Chhatrapati Sambhajinagar, India

Chetan. D. Kuthe
☎ **9028699247**