

Peter Yoli

Asheville, North Carolina

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828-242-1489

**Valuable Personal Attributes:**

Critical Thinking.  
Mental Agility and Adaptability.  
Curiosity and Imagination.  
Accessing and Analyzing Information.  
Collaboration across Networks.  
Effective Oral and Written Communication.  
Initiative and Entrepreneurialism.  
A Continuous Learner.  
An Active and Informed Citizen.  
Leadership by Influence.

**Core Competencies:**

Conceptual Development and Detail Design of New Products.  
Competitor Design Analysis and Reverse Engineering.  
Knowledge of Regulatory and Quality Assurance Procedures and Compliance.  
Understanding of International Design Methodologies.  
Exceptional Creativity.  
Superlative Presentation Skills.  
Keen Problem Solving Skills.  
Autodesk Inventor >23,000 hours.  
SolidWorks Essentials Training (40 hours)  
SolidWorks Essentials Refresher (16 hours)

LinkedIn:

<http://www.linkedin.com/in/peter-y-5b17a591>

Please visit my Video Portfolio of Designs to see some examples of my work:

<https://www.youtube.com/channel/UCxtxowQm8Pbybow9q7485GQ>

**Professional Experience:**

**Selbach Machinery, LLC Wilmington, North Carolina  
Engineering Manager, September 2018 to September 2019**

I execute product and process improvements, manufacturing cost reduction, safety and ergonomics improvements. I design all tooling and fixtures required for the company's wire-EDM machine [AgieCharmilles CUT 30 P] which is used to cut to length the raw material used in the manufacture of solid tungsten needles. I also maintain, program and operate the wire-EDM machine. I design tooling, fixtures and all other mechanical components of the company's needle-pointing ECM [electro-chemical manufacturing] machines. I developed a part fixturing system and new program which reduced wire-EDM manufacturing labor cost, reduced machine process time and reduced scrap material. I prepared a machine operation manual, fixture loading manual and trained foreign personnel in advance of the manufacturing operations being moved outside the USA.

**Molex –Advanced Connectivity Solutions, Maumelle, Arkansas  
Automation Engineer (Contractor), May 2017 to October 2017**

In this contract Engineering role, I am responsible for conceptual development and detail design of proprietary high-speed automated assembly and inspection machines used in the manufacture of Molex's advanced computer connectivity products – proprietary connectors, cabling and wiring harnesses.

**GE-Hitachi Global Nuclear Fuel, Wilmington, North Carolina  
Tooling Engineer, July 27, 2015 to July 13, 2016**

As Tooling Engineer I am responsible for conceptual development and detail design of proprietary in-vessel tooling, (nuclear reactor pressure vessel underwater inspection equipment). I am also tasked with design improvements on existing equipment to enhance safety, ergonomics and reliability.

**Aloha Medicinals, Inc, Carson City, Nevada  
Plant Engineer, May 4, 2015 to July 17, 2015**

As the Plant Engineer I am utilizing my 22-year Mechanical Engineering background, Project Management and Problem Solving Skills to support the company's 33,000 square foot Biotech manufacturing operation. I work closely with the Plant Manager, Production Supervisors and Maintenance staff to keep all of the Plant's air, water, steam and electrical systems operational and am developing preventative maintenance strategies for reducing equipment down-time and maximizing production through-put, cost efficiency, safety and ergonomics.

Company web site: <http://www.alohamedicinals.com/>

**Intrinsic Potential, LLC, Wilmington, North Carolina  
Principal Ideation Specialist / Owner, September 2014 to present**

My most recent business venture to provide consulting services for ideation, industrial design, corporate logos and graphic design, mechanical engineering, product development, animation, video presentation, web design, design and manufacture of job specific tools, fixtures, custom robotic systems for various industries, as well as the ideation and conceptual development of renewable energy systems.

**Corning Inc., Wilmington, North Carolina  
Mechanical Design Engineer (Contractor), February 2014 to September 2014**

As the lead mechanical design engineer I am carrying out conceptual development and detail design of proprietary automated optical measurement system. I am working with a small team of optics engineers, electrical engineers and physicists. The development of this system involves the innovative application of proprietary light sources, advanced optics, servo actuators, precision linear guide rails and careful selection of materials used for fabrication to facilitate repeatable position control, to nanometer accuracy.

