

Gordon C. Kirkwood

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Objectives

I am an interdisciplinary engineer, scientist, and artist with 15 years of experience in numerous engineering disciplines including mechanical and electrical engineering and programming. I am looking for a full-time position which will leverage my skills in an interesting and cutting edge work environment.

Highlights

- Excellent verbal and written technical communication skills.
- Extensive expertise in computer aided design and manufacturing, and computer numerically controlled machining.
- Mechanical and Electrical engineering background including Embedded Systems and Motion Control.
- As a Cell Biology Researcher was awarded Howard Hughes Medical Institute and NIH fellowships.

Experience

Artist in Residence, Autodesk, Inc.

January 2015 – present

I explore the state of the art in rapid prototyping of mechanisms for kinetic sculpture using CAD/CAM and cutting edge 3D printers and CNC machining equipment, including use of top of the line 3D printers and 5 axis CNC mills.

Founder & Principle, Manifold Technologies LLC

2012-2014

Specialized in executing product development and rapid prototyping, taking on unique and challenging fabrication tasks such as mag-lev, electronic control systems, CNC jobs, and robotics.

Senior Lighting Consultant, Forms and Surfaces, Inc.

2011-2013

Designed optics and electronics for state of the art LED lighting products, and performed manufacturing quality control for architectural lighting in Apple Computer stores and elite hotels and residences around the world.

Automation Engineer, TAKTL Ultra High Performance concrete

2010-2011

Designed and built automated fluid measurement and dispensing apparatus and automated product quality sensors for a composite materials production line.

Electrochemist & Manager of R&D Lab, Matco Services Inc.

2008-2010

Led a team of engineers and scientists tasked with rapid development of novel test instrumentation for unconventional mechanical, electrochemical, magnetic, and electrical property tests. Received patent for invention of Non-Destructive Magnetic Sensor of Graphitization Corrosion (Patent No. 8154279, <http://www.google.com/patents/US8154279>).

Project Manager, Matco Associates, LLC

2005-2008

Conducted forensic engineering investigations to determine the cause of industrial problems and failures. Authored hundreds of technical reports detailing investigations of mechanical, electrical, corrosion, and design problems from medical implants to rocket engines. Clients included NASA, Boeing, Lockheed Martin, Chevron, Industrial Scientific, municipal governments, and many others.

Education

Graduate Student in the Department of Bio-Engineering, University of Pittsburgh

2001-2004

Developed algorithms to support direct brain control of robotic prosthetic limbs via implanted intracranial electrodes, requiring expertise in real time control systems, mathematical modeling, and electronics

B.A. in Biology, Reed College, Portland, Oregon.

1995-1999

Thesis Research: *The evolution of cellular differentiation control: The statistical likelihood of hierarchical control nodes prior to selection in random genetic regulatory networks.*

Additional Information

- Acclaimed concert cellist and professional photographer
- Winner of Howard Hughes Medical Institute Fellowship Award, 1998
- Fellowship in Nuclear Medicine at the National Institutes of Health, 1997
- Nuclear Reactor Operator, General Atomics Triga Mark II reactor, Reed College Reactor Facility