CURRICULUM VITAE

Assefa Asmare Tsegaw

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Bahir Dar - ETHIOPIA

Date of Birth :	December 08, 1975
Place of Birth :	Ethiopia, Bahir Dar
Nationality :	Ethiopian
Sex :	Male
Marital Status :	Married
E-mail :	**assefa1960@gmail.com/ assefaa@bdu.edu.et**
Home Page :	None
Language:	Amharic, national language in Ethiopia (mother tongue) English (Excellent in reading, writing, listening and speaking), German (little, for communication), and Ge'eze, religious language in Ethiopia (moderate in both)

EDUCATION

- September 2011- June 2013 **Ph. D.,** Mechanical engineering (Precession manufacturing and Metrology Engineering) at National Taiwan University of Science and Technology.
  Advisor: Prof. Fang-Jung Shiou

- October 2004 – Sept 23. 2005 **M. Sc.,** Quality, Safety and Environment at Otto-von-Guericke University of Magdeburg. Thesis topic - "***Particulate Matter Measurement on Internal Combustion Engine Exhaust Gas***" Under the Institute of Measurement Technology and Reciprocating Machines (IMKO).
  Advisors: Dr.H.-U. Franke, Dr.H.-e. Henize

- Aug 2004 – Sep 2004: - Preparatory Course in German language; Harder Institute of Leipzig University (InterDaF), Leipzig (Germany); (**Certificate**)

- 1997 - 2002: - Specialized in Mechanical engineering; at Bahir Dar University faculty of Engineering (Ethiopia); Study in the department of Mechanical Engineering Department (**Bachelor of Science Degree**)
  Advisor: Dr. Tafess Gebresenbet

- 1991-1993: - Metal Technology; Bahir Dar Polytechnic Institute (Ethiopia); (**Advanced Diploma**)

- 26th July-6th Aug. 1993: - Principle of teaching; The University of Haddersffield and Bahir Dar Polytechnic Institute (Ethiopia); (**Certificate**)

- 1979 - 1991:- Elementary and Senior high school; Tana Haik Secondary School; Bahir Dar (Ethiopia);

PROFESSIONAL EXPERIENCE

- July 2013 – present: Assistant professor in Faculty of Mechanical and industrial engineering, Bahir Dar University, Bahir Dar, Ethiopia.

    - Conducting Feasibility study on Cold rolling mills for Amhara Regional State
    - General manager for Eagle view engineering consultancy
    - Manufacturing chair head at faculty of mechanical and industrial engineering
    - Maintenance head at Faculty of Mechanical and Industrial engineering
    - Personal contact for Appropriate Scale Mechanization Consortium (ASMC)-project;
        - Conducting in collaboration with four USA universities.
        - About 13.9 million Birr budget
        - Lasting for four years

- Offering Community service for Amhara Regional State Technical and Vocational colleges regarding on CNC machining operation.

- September 2005 – July 2011: **Lecture**r in Mechanical Engineering Department at Bahir Dar University, Engineering Faculty, Bahir Dar, Ethiopia.

- July 2002 – August 2004: - **Assistant Lecturer** in Mechanical Engineering Department at Bahir Dar University, Engineering Faculty, Bahir Dar, Ethiopia.

- August 1993 - 1997: - **Working as technical assistant** (Adva. Diploma.) at Metal Technology department; Bahir Dar Polytechnic Institute; Ethiopia.

PUBLICATIONS

- Assefa Asmare, Raheem Al-Sabur and Eyob Messele. Experimental Investigation of Friction Stir Welding on 6061-T6 Aluminum Alloy using Taguchi-Based GRA. Metals 2020, 10, 1480; doi:10.3390/met10111480.

- Assefa Asmare, Adaption of water ram pump for small-scale irrigation, ICAST 2020

- Eyob Mesele and Assefa Asmare. Identification of Process parameters and Optimization Techniques for AA 6061 in FSW: State-of-the-art. ICAST 2020.

- Andualem Belachew and Assefa Asmare. Optimization of treatment parameters to enhance bending strength of bamboo. ICAST 2020.

- Tefera Eneyew and Assefa Asmare. Yield strength and ductility analysis on steel reinforcing bars used in Ethiopian construction industry. ICAST 2020.

