# Jonathan Wharton

**Senior Mechanical Engineer - Abbott Labretories Princeton, NJ**

Ewing, NJ - Email me on Indeed: indeed.com/r/Jonathan-Wharton/2b90814300e59fc6

• Mechanical Engineer with Masters Degree 11+ years experience
• Fluent in CAD software (NX, and Solidworks)
• Experienced in electro-mechanical part design (Plastic Molded, Sheet Metal, Machined)
• Experienced in design for optimal heat transfer
• Experienced with CFD software (Fluent Icepak)
• Experiences with setting up and troubleshooting manufacturing lines
• Experienced using statistical analysis to compile experimental results

WORK EXPERIENCE

### Principal Mechanicl Engineer

Unilife Corp - York, PA - March 2014 to Present

Responsibilities
Lead engineer overseeing the design of a retractable needle syringe. Lead the team as the product transitioned from R&D state to initial pilot line.

### Senior Mechanical Engineer

Abbott Labritories - Princeton, NJ - November 2012 to March 2014

Accomplishments:
• Took a Piezo pump driven by a scissor lift from concept to manufacturing by:
Finding cost savings opportunities
Making assembly easier
Creating all solid models and 2D drawing packages
Working with outside vendors to obtain all components
• Collaborated with the science team to create a set of targets for initial calibration of instrument.
Eased burden on manufacturing by using the standard consumable
Extended usable life of target with more durable tray design
• Mechanical lead for cost saving strategies in parts factoring changes in design, material selection, and the manufacturing process.
• Partnered with science and optical teams to create custom fixtures using both FDM system and outside machine shop.
• Mechanical lead to purchasing department coordinating part lead time with document release in order to assure that mechanical components would arrive on schedule for production start.
• Collaboration with mechanical team to produce 2D drawings of all parts and assemblies in the instrument, working with vendor to assure tolerances on drawing met vendors capability.

### Senior Mechanical Engineer

LEXMARK INTERNATIONAL - Lexington, KY - June 2007 to November 2012

Accomplishments:
• Patents issued for:
Variable force wiper for inkjet printhead maintenance.
Multi-port vacuum canister for printhead priming.
• Collaborative development of Lexmark's first off carrier ink jet printer through the manufacturing process.

Assumed a lead role in collaboration with Asian development team.
Partnered with the Chinese manufacturing line for parts associated with the fluidic system including development of the final machine functional test.
Designed and controlled the internal specification document utilized by the firmware team to create the control algorithms for general printhead nozzle health and extreme duty recovery requirements.
Collaboration with Manufacturing, Quality Assurance, Service, Product Safety, and Marketing to develop the specification for an easily produced, reliable, maintainable, cost effective, and waste reduced ink jet printer design.
Partnered with Lexmark's ink chemistry team to qualify inks for hydrophobic membrane compatibility, including designing experiments, programming a specialized tester, as well as performing testing to ensure this compatibility.
Designed a pressure regulator to protect product's hydrophobic membranes from damage resulting from the system pump operating pressure.
Designed, built and programmed (Labview) several specialized testers for Lexmark's Chinese and Filipino manufacturing lines to ensure quality sub-assemblies were being manufactured at each stage of the manufacturing process.

### Thermal Engineer

LEXMARK INTERNATIONAL - Lexington, KY - December 2003 to June 2007

General Responsibilities:

• Worked with development engineers to ensure Inkjet and Laser printers met internal thermal qualification requirements.
• Qualified electrical components for required longevity including verifying that certain components followed the Arrhenius equation.
• Worked with development engineers to design printers with acceptable thermal characteristics..
• Developed a flow tube and software (Visual Basic) to determine system and fan curves, allowing the comparison and optimization of the fans in our systems.
• Used Fluent's Icepak software to model air flow systems to help design features and flow paths to sufficiently cool laser printers.
• Used Icepak to analyze the need for forced convection verse natural convection of electronic packages in early stage designs.
• Worked with acoustics team to design fan algorithms that sufficiently cooled the system while maintain a minimal acoustic impact to customer experience.

### Graduate Researcher

UNIVERSITY OF TEXAS AUSTIN - Austin, TX - June 2000 to May 2003

General Responsibilities:

• Responsible for setting up maintaining and running a two part porous media burner burning a premixed propane/air blend.
• Setup and used a laser velocimetry set up with titanium dioxide seed particles to measure the velocity and turbulence of the combustion products exiting the burner.
• Analyzed the data from the LDV setup and determined the effects of the pore diameter in the upstream media.

EDUCATION

### Master of Science in Mechanical Engineering, Specializing in Thermal Fluid Systems

UNIVERSITY OF TEXAS - Austin, TX
2003

### B.S. in Mechanical Engineering

TEXAS TECHNICAL UNIVERSITY - Lubbock, TX
1996 to 2000

## SKILLS

3-D Modeling (NX Unigraphics, Teamcenter, I-DEAS), Fluent Icepak, MATLAB, Minitab, Labview, Extraview, MS Office.

## ADDITIONAL INFORMATION

### TECHNICAL SKILLS

3-D Modeling (NX Unigraphics, Teamcenter, I-DEAS), Fluent Icepak, MATLAB, Minitab, Labview, Extraview, MS Office.