

Curriculum Vitae

ZULQARNAIN HAIDER

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EDUCATION

University of South Florida, Tampa

PhD student, Industrial and Systems Eng. / Operations Research

Tampa, FL

GPA: 3.66/4.0

Relevant Coursework: Linear Programming, Integer Programming, Nonlinear Programming, Multiobjective Optimization, Advanced Analytics I, II, Theory of Algorithms, Stochastic Methods, Simulation and Stochastic Modeling, Deep Learning, Stochastic Decision Models

University at Buffalo, The State University of New York

Master of Science, Industrial and Systems Eng. / Operations Research

Certified Black Belt Lean Six Sigma Professional

Buffalo, NY

September 2014

GPA: 3.83/4.0

Omega-Rho Honors

University of Engineering & Technology

Bachelor of Science in Electrical Engineering

Lahore, Pakistan

July 2010

GPA: 3.4/4.0

SKILLS

Computer and Other Skills: R, MATLAB, JAVA, PYTHON, JULIA, QGIS, CPLEX, @RISK, LINGO, MS Office, Minitab, MS Visio, TPM, Six Sigma, Lean

Languages: English (fluent), Urdu (native), Punjabi. Hindi, Seraiki

RESEARCH EXPERIENCE AND PROJECTS

- **Research interests:** Mixed Integer Linear Programming, Routing and Scheduling Problems, Multi Objective Optimization, Machine Learning, Deep Learning, Stochastic Modeling, Supply Chain network design, Ride Sharing, Healthcare systems, Public Service systems
 - **Journal Articles:**
 1. Journal article published in Ecological Modeling: "Haider Zulqarnain, Hadi Charkhgard, and Changhyun Kwon. "A robust optimization approach for solving problems in conservation planning."
 2. Journal Article accepted for publication for European Journal of Operations Research (EJOR): "Haider, Z.*, A. Nikolaev, J. E. Kang, C. Kwon, "Inventory Rebalancing through Pricing in Public Bike Sharing Systems".
 - **Work in Progress:**
 1. "Exact and Approximate Solution Approaches for Reserve Design Using Modern Portfolio Optimization Theory".
 2. "Optimizing the Operations of a Free Floating Electric Car Sharing System"
 3. "Biobjective Autonomous Vehicle Repositioning Problem with Travel Time Uncertainty"
 - **Notable Student Projects Advised:** Equitable canal water distribution in Hakra river area in Punjab, Optimal Staff scheduling at a tertiary care Cancer hospital, Modeling and Simulation of patient flows in an out-patient ward in Children's hospital, Optimal crop sowing schedule for farmers in Central Punjab, Optimal course scheduling at LUMS to maximize a student preference function, A Multi Objective Linear Programming approach to Portfolio Management, Optimal routing for a multi depot, multi commodity food delivery service in Lahore.
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TEACHING EXPERIENCE (2 years)

Suleman Dawood School of Business, Lahore University of Management Sciences, Pakistan (*Full time Faculty- Teaching Fellow*) Oct 2014- to Date

- Introduction to Information Systems (DISC 250-Spring 2015): Major topics include Design of Information Systems, Database Design, Information Systems in Business and Government and relevant ethical, security and privacy issues.
- Introduction to Management Science (DISC 212-Spring 2015, Fall2015, Spring 2016): Topics include LP, Network Modeling, Regression and DA, Simulation and Queuing Theory. Course also includes group projects in real life industry settings.
- Optimization Methods in Management Science (DISC 322-Fall 2015, Spring 2016): Topics include Discrete Optimization, along with B&B and Branch and Cut algorithms, Evolutionary Heuristics, Goal Programming, Dynamic Programming, MOLP, Topics on LP including Simplex Method, Sensitivity and Duality theory.
- Transportation and Logistics Management (DISC 335-Spring 2016): Topics include Logistics strategy, issues of logistics design, infrastructure, contracts, transportation network models, and issues related to global freight logistics management.
- Introduction to Business Process Modeling (DISC 230-Spring 2015): Topics include Time Series Forecasting, Inventory Management, Lean, Work Systems Design, Product and Process Design, Human Factors etc.