- Fang-Jung Shiou, Assefa Asmare. Ultra-Precision Surface Finishing Processes. IJAT Vol.13 No.2, doi: 10.20965/ijat. 2019. p0174

- Fang-Jung Shiou, Assefa Asmare. Parameters optimization on surface roughness improvement of Zerodur optical glass using an innovative rotary abrasive fluid multi-jet polishing process. Journal of Precision engineering. http://dx.doi.org/10.1016/j.precisioneng.2015.04.004 0141-6359.

- Assefa Asmare Tsegaw, Fang-Jung Shiou, Sun-Peng Lin . Ultra-Precision Polishing of N-Bk7 Using an Innovative Self-Propelled Abrasive Fluid Multi-Jet Polishing Tool, Machining Science and Technology: An International Journal, Vol. 19, Iss. 2, 2015.

- Development of a Small Rotary Multi-Jet Abrasive Fluid Jet Polishing Tool. 10.4028/www.scientific.net/KEM.625.140 (Online)

- African Research Review titled: “Involutes Spur Template Development by Parametric Technique Using Computer Aided design. (pp 415-429), ISSN 1994-9057 (Print), ISSN 2070-0083(Online).

ADMINSTRATION EXPERIENCE

(July 2013 – present):

- General manager for Eagle view engineering consultancy
- Manufacturing chair head
- Personal contact for Appropriate Scale Mechanization Consortium (ASMC)-project;
  - Conducting in collaboration with USA universities.
  - About 13.9 million dollar budget
  - Lasting for four years

(November 2010 – July 2011)

(a) Customer relationship officer of School of Mechanical and Industrial Engineering.

(July 13, 2010 – December 7, 2010)

(a) Supervising CAD/CAM and project laboratories

(August 2006 – September 2, 2008)

(a) Head of the mechanical engineering department at Bahir Dar University. Managing more than 400 students and 41 home land and expatriate staffs.

(b) Head of the departmental Graduate committee and developing M.Sc. Curriculum for :
    1. Thermal engineering
    2. Manufacturing engineering
    3. Mechanical design engineering

(c) Developing 3 different curriculum within the department
    1. Revised B. Sc. Curriculum with collaboration of GTZ.
    2. Developing TVET curriculum with collaboration of GTZ.
    3. Developing graduate program curriculum.

(Aug 1993- Aug 2004)

(a) Chairperson of the Computer Aided Design and Computer Aided Manufacturing laboratory Head and maintenance manager. CAD/CAM Mechanical Engineering Department at the Engineering Faculty, Bahir Dar; Ethiopia.

(b) Casher of the Polytechnic Institute Saving and loan association. This Association has a total member of 200. Having the capital of more than 800,000.00 Ethiopian Birr.

(c) Department Maintenance and Commissioning sector of the Mechanical Engineering Department. Responsibility includes: administering department machine tools and commission the newly purchased machine tools. The department has more than 10 workshops equipped with new machine tools. Teaching 400 students in regular program and 100 students in continuing program. 1 million Birr yearly budget. Achieved in raising admission to the department by running a very well organized continuing education in the faculty. Creating a link between factories in the country to get project works for last year students. Organizing local workshops and seminars in the department on different issues. Etc.

(d) Head of the Computer Laboratory and Flexible manufacturing Lab. The center is established to give training to the students and the staff a skill in flexible manufacturing systems.

TEACHING EXPERIENCE

(September 2005 - present) – Offering courses for undergraduate, postgraduate (MSc & PhD)

- Advanced different kinds of course for post graduate programs
- Skill courses
    - Machine drawing, I, II
    - Machine drawing and design
    - Workshop technology I, II
- Safety Engineering
        - Loss prevention
        - Fault analysis
        - Consequence of accidents
        - Probability calculations of accident in industry
- Numerical Methods
- Tolerance engineering
- CAD/CAM/CIM
- Offering special training;
        - Advanced welding technology (TIG/MIG)
        - 2 axis, 3 axis and 5 axis CNC machining
        - EDM operation

(1993 - 1998, 2003, 2004)

- **Design Sections**

Strength of Materials II

A second course for different department offered for design sections. This course integrated with higher mathematics and different strength analysis of different machine components and structures. Analysis with different strength principles. The course is offered with experiments in design laboratories. Measuring of the strength of different components and so on

Engineering Mechanics II

Discussion of the dynamics behavior of different machine and engineering components. This course is supported with the dynamics laboratory and experimental work.

Theory of machines

The principle of the history of machines, different mechanisms theory evaluation of the proposed mechanism profiles, determinations of degree of freedom, design of different mechanisms such as cam and flowers and so on. Force analysis of the machine members.

