

HIGHLIGHTS OF QUALIFICATIONS

- Good understanding of designing monitoring systems: Designed a manual automation system for vibration monitoring of screen and feeders in mining industry and a full monitoring data acquisition system for washing machine performance testing
- Professional knowledge in vibration equipment and vibration analysis: Developed vibration laboratory for two companies and designed a manual automation system for vibration monitoring
- Designed and defined vibration test methods for vibratory mining equipment and washing machine
- Great capability in dynamic simulation: Designed dynamic system of an automatic horizontal type washing machine and also simulated mining vibratory screen using Visual Nastran software.
- Capability of designing and analyzing different industrial parts and machineries by over seven years being involved in design teams of different companies
- Coded a vibration test analyzer and test report generator software using Graphic User Interface (GUI) of Matlab and Simulink software.
- Completely designed flowchart of software for designing vibratory mining equipment: The flowchart is later coded by a Delphi programmer and the software is commercial presented by Research and development dept. of FMS mining company.

EDUCATION

- **Visiting Student in Mechatronics**

Industrial Automation Laboratory (IAL), University of British Columbia, Canada

Mar. 2013-Sep.2013

Supervisor: Dr.de Silva

- **PhD Candidate in Mechatronics**

Isfahan University of Technology, Iran

Sep. 2009-Present

Thesis: Optimal multidisciplinary design of mechatronic systems using soft computing methods

- **M.Sc. in Applied Mechanics**

Isfahan University of Technology, Iran

Sep. 2007- Sep. 2009

Thesis: Chatter vibration control in lathe using piezoelectric smart material

- **B.Sc. in Solid Mechanics**

Isfahan University of Technology, Iran

Sep. 2003- Sep. 2007

Thesis: Designing a specific gearbox for Mobareke Steel Company (Major Steel Company in Middle East) using KissSoft software.

WORK EXPERIENCES

Senior Research Engineer

Research and Development Dept. at FMS Mining Company, Isfahan, Iran

Jan. 2012-Present

- Manufactured a manual vibration test equipment for testing vibratory screens and feeders
- Designed and analyzed vibratory mining equipment
- Generated software for designing vibratory feeder, screen and hopper
- Developed vibration laboratory including purchasing vibration test equipment and defining test methods

Senior Research Engineer

Research and Development Dept. at Entekhab Group, Isfahan, Iran

Oct. 2009-Dec. 2011

- Planned data acquisition (DAS) system to extract washing machine data
- Designed and manufactured mechatronic systems for reliability tests
 - Developed software for vibration tests, which analyzed data from vibration sensors, prepared test reports for washing machine performance test and calculates energy grade of washing machine
 - Designed the dynamic and suspension system of a new automatic horizontal type washing machine
 - Interacted with international partners including Daewoo electronics, Tecnogas and LG as the major home appliance manufacturer in Iran

Designer Engineer

Isfahan Parts and Machinery Company, Isfahan, Iran

Jan. 2006-Sep. 2009

Involved in designing and manufacturing the following machineries:

- vertical and horizontal cutter for Heblex concrete (two registered patens)
- recycling system for waste management system of Starch company (registered patents)
- Center sive system for separation of glutton from starch (registered patents)
- Ball mill machine
- Membrane pump

ENGINEERING SOFTWARE SKILLS

Stress Analysis	CAD/CAM	Dynamic Analysis	Designing Mechanical Parts	Programming
ABAQUS, ANSYS	Autodesk Inventor, AutoCAD, Solidwork	Visual Nastran	KissSoft Hirnware	MATLAB, C++

AFFILIATION AND VOLUNTEER

- Member of The American Society of Mechanical Engineers (ASME), New York, US Mar. 2013-Present
- Volunteer event photographer for Vancouver Television (VTV), Vancouver, BC Apr. 2013-Present
- Volunteer event photographer for UBC Graduate Student Society, Vancouver, BC Sep. 2013
- Member of National Educated Elites Foundation of Iran, Iran 2011-Present
- Member of Special Talent society of Isfahan University of Technology, Iran 2004-2005

SELECTED AWARDS

- Awarded as the elite inventor from the National Educated Elites Foundation of Iran for the invention of the “automatic vertical cutter of light concrete”. 3000 \$ 2012
- Awarded as the elite inventor from the National Educated Elites Foundation of Iran for the invention of the “system for recycling the residue of starch company”. 1500\$ 2010
- Four registered patents, which are commercialized and being utilized in industry. - 2007 - 2009

SELECTED WORKSHOPS AND SEMINARS

- Attended at mechanical mining and rock excavation workshop, 23rd World Mining Congress, Montreal, Quebec Aug. 2013
- Attended at vibration analysis, health monitoring and fault detection of bearings, Sharif University of Technology, Tehran, Iran Jan. 2013
- Taught a workshop in industrial vibration testing and analysis, FMS Mining Company, Isfahan, Iran Oct. 2012
- Taught a seminar in Reliability, Entekhab Group, Isfahan, Iran Sep.2011
- Taught a seminar in Patent Map, Entekhab Group, Isfahan, Iran Sep.2010
- Attended at Welding inspection workshop, Isfahan, Iran Apr. 2008
- Taught a workshop in designing gearbox using Kisssoft and Autodesk Inventor software, Isfahan University Technology, Isfahan, Iran May. 2008

MAJOR PUBLICATIONS

- S.M.K. Tabatabaei, S. Behbahani, and de Silva, "Dynamic Mechatronic system design using Inductive Genetic programming for topology optimization equipped with artificial immune system for parameter value tuning".(To be submitted)
- S.M.K. Tabatabaei, and S. Behbahani," Analysis of Ultrasonic Assisted Machining (UAM) on Regenerative Chatter in Turning". *Journal of material processing technology*, Volume 213, Issue 3, March 2013, Pages 418-425.
- S. Behbahani, S.M.K. Tabatabaei, and D. Sajedipour, " Controller Design for Chatter Reduction Using Genetic Algorithm Method". *ICCA2010-China .IEEE conference on control*.
- And ten other conference papers.

REFERENCES AVAILABLE UPON REQUES