

PROFESSIONAL ENGINEERING EXPERIENCE: 13 YEARS

Texas Instruments (Rfab/Rfab2) Richardson, TX.

Dec '21 – Present

Title: Implant Equipment Engineer. 300mm

- Recruited for new fab build/tool install, project management, leadership.

NXP Semiconductors (ATMC) Austin, TX.

Title: Sr. Staff Equipment Engineer (E12). 200mm

Jan '21 – Nov '21

- Recruited by former Cypress VP Gary Dawson to NxP after he transferred to ATMC location.
- Awarded *Manufacturing Excellence Award* the first quarter of employment (Qualified a tool for production).
- Repaired an assembly (detector) and re-created non-existent cables from OEM vendors saving ~\$60k.
- Successfully diagnosed unfamiliar major issues (e-chuck electronics ~\$30k, turbo vacuum).
- Continuous manufacturing improvement in metrology (Arduino FDC flow sensor via Modbus protocol).
- Diagnose issues with tools that measure film stress on wafers (Flexus measuring IR laser/optics).
- Identify improvement projects dealing with automated material handling system (mentoring AMHS engineer).
- Automation stocker troubleshooting and car improvement projects (tracking modules).
- Work alongside engineering technicians mentoring on industry best practices.
- Tool improvement project lead spanning across CMP, Implant and Metro along with A80 metric calculations.
- Organize and lead meetings and onsite support with vendors for tool down action plans (TPM).
- Work with Environmental Safety engineers to import new materials overhauling SDS.

Cypress Semiconductor (Infineon) Austin, TX.

Title: Staff Equipment Engineer & MT Manager (E10). 200mm

Oct '17 – Jan '21

- Safety, Quality, Delivery, Cost/Customer, People, Ethics mindset (SQDC)^P.
- Continuous equipment improvements to maximize throughput, increase tool reliability, and reduce costs.
- Preparing weekly analysis reports using Microsoft Office and Google Apps (Docs, Sheets, etc.).
- Manage and maintain Ion Implant legacy 200mm E500, Kestrel, Vision 80/HC, Mattson PS, VISta 810XP/900XP.
- Manage direct report maintenance technicians.
- Cross training and project completion on P5000, Endura, Centra CVD/PVD, Mattson Aspen 2 Etch platforms.
- 8D and 5 why analysis. Lean Manufacturing and Six Sigma best practices.
- Process improvement studies to increase beam current on recipes while staying within vendor BKMs (>UPH).
- Documenting performance and failure analysis. Aspect charts for FDC/SPC rules/warnings/alarms.
- Weekly reports on tool performance. A80, OEE, Availability, MTTF, MTTR, MTTB scheduling/RTF analysis.

Global Foundries Malta, NY.

Title: Principal Equipment Engineer (E7). 300mm

Title: Factory Systems Coordinator.

Jan '12 - Oct '17

- Installed 16 Varian/AMAT VISta Trident tools & assisted with 7 Varian/AMAT VISta 900XPT installs.
- FDC/SPC tool modeling setup for multiple semiconductor recipes and equipment.
- Factory systems and tool systems integration. SVIDs, Golden Settings, VIDs.
- Equipment constants and tool matching management across multiple station families.
- Continuous equipment improvements to maximize throughput, increase tool reliability, and reduce costs.
- FMEA, 8D, 5 why, DMAIC creation and analysis.
- Alarm creation and limits based on statistical analysis using AMAT *E3 & Derdack* and FDC monitoring.
- Preventing unscheduled downtime and maximizing tool utilization, availability, and uptime (MTBF/MTTR).
- Process improvement studies to increase beam current on recipes while staying within vendor BKMs (>UPH).
- Coordinating, supervising, and installing new equipment and tools. Working with vendors for qualification.
- Preparing weekly analysis reports using Microsoft Office and Google Apps (Docs, Sheets, etc.).
- Developing standard operating procedures while maintaining safety and quality standards.
- Troubleshooting technical electrical, mechanical, hydraulic, pneumatic, hi-vac, cooling, and heating issues.
- Evaluate second source parts and qualification of second source suppliers.
- Manage and maintain Varian/AMAT medium and high current tool ownership (VISta Trident/810/900XPT/HE/XP).
- Cost savings projects/qualification totaling over 7 million USD to date of sustaining savings realized.
- Engineering and intern mentor and leader for Implant.
- Manage and maintain a safe working environment by working with EHS&S.
- Mentor maintenance technicians and shift engineers.

