

**STANFORD UNIVERSITY - MS Engineering: Product Design**, expected June 2009.

**STANFORD UNIVERSITY - BS Mechanical Engineering**. June 2003.

**APPLE COMPUTER - Engineer: Manufacturing Process Development** 10/2005-10/2007

Member of elite team responsible for development and installation of new manufacturing processes. Oversaw mass production lines in Asia and Europe, managing numerous factories including over 500 CNC mills, 25 plastic injection molding tools, 60 5-axis laser cutters, and training hundreds of line workers. Directed fixture design, part assembly, metrology, and custom process tailored to individual factories and lines. Apple's internal expert on laser cutting, adhesives, and proprietary abrasive and finishing processes. Directed R&D jointly with PhDs, professors, and industry leaders worldwide. Qualified production for 350,000+ parts per day using six sigma. Interfaced with ID and PD teams to ensure tight integration of new technologies. Solely responsible for developing new laser-based manufacturing process, including \$25 million equipment vetting and purchase in Germany and installation at factories across Japan and China. Traveled nearly half time to personally manage projects and teams. Regularly sought as an internal consultant for DFM or ME. Often the default contact between factories and Apple due to approachable, respectful style of project management. Learned about seven words in Chinese.

**LIGHT AND MOTION INDUSTRIES - Design Engineer** 5/2004-10/2005

Designed camera systems for SCUBA divers and high performance lights for bicyclists. Responsible for full product development from concept to production, including: CAD, prototypes, ID, FEA, technical drawings and specifications, testing, cost analysis, manufacturing, and direction of relevant team members. Lead design for 26 products and assisted every project released during my tenure as a sought-after team member. Mathematically modeled thermals for new solid-state light. Revamped design and ergonomics with 3D-spline surface modeling. Halved average project turnaround time. Held design meetings while surfing in beautiful Monterey.

**EDGE INNOVATIONS - Mechanical Engineer** 10/2003-3/2004

Directed assembly and testing of hydraulic actuators for 5000+ part, 36-axis robotic humanoid figures. Managed several assembly and repair technicians, supervising manufacture and inspection of precision parts. Developed master-slave control system of animatronic shark for major Hollywood film, eventually controlling figure on-set. Designed fog based effect maximizing flow laminarization and ease of maintenance in high-cycle/long-life product.

**NORTHROP GRUMMAN - Associate Mechanical Engineer** Summers 2002-2003

Created tools and techniques for repair of submarine seals, working directly with maintenance sailors. Deliverables included numerical dynamics models, manufacturing cost analysis, MIL specs, and ASME Y14.5 compliant prints.

**TOOLZ LTD. INC. & D2M INC. - Engineering Consultant** Summers 1998-2000

Eliminated calibration errors in 5-beam laser level/plumb/square tool by designing fixtures, photosensor circuitry, and error compensation methods targeted to skilled assembly team. Fabricated several test and assembly fixtures.

**STANFORD UNIVERSITY - Resident Assistant** - Toyon Hall with Rolf & Linda Faste 9/2002-6/2003

**STANFORD UNIVERSITY - Student Tour Guide** 9/2001-6/2003

- **SOFTWARE:** PRO/Engineer, SolidWorks, SolidEdge, AutoDesk Inventor, MasterCam, GibbsCAM, MATLAB, AutoCAD, COSMOS FEA, Siemens NC controllers, G-code NC programming language, Adobe Creative Suite.
- **MANUFACTURING:** 3-5 axis CNC milling, 3-5 axis CNC laser cutting, fixture design, swiss-screw machining, plastic injection molding, metal injection molding, FDM, SLA, SLS, chemical milling and etching, laser marking, heat staking, vacuum forming, polishing, centerless grinding, drawing, hydroforming, punching, stamping, aluminum extrusion, plating, anodizing, painting, vapor deposition, sputter coating, abrasives, media blasting, tumbling, TIG and MIG welding, laser welding, ultrasonic welding, friction-stir welding, oxy-acetylene welding, resistance welding, spot welding, brazing, adhesives, investment casting, die casting, sand casting, composite lay-up, fine waxwork, wood turning, wood steam bending, fine woodworking and joinery, pearl and metal inlay, basic manual mill and metal lathe work, sheet metal brakes and shears, silicone casting, analog circuit design & troubleshooting.
- **INSPECTION:** OMM, CMM, SEM, light interferometry, profilometry, electron force microscopy, laser scanning, optical comparators, photoelastic stress analysis, failure analysis and fractology, GD&T, six sigma.
- **SOMEHOW RELEVANT:** acid-jazz guitarist, avid cyclist, loves cooking, enjoys poetry and particle physics textbooks. Passionate about: craftsmanship, attention to details, good writing, learning new things, being outdoors, personal development through reflection, and deeply spiritual or interpersonal discourse. Committed to seeing others perform at their best, often at expense of own work and time. Want to help people learn to work in personally meaningful ways.