**Deatwyler Clean Energy, Huntersville, North Carolina  
Design Engineer, April 2013 – July 2013**

In this engineering role, I am tasked with cost reduction and strength improvement of several of the company's existing Solar PV Racking products. I achieved this by designing geometry of steel beam sections which enabled material thickness reduction, weight savings and enhanced strength. Cost and

ergonomics benefits resulted from these geometry changes. I also work on the conceptual development of new products. I create computer renderings and animation to convey these ideas to company executives as well as customers.

**Corning Inc., Wilmington, North Carolina**

**Mechanical Design Engineer (Contractor), April 2012 to Dec. 2012**

This was my third contract with Corning. At this plant location, I worked on the conceptual development and detail design of proprietary custom automated optical fiber inspection machine-vision system. As the lead design engineer I worked within the Division Engineering Department and utilized a team of mechanical engineers, electrical engineers and physicists. The project specifics are proprietary; however, the inspection system I designed involved the application of electric and pneumatic actuators for multi-axis motion.

**World First Consulting, Wilmington, North Carolina**

**Principal Ideation Specialist, February 2010 - December 2012**

World First Consulting was a product development venture, Corning being one of my key clients. I produced custom automated equipment designs. Other clients were presented with custom renewable energy systems utilizing my proprietary designs in wind turbine power generation technology.

**The Water Company, Pueblo, Colorado**

**Design Engineer (Consultant), February 2012 - April 2012**

As a consultant I worked at their research facility with the engineering manager, scientists, and contract engineers. As the co-leader of this team, my responsibilities included, but were not limited to the improvement in the costs of manufacturing their proprietary custom electro-mechanical system for industrial water purification. In addition to this facet of the project, the improvement for the ease of manufacturability became a key component.

**Corning Inc., Wilmington, North Carolina**

**Mechanical Design Engineer (Contractor), Sept 2010 - Nov 2011**

At this plant location, I worked on the conceptual development and design of proprietary custom automated optical fiber manufacturing system. This was completed using 3-axes linear motion, with the combined application of long stroke linear actuators (> 4m). I was responsible for detail design, creation of manufacturing drawings, ordering of parts and all vendor interfaces, as well as the supervision of contract mechanics and laborers for the installation of the completed system.

**Seacon Enterprises, Concord, North Carolina**

**Design Engineer (Contractor), February 2009 – September 2009**

In this position, I was asked to do a pre-project assessment of commercial truck driver ergonomics. My responsibilities were the conceptual development and design of a custom multi-axis tarp deployment and storage system for flat-bed trailers. I designed and manufactured a proof-of-concept prototype. The final project deliverable included an animated presentation of the system, its assembly and use.

**Corning Inc., Wilmington, North Carolina  
Mechanical Design Engineer (Contractor), Sept 2009 - March 2010**

In this role as a Mechanical Design Engineer, my responsibilities were to improve the quality of the company's finished product. This included the conceptual development of a custom proprietary automated system for the improvement on a manual work process. The improvements realized upon implementation of this system were superior product quality, increased productivity and enhanced ergonomics.

**Symmetric Design Corporation, Wilmington, North Carolina  
Owner, June 2002 - August 2009**

My company provided services for mechanical engineering, ergonomics, ideation, industrial design, product development consulting, animation, computer simulation, video presentation, web design, design and manufacture of job specific tools, fixtures, custom robotic systems for various industries, as well as the ideation and conceptual development of custom class II medical devices.

**United States Air Force, Warner Robins, Georgia  
Ergonomics Advisor (Contractor), June 2007 - July 2008**

As a contractor to the Air Force, I provided industrial ergonomics, manufacturing engineering surveys and assessments for Air Force maintenance areas and aircraft hangers. Preparation of reports to indicate the areas of concern and corrective recommendations were made for improvement. I was responsible for conceptual development and detail design of custom maintenance equipment for implementation on various weapon systems. animated presentations for team leaders, supervisors and commanders were provided.