Engineering Drawing

All design courses are assisted in systematic and scientific way. This course is mainly engaged in design processes.

- **Production Section**

Production Engineering

To develop a better production skill of different components and selecting a suitable production system with the efficient methods. Program analysis, optimization, etc.

Workshop Practice II

The most widely used productions systems are examined and utilized for efficient production systems are studied. The course has been given mostly in practical ways. The productions are manipulated in different machine tools. Such as conventional and computerized metal cutting tools.

Computer Applications:

Computer Aided Manufacturing, this course is offered in assisting of using newly purchased CNC and DNC machine tools. The course is aided with part programming and simulating with simulation software. To teach fundamental computer science skills and concepts as they relate to the development of different application designs of computer applications.

Foundry technology:

Production of different truncated and complicated machine components using different types of foundry technologies.

- **Different courses**

Engineering Materials (I &II)

Fundamental theory of engineering materials: atomic structure, bonds, crystalline structure; Defects in crystalline structures and dislocation theory; Deformation in solids; Failure and mechanisms of fracture; Mechanical properties and testing of metals; Phases and phase transformations. Production of iron and steel steels alloy steels; Composite materials, Effect of alloying elements and heat treatment of steels, cast irons; Families of cast iron production, properties and applications; Non-Ferrous metals; Corrosion; Inorganic non metallic materials organic materials.

Fit and tolerances

Types of fits and tolerances used in machine component assembly and surface finish attainable in different product methods. And other related topics.

I.C. Engines

Introduction to basic types of internal combustion engines. Classification of internal combustion engines, introduction to the performance of ICE with special laboratory experiments with newly purchased equipment, engine bed.

Introduction to computers

The basic computer concepts and the algorithms are thought. Different engineering software and programming languages are given. Such as Visual Basic, Pascal, introduction to C^{+} and others relevant software.

Descriptive geometry
Sheet metal work and development
Principles of metal cutting (PMC)
Fluid and thermo dynamics laboratories

WORKSHOP AND SEMINAR ATTENDED (Some)

- The 16th International Conference on Advances in Materials & Processing Technologies, Sept. 22-26, 2013, Taipei, Taiwan, R.O.C.Sponsored by the Society of Manufacturing Engineers (SME, Taipei Chapter) National Taiwan University of Science and Technology (NTUST)

- The 5th International Conference of Asian Society for Precision Engineering and Nanotechnology (ASPEN2013), November 13 – 15, 2013, National Taiwan University and National Taipei University of Technology

- First International Conference on Electrical and Computer Engineering (ICECE 2003), 29th October to 1st November 2003, Organized by Electrical Engineering Department, Engineering Faculty, Bahir Dar University, Bahir Dar, Ethiopia.

- Teaching methodology, organized by the University of Haddersffield (UK), Engineering Faculty, Bahir Dar University, Bahir Dar, Ethiopia.

- Second International sustainable technology for developing countries, Engineering Faculty, Bahir Dar University, Bahir Dar, Ethiopia.

- Institutional Management, Organized by the University of Haddersffield (UK), Engineering Faculty, Bahir Dar University, Bahir Dar, Ethiopia.

SPECIAL SKILLS

- Some of mechanical engineering application software
- Basic Computer Programming: Such as visual basic, introduction to Java, C and C^{++}, Pascal, CAD/CAM, Spread sheets (Excel, access, and others)
- Machine installing and commissioning.

- Feasibility study for different plants
- Operating CNC machines.

Hobbies

- Technology aficionado
- Accepting natural and affirmative changes
- Reading different articles
- Discussing on different issues
- Fishing
- Swimming
- Cooking
- Paying and signing music
- Loving to hear the sound of birds at early morning
- Traveling
- Nature lover

REFERENCES

1. Dr.Solomon T/mariam, Bahir Dar University, Director of School of Mechanical and Industrial engineering, P. O. Box 26, Bahir Dar Ethiopia
   Email: Solomontem@yahoo.com
   Tele: + 251- 918 01 95 89

2. Dr. Nigussie Mulugeta, Dean of Graduate studies and Research, Bahir Dar University, School of Mechanical and Industrial engineering department,
   P. O. Box 26, Bahir Dar Ethiopia
   Email: Nigussie850@yahoo.com
   Tele: + 251- 918 78 04 53

3. Dr. Tafesse Geberesenbet, Addis Ababa University, Mechanical engineering department, Addis Ababa, Ethiopia
   Email: gstafesse@yahoo.com
   Tele: + 251- 911 01 14 77