LAXMAN BHATTA

+1-5418292672 | bhattalaxman99@gmail.com | linkedin.com/in/laxman-bhatta

SUMMARY

Experienced in material processing, mechanical testing under various conditions, and microstructural characterization. Proficient in data analysis, interpretation, and manuscript preparation for publication. Strong leadership and teamwork skills, demonstrated through managing a class of 100+ students and leading a team of 3 graduate teaching assistants.

EDUCATION

PhD student in Materials Science, Oregon State University — Sep. 2022 – Expected June 2026
Corvallis, Oregon, USA **GPA: 3.67**

Master in Mechanical Engineering, Central South University — Sep. 2018 - June 2021
Changsha, Hunan, China **GPA: 3.33**

Bachelor in Mechanical Engineering, Kathmandu University — Aug. 2012 – Sep. 2016
Dhulikhel, Kavre, Nepal **GPA: 3.30**

WORK EXPERIENCE

Research Assistant, Oregon State University, Corvallis, Oregon — Sep. 2022 - Present

- Conduct High Pressure Torsion (HPT) experiments applying compressive pressures up to 50 GPa with torsional rotation to produce nano structured materials and also bonding and mixing different alloys at room temperature
- Perform mechanical testing, including Vickers micro hardness mapping across entire surfaces and tensile tests on samples ranging from 2 mm to 8 mm gauge length and up to 7-micron thickness
- Conduct Synchrotron X-ray diffraction (XRD) analysis to determine phase fraction, anisotropy, crystallite size (10-100 nm), dislocation density, and internal stress with high precision
- Examine microstructures using Optical Microscopy (OM) and Scanning Electron Microscopy (SEM), measuring grain size and dimple size (ranging from 1-50 μm) to understand failure mechanisms
- Employ software such as MATLAB, Igor, and Maud to analyze mechanical and microstructural data

Lead Teaching Assistant, Oregon State University, Corvallis, Oregon — Sep. 2022 - Present

- Lead lab sessions and 3 graduate teaching assistants for a class of ~ 100 students
- Deliver in-class presentations explaining key mechanical properties of materials
- Instruct students on material testing, including hardness tests, tensile tests, Charpy impact tests, SEM fractography and non-destructive impulse excitation tests
- Evaluate and grade assignments and deliver timely feedback to enhance student performance

Mechanical Engineer, Om Bijay Engineering, Kathmandu, Nepal — Aug. 2021 - Aug. 2022

- Finalized technical specifications for 10+ projects, recommending cost-effective solutions for projects involving generators, motors, solar streetlights, LED bulbs, and electrical/mechanical components
- Conducted thorough analysis of 50+ suppliers, identifying those meetings quality and specification requirements

SKILLS

- Synchrotron X-ray Diffraction (SXRD)
- Scanning Electron Microscope (SEM)
- Energy-dispersive X-ray spectroscopy (EDS)
- Electron backscatter diffraction (EBSD)
- Digital Image Correlation (DIC)
- Differential Scanning Calorimetry (DSC)
- Tensile testing, hardness testing and impact testing
- MATLAB, Engineering Equation Solver, C
- Finite Element Analysis (ANSYS and Abaqus)
- AutoCAD, Solid Works, CATIA

AWARDS AND CERTIFICATIONS

- Scholarly Presentation Award, 2025, provided $905 for registration fee at THERMEC conference
- Best International Student Graduates of Central South University in 2021
- Conduct of Research for Engineers (CITI) certifications in 2022

PROJECTS

Manufacturing High Strength Nanocrystalline Metal Sheets — Sep. 2022 - Present

- **Published** 3 papers
- **Reviewed** 3 research papers for scholarly journals

High Strain Rate Superplasticity in Cryorolled AA5083 Alloy — Sep. 2018 – Jun. 2021

- **Published** 10 papers

Study and Analysis of Suspension System in Two Wheeler — Aug. 2015 – Jun. 2016

PRESENTATIONS

- "Multiple-Step SPD Process for Ultrafine-Grained Aluminum Sheets" at TMS 2024 conference held in Florida, USA, from March 03-07, **Poster presentation**
- "Study and Design of Home Hydro System" in an international symposium on Current Research in Hydraulic Turbines – CRHT IV organized by Kathmandu University, April 7, 2014, **Oral presentation**

AWARDS AND CERTIFICATIONS

- Scholarly Presentation Award, 2025, provided $805 for registration fee at THERMEC conference
- Best International Student Graduates of Central South University in 2021
- Awarded a Chinese government scholarship to study M.E. in Mechanical Engineering
- Conduct of Research for Engineers (CITI) certifications in 2022