**Treadwell Corp, Wilmington, North Carolina  
Director of Engineering, October 2005 - September 2008**

I began as an engineering advisor and was responsible for conceptual development and detail design of five iterations of a human-powered, preventative health machine. This included preparation of patent drawings and technical description of components for the patent application process. I supervised the manufacturing and assembly of prototype machines. I was engaged in the creation of the preliminary business plan, and the researching and qualifying of vendors for production quantities. Company web site: <http://www.treadwellness.com>

**Emertech, Inc., Hampstead, North Carolina  
Engineering Advisor, August 2005 - January 2007**

As an engineering advisor, I was responsible for conceptual development and detail design of a custom agricultural machine which deploys a hydroponics system for field crops. I supervised the manufacturing, assembly, and the fieldtesting of prototype machines. In addition, I was in charge of preparation of presentations for vendors, investors and potential customers, as well as the researching and qualifying of vendors for production quantities of the final product.

**Amersham Health, Durham, North Carolina  
Engineering Advisor, July 2002 – August 2003**

As an engineering advisor, I was responsible for ideation and concept development of a custom in-hospital machine which manufactures and dispenses a gaseous drug product for medical diagnosis. My duties included collaboration with the engineering director, mechanical and electrical engineers, and research physicists at the company's research facility in Durham, NC.. I provided 3D CAD models and renderings as the primary project deliverables and transferred these to the customer's strategic partner for manufacturing of physical prototypes.

**Pelton & Crane, Inc. Charlotte, North Carolina  
Product Development Engineer, November 1999 – May 2002**

I was hired as a Product Support Engineer to support the manufacturer of existing products. I supervised product assembly during implementation of new procedures, and new product designs. I championed product cost reduction, focusing on alternate manufacturing methods and simplifying assembly processes. The coordination of engineering changes between operations in Charlotte, and several affiliated divisions located in Oregon was my responsibility. In the role of Product Development Engineer, I worked on Industrial Design and Conceptual Development of new dental products that went to market. This included the creation of 3D CAD renderings as well as physical models of proposed new products. Company web site: <http://www.pelton.net>

**IKA-Works, Inc., Wilmington, North Carolina  
Electro-Mechanical Engineer, August 1997 – October 1999**

In this engineering position, I supported the manufacturing of small bench-top laboratory products, such as magnetic stirrers, hot-plates, mixers and shakers. I designed assembly tooling and fixtures and supervised assembly personnel in the use of these tools. I designed every component of laboratory products including pc boards, housings, enclosures, ceramic hot plates, heating elements, electric motors and drive trains. I designed laboratory products to be compliant with UL, CSA and CE regulatory standards. I also worked in other company manufacturing plants in Germany, Malaysia, and China, to better coordinate projects and exchange manufacturing technology. I created 3D renderings and physical models of proposed new products. Company web site: <http://www.ika.net/>

**Ergotech, Inc., Danbury, Connecticut  
Design Engineer, April 1996 – June 1997**

For this company, my responsibilities were conceptual development and detail design of multi-axis work positioning equipment. I was tasked with cost reduction and quality improvement of several of the company's existing products. I achieved this by alternate material selection and by using alternate methods of manufacturing. I also worked at an affiliated company manufacturing facility in Sweden, for technical training for a large multi-axis industrial robot that Ergotech, Inc., was the sole North American distributor of. I provided inside sales, customer service and technical support for all the company's products. I traveled to existing customers' facilities to provide technical support and training. I called on prospective new customers to give sales presentations. I designed a new company Logo, and catalog artwork.

**Preferred Engineering Corporation Danbury, Connecticut  
Project Engineer April 1992 – April 1996**

As a project Engineer, I was tasked with detail design and creation of manufacturing drawings of custom remotely-operated underwater equipment for use in nuclear power plants. I worked on-site at nuclear plants to provide technical support and supervision in the use of the equipment. When designing the equipment, I applied quality assurance procedures as they applied to the project. I also created operating and maintenance manuals.

Company web site: <http://www.preferredengineering.com/>

**ISB Products, Inc. Waterbury, Connecticut  
Mechanical Designer July 1989 - April 1992**

In this role as mechanical designer, my responsibilities included, design of aluminum extrusions, sheet metal enclosures, machined parts and weldments. I also created pc board circuit artwork from electrical schematics. I created all manufacturing, assembly drawings, catalog artwork and installation manuals for all the company's products.