PROFESSIONAL ENGINEERING EXPERIENCE (continued)

Samsung Austin Semiconductor Austin, TX.

Jan '09 - Jan '12

Title: Equipment Engineer (E2). 300mm

- Develop and monitor experimental parts to improve quality and capacity.
- Maintaining quality, rebuilding, and improving equipment and their assemblies.
- Coordinating, supervising, and installing new equipment and tools.
- Scheduling preventative maintenance throughout the calendar year.
- FDC/DCOP/SPC trend analysis for problem prevention and awareness.
- Qualifying second source vendors for material and repair cost reductions (totaling over \$700k in 2011).
- Strong ability to perform and complete unscheduled breakdown events in high tension situations.
- Manage and maintain Axcelis HE & Varian/AMAT HCS/HCP/810XP/810HE/810HPE tool ownership.
- LEAN Six Sigma Greenbelt. Project: Robot handling improvement.

Lynntech, Inc. College Station, TX.

Jun '06 - Apr '07

Title: Product Development: Research & Fabrication Engineering Technician.

- Designed and built a variety of projects related to current research needs.
- Fabricated components specified by lead researchers using welding and machining equipment.
- Collected data from experiments and tests.
- EPA: Tested different concentrates of chemical and biological compositions for a decontamination solution.
- Research & Development: Fabrication of a hydrogen oxygen test stand.
- Research & Development: Built and tested a non-lethal, non-tethered, electro-muscular disruption projectile.
- U.S. Air Force: Experimented and built testing chambers for a high power, long endurance micro fuel cell UAV.
- U.S. Air Force: Fabricated fuel cell skids and equipment used for a 13-ton loader using plasma reformed JP8.
- U.S. Army: Tested a portable high efficiency electrochemical cell for hydrogen.
- U.S. Army: Fabricated a small portable sterilization system for medical/dental instruments.

COMPREHENSION

- (SQDC)^P mindset. Highly mechanically inclined. Highly electrically inclined.
- Strong technical comprehension. Ability to learn extremely fast. Strong time management/prioritization skills.
- Cost savings/analysis and financial forecasting ability. Cost efficiency mindset.
- Strong identification capability in materials, mechanical, manufacturing, fluids, pneumatics, and electrical systems.
- Strong ability to perform and complete unscheduled breakdown events in high tension situations.
- Very strong troubleshooting/root cause analysis. Creative and unique problem solving.
- Professional SolidWorks 3D modeling ability. Professional wiring/soldering/schematics/automotive.
- Attention to detail mindset. SPC, E3, statistical analysis. A80 tool availability comprehension.
- Knowledge on power & hand tools, circuit components, ICs, PCBs, hardware/fasteners of all types.
- Computer/software knowledge: Building computers, Microsoft Office, Google suite, many more.
- Intermediate machinist skill set (lathe, milling).
- Intermediate project management mindset.
- Master welding skills (TIG, MIG, ARC, and Plasma cutting, Oxy-Acetylene torch/brazing).
- Intermediate microcontroller integration skills. Arduino IDE.

EDUCATION

Texas A&M University College Station, TX. Masters class Spring 2020. **GPA: 3.9**

- Master's in Engineering: Technical Management.
 - Financial Decision Making - Team Leadership Coaching
 - Technical Leadership - Value Chain Management.
 - Capstone II: New product line diversification at L. F. Manufacturing. Project Management.

Texas A&M University College Station, TX. Class of Fall 2008 (2004). **GPA: 3.3**

- B.S. in Engineering: MMET (Mechanical & Manufacturing Engineering Technology). ABET Accredited.
 - Materials - Statics and Dynamics - Fluid Dynamics - SolidWorks - ProE Design - AutoCAD
- Tau Alpha Pi Engineering Technology Honors Society.
- National University of Singapore (Studied-Abroad).
 - Concentrating in nano-manufacturing semiconductor processes
 - Photo, RTA, Dry/Wet Etch, CVD, PVD, CMP, Metro, Epi, Diffusion, Implant.