PROFESSIONAL EXPERIENCE (3 years)

CHC Inc. Buffalo NY (*Black Belt Lean Six Sigma Professional*)

July 2013-to Dec 2013

- Improved the pricing process for timely and accurate pricing of the Equipment and Parts as Team Leader of the project involving six members. The project resulted in increased financial accuracy, transparency and improved pricing strategies.
- Improved the average standard deviation between quoted price and actual cost from 8% to 2.5% and reduced the process cycle time from 70 to 15 man hours.

Nestle SA, Pakistan (*CAPEX Project Engineer*)

July 2011-to Sep 2012

- Coordinated all technical activities on assigned projects. Planned, scheduled and coordinated engineering work; monitored work for compliance to applicable codes, acceptable engineering practices, and Nestle standards.
- Ensured that all Electrical assets are well designed and meet the business requirements, directed towards a low cost, highly efficient and flexible operation ensuring equipment and personnel Safety.
- Liaised directly with the purchasing and supply chain departments for technical specifications of all the equipment ordered.
- *Noodle line project, 3.8 M USD:* Ensured on time delivery of project deliverables despite one month delay in the machine arrival.
- As an electrical and instrumentation project engineer, completed electrical system design, protection design, panel design
- Prepared comprehensive Bill of Quantities, requisitioned and procured material
- Led a team of 30 technicians to complete Electrical system installation, system testing, project commissioning and start up.
- Pivotal role in connecting corporate technical, production, marketing and purchasing departments.
- Conducted detailed Factory Acceptance Testing (FAT) of Tokiwa wrapping machines in Japan, reporting to corporate technical.
- *Project VIVA, Confectionary Line, 5.8 M USD:* Completed Electrical system design, protection design, panel design, preparation of BOQ, ordering and procurement of materials.
- Prepared Electrical energy map of the whole factory. Ordered and installed Energy meters for transparency in metering.

Nestle SA, Pakistan (*Engineering Management Trainee*)

August 2010 –to July 2011

- Rotation through all departments as part of Nestlé's Leadership Development program. Covered all aspects of Nestle operations including sales, marketing, brands, supply chain and corporate affairs in detail.
- Exposed to the field operations and back end supply chain of Nestle during Technical orientation in Nestle milk collection.
- Project based trainings at all the plants with detailed exposure to process design, production schedules, Line labor standards, maintenance routines, hygienic engineering and Quality assurance.
- Trained in Six Sigma and DMAIC methodology. Thoroughly introduced to Nestle Continuous Excellence, Nestlé's worldwide improvement initiative.

ACADEMIC DISTINCTIONS

- Member, OMEGA RHO® International Honor Society for OR and Management Science - The Honor Society of INFORMS
- *Fulbright* Scholarship for Master's at University at Buffalo. 2012
- High school: *Gold medalist* in Multan Board which consists of six education districts and 40,000 students. 2006
- High school: *Gold medalist* in Federal board in National level Matriculation (10th grade) exams. 2004
- Topped Engineering Colleges Admission Test, achieving the highest percentile for all engineering universities in Punjab 2006
- Holder of National Talent Scholarship and Federal Board Scholarship during undergrad. 2006
- Holder of HEC-Japanese Scholarship during undergrad. 2008
- Two times holder of Dean's honor role during undergrad. 2010

PROFESSIONAL TRAININGS

- Training on Basic DMAIC problem solving methodology
- Emotional Quotient training
- Training on project management methodology
- Training on presentation and negotiation skills titled "Presenting with impact"
- Workshop on introduction to the basics of Hygienic Engineering
- Workshop on "HACCP" quality control system.

VOLUNTEERING, LEADERSHIP POSITIONS AND ACHIEVEMENTS

- Volunteered for The Citizens Foundation (TCF) in their weekend "Rahbar" program to counsel middle school students from underprivileged backgrounds.
- Carried out pro-bono consulting for the following organizations: Punjab government Transportation department, Jinnah Hospital Lahore, Shaukat Khanum Cancer Hospital Lahore.
Served as Youth Minister of Education, Health and Environment, part of six member national youth cabinet at Youth Parliament of Pakistan
- Participated in many national level Parliamentary and declamation competitions. Also organized two all Pakistan debating championships from the same forum.
- Winner of consecutive national parliamentary debates competitions 2008, 2009 held at Kinnaird College, Lahore.
- Member, United Nations Club, Engineers for Sustainable World and Outdoor Adventures Club at University at Buffalo.

INTERESTS

Volunteering, sustainability, entrepreneurship, debates, fiction, history, poetry, travel, learning languages