Company web site: <http://www.isblite.com>

**Education:**

SolidWorks Essentials Training (40 hours), Creative Dezin Concepts, Inc.,  
Morrisville, North Carolina

SolidWorks Essentials Refresher (16 hours) TriMech Services, Columbia,  
Maryland

Creative Dezin Concepts, Inc., Morrisville, NC

SolidWorks Essentials Training,  
Cadrea Systems, Inc., Cary, NC

Inventor 5, 5.3, 6,

Porter and Chester Institute, Watertown, CT

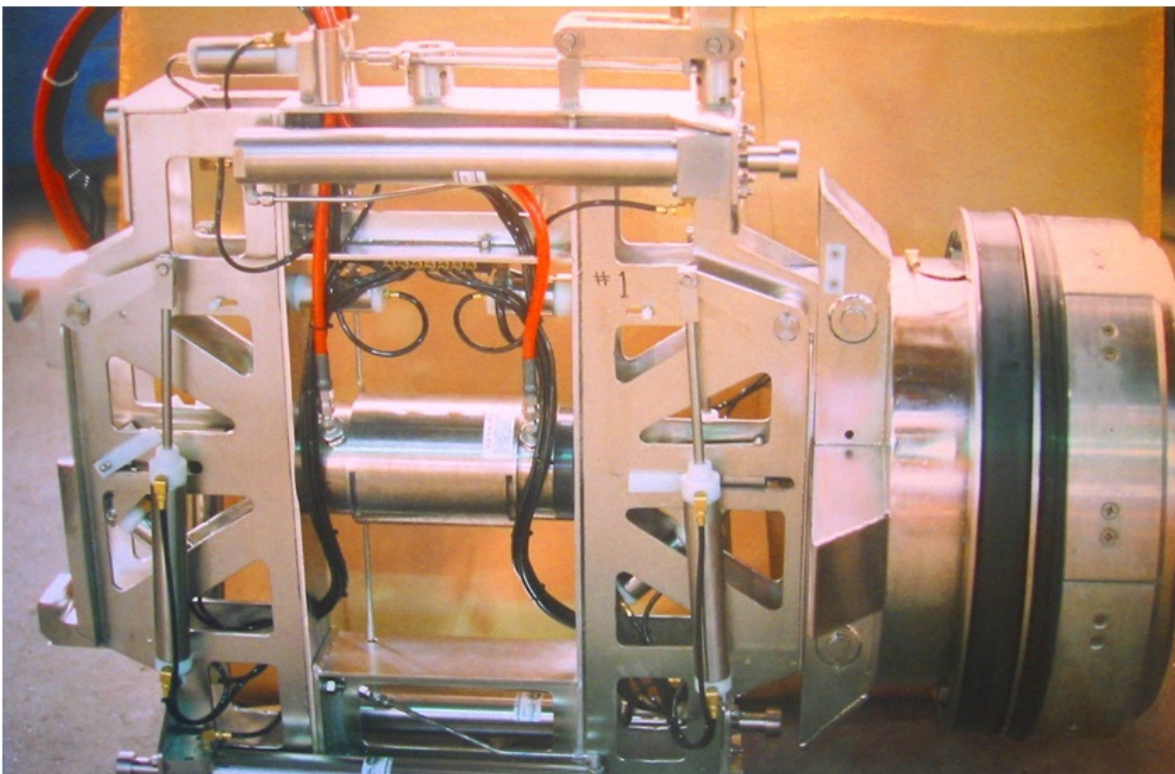
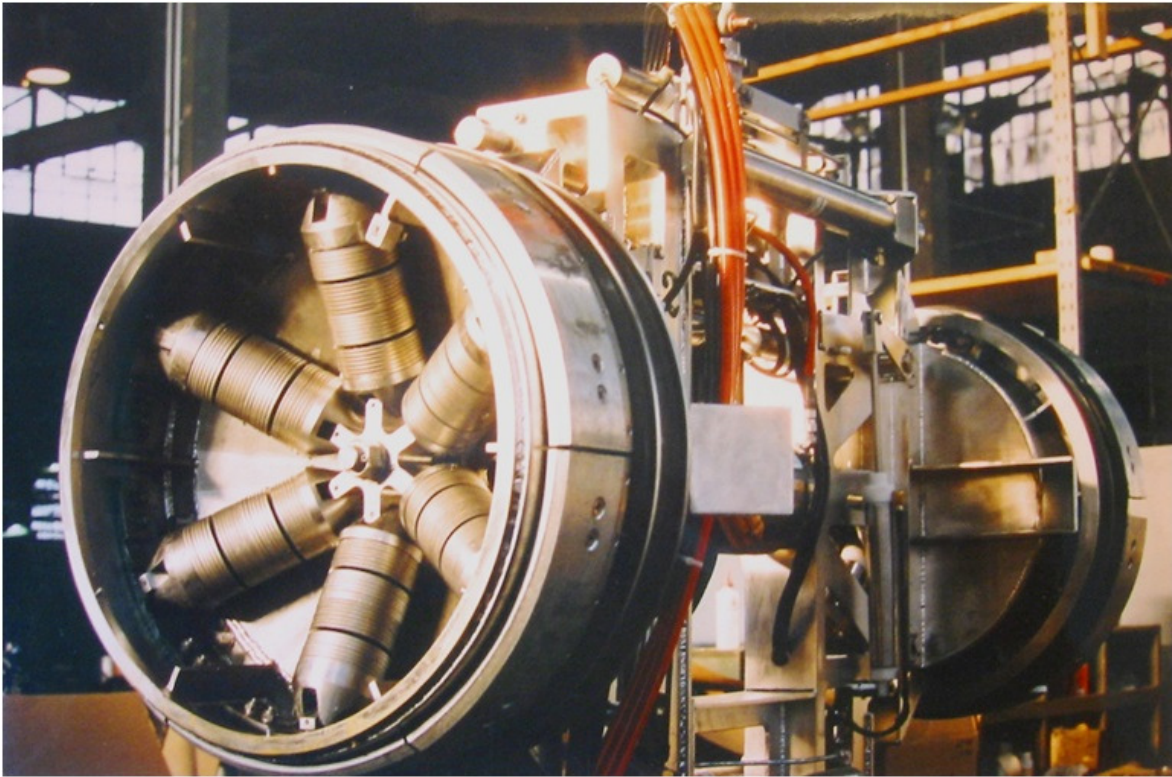
Update Advanced AutoCAD release 11

AutoCAD release 9 and 10

Mechanical and Electrical Design Certificate

Albertus Magnus High School, Bardonia, New York

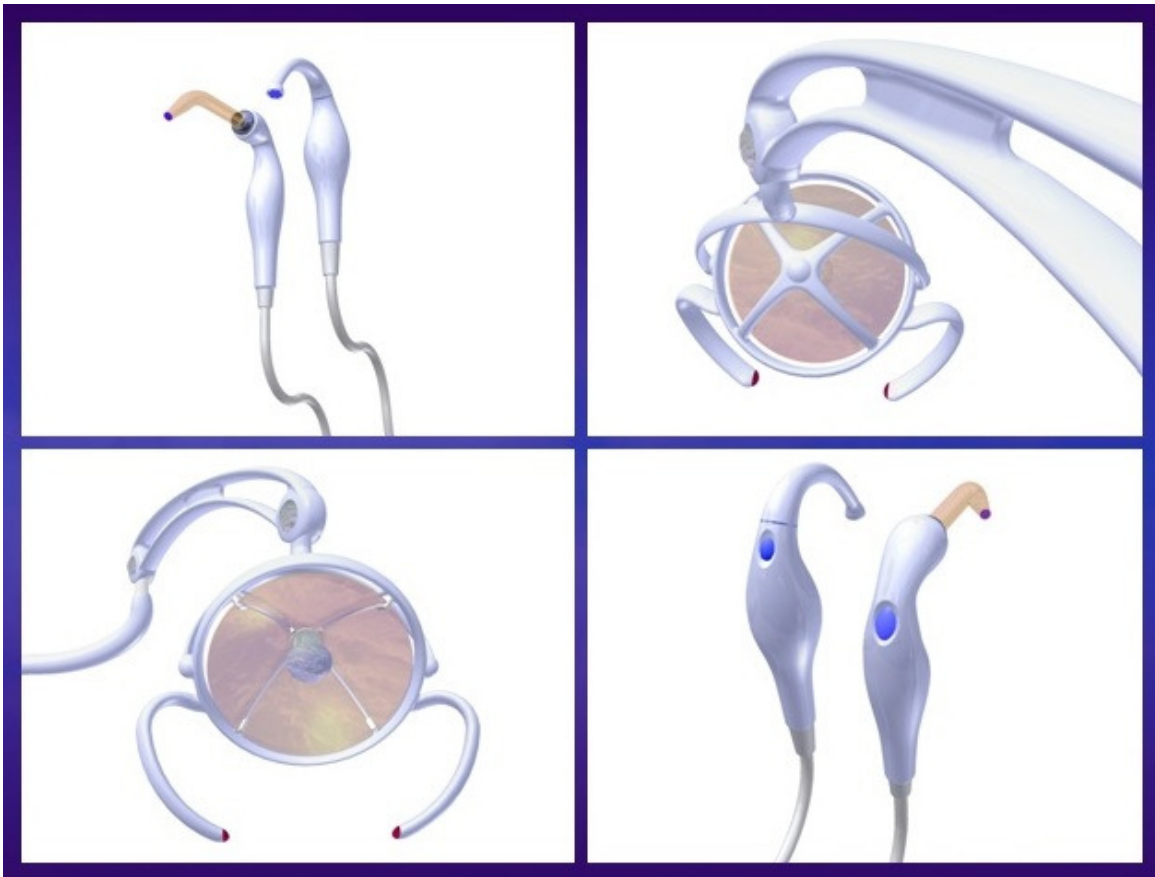
**Professional references available upon request.**



Main Steam Line Plug and Installation Tool, for use in Nuclear BWR (Boiling Water Reactor).



Dental Chair and Dental Delivery Unit.



Dental Composite-Curing Light and Dental Operator Light.



smooth, asepsis upholstery, easy to clean without compromising style.

**MODEL 2007**  
 With our new Advanced Comfort upholstery, this chair is ergonomically engineered using a combination of slow-recovery and high density foam for your patient's ultimate comfort.

Dual articulating headrest position the patient precisely to position the patient precisely to access to the oral cavity. Also available with an optional flat headrest and magnetic pillow.

**ARMRESTS**  
 We believe armrests to your patient's comfort of security in all chair positions. Armrests conveniently out of the way for easy and exit, yet are available all times. A unique design of armrests to articulate with the seat back, keeping the patient in a natural position.

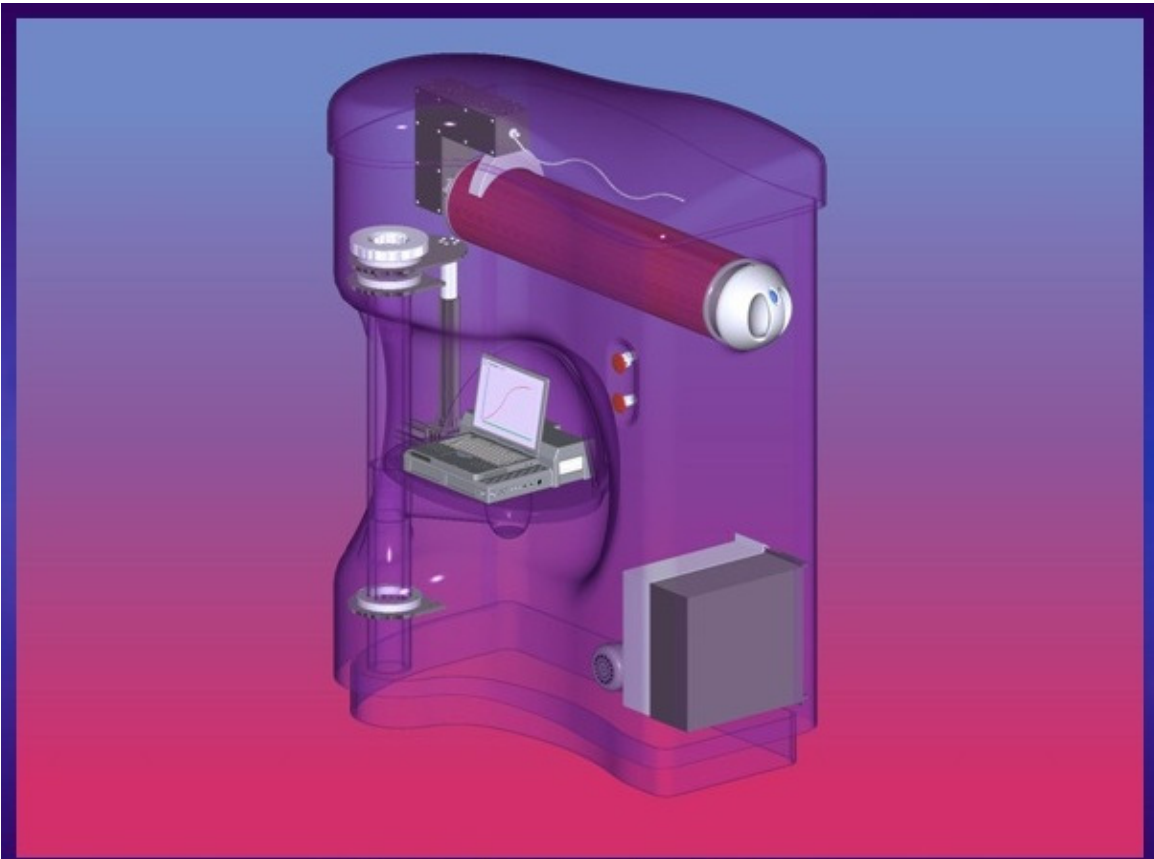
**CHAIR FOOT CONTROL**  
 Easy to program five-position a large, disc-shaped face, end of manual and automatic functions without interrupting patient care.



**Electro-Hydraulic Dental Chair**



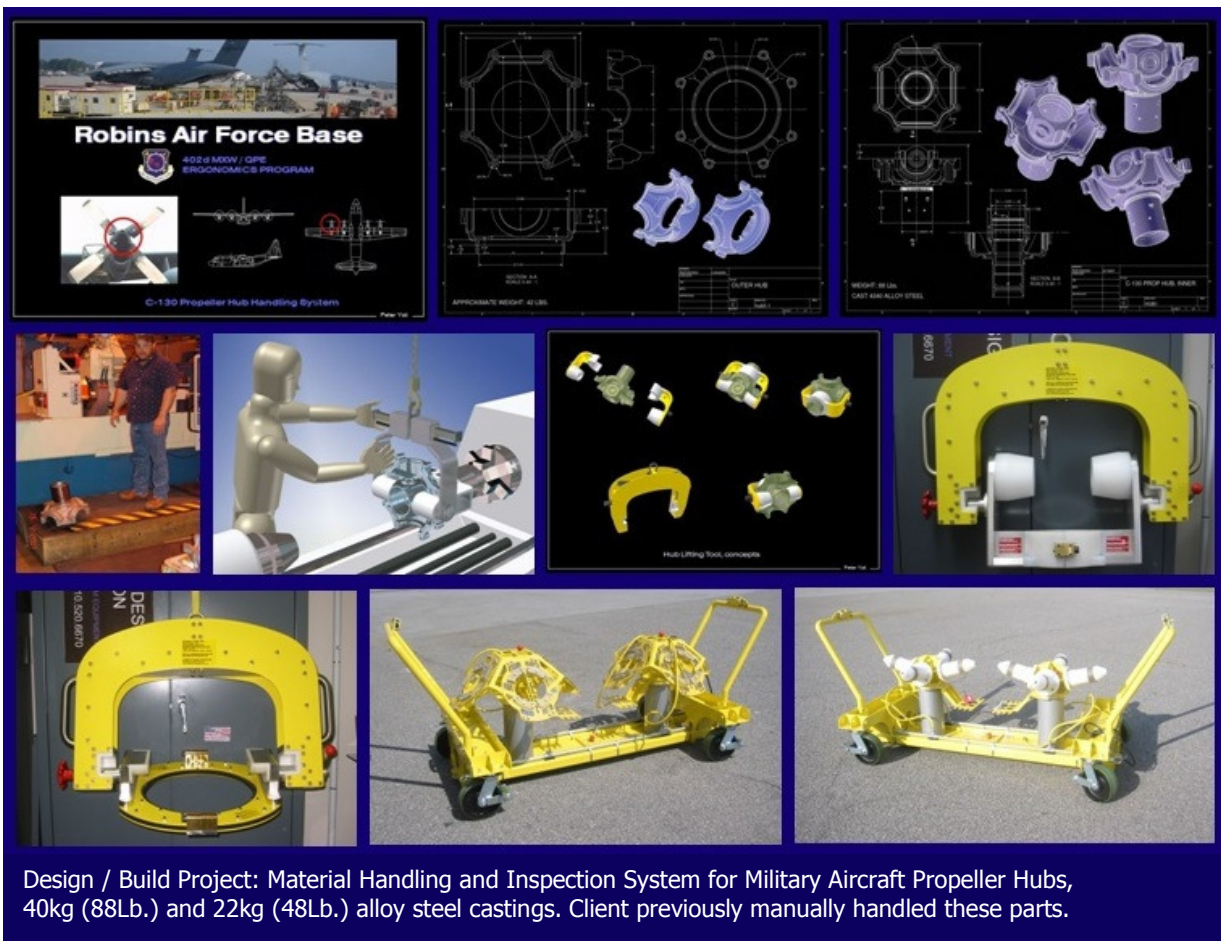
**In-Hospital Auto-Modular Polarizer**  
 manufactures and dispenses a gaseous drug product, Hyper-polarized H3



