

ARUN BIKRAM THAPA

Ph.D. 2017-2022 (expected)

Department of Mechanical Engineering, University of Alabama, Tuscaloosa, AL 35487

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1. Education

Degree: Bachelors in Mechanical Engineering

Institution: IOE, Pulchowk Campus, Lalitpur, Nepal

Affiliation: Tribhuvan University, Kathmandu, Nepal

Aggregate Percentage: 75.13%

2. Experiences

A. Research Experiences

1. Undergraduate Research Work

Research Project Title: “Development and Testing of Runner and Conical Basin for Gravitational Water Vortex Power Plant”

Research Supervisor: Prof. Dr. Tri Ratna Bajracharya (see References section)

Duration: 1 year (Report submitted on November, 2013)

Type of Research: Group Project work (Final year research project)

Funding: Project funded by Alternative Energy Promotion Center (AEPC), Ministry of Science, and Technology, Government of Nepal

B. Working Experiences

Company: E & T Nepal Pvt. Ltd, New Road, Kathmandu Nepal

Company Type: Research and Development (R&D) of Computational Fluid Dynamics(CFD) and Computer Aided Design (CAD)

Company Website: <http://www.e-et-t.com/jp/nepal.html>

Position: Mechanical Engineer

Duration: December 16, 2013 to January 1, 2017

Training: CATIA V5 for modeling, Particles method for simulation, C++ programming language, Basics of CUDA programming

Major Responsibilities:

- ✓ Research on Simulation using Explicit Moving Particle Simulation (MPS) method and Analysis of Simulation results
- ✓ Algorithm development and Solver modification
- ✓ Lift and Drag analysis (HTU project)
- ✓ Engine room simulation (HTE project, Thermal optimization)
- ✓ Assistance with research on : Large Eddy simulation (Smagorinsky Model, WALE model)

C. INTERNSHIP

Company: Morang Auto Works Pvt. Ltd., Kathmandu, Nepal

Duration: October 1 to November 9 (2012)

Training: Basic of Internal combustion Engine of two wheeler and four wheeler and maintenance of such engines.

D. TEACHING EXPERIENCES

- ✓ Official trainer on mathematical modeling and simulation software operation and development at E&T Nepal Co., Ltd.
- ✓ Official trainer on mathematical modeling and simulation software operation and development at E&T Thailand Pvt. Ltd.
- ✓ Undergraduate instructor on “Fundamental of Thermodynamics and Heat Transfer” and “Applied Thermodynamics”

3. **PUBLICATION**

Article Title: “Development and Testing of Runner and Conical Basin for Gravitational Water Vortex Power Plant”

Journal: Journal of the Institute of Engineering ISSN 1810-3383 (Volume 10, No 1, 2014)

DOI: <http://dx.doi.org/10.3126/jie.v10i1.10895>

4. **SKILLS**

- ✓ CATIA-V5 (Basics of Part design ,Generative Shape Design ,Generative Shape design and Drafting)
 - ✓ Fortran, C and C++ programming languages
 - ✓ ANSYS – Fluent and CFX workbenches
 - ✓ Microsoft Office Package
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5. **OTHER ACTIVITIES AND ACHIEVEMENTS**

- ✓ **Partial scholar** from the Institute of Engineering
- ✓ Team member of **ABU- ROBOCON 2013**, Hong Kong
- ✓ Participated in **Asian Science Camp 2011** held in South Korea and won a **Medal** in Poster Presentation.
- ✓ Participated in Seminar on **Renewable Energy**
- ✓ Presented Report at Honda R&D, Thailand