In-Hospital Auto-Modular Polarizer



Additional iterations of the Auto-Modular Polarizer



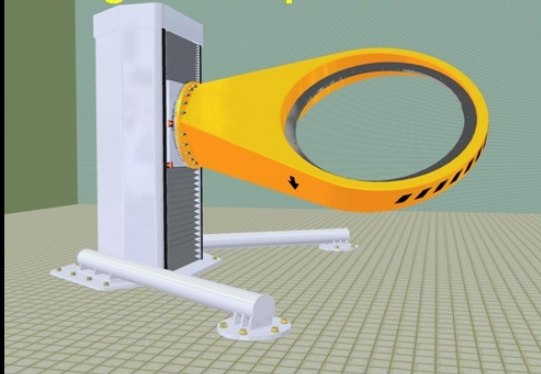
Design / Build Project: Material Handling and Inspection System for Military Aircraft Propeller Hubs, 40kg (88Lb.) and 22kg (48Lb.) alloy steel castings. Client previously manually handled these parts.



Design / Build Project: Industrial Robotic Fixtures and Transportation System for Military Aircraft Tire and Wheel Assemblies, 166kg (365Lb.). Client previously manually handled these parts.



**Design Concept.....**



SYMMETRIC DESIGN CORPORATION

**National Radio Astronomy Observatory**

**ALMA** - Atacama Large Millimeter Array



Tilt Table for the Front End Integration Center  
**Preliminary Project Plan**

SYMMETRIC DESIGN CORPORATION

Custom Product Proposal: 3-Axis Industrial Robot – for the assembly of radio telescope receivers.



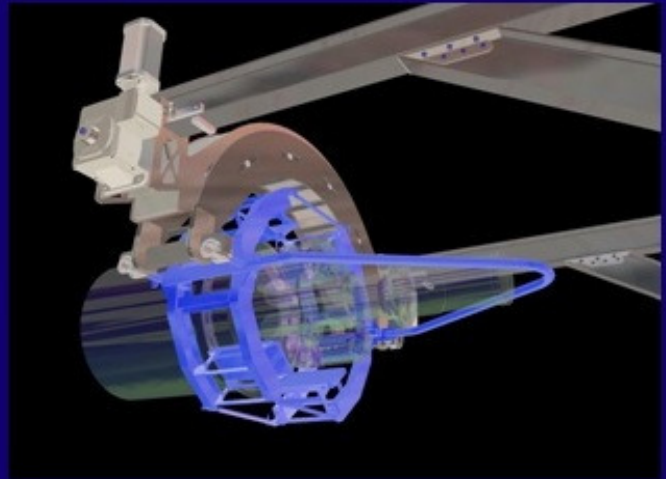
GMD Interceptor

The payload  
**EKV**  
(exoatmospheric kill vehicle)



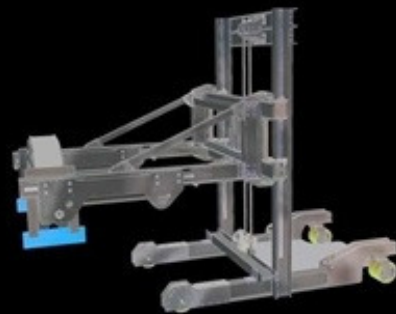
Proposed 6-axis lifting tool for the Ground-based Mid-course Defense INTERCEPTOR INTEGRATION FACILITY

Peter Yeh



Structural Analysis and Center of Gravity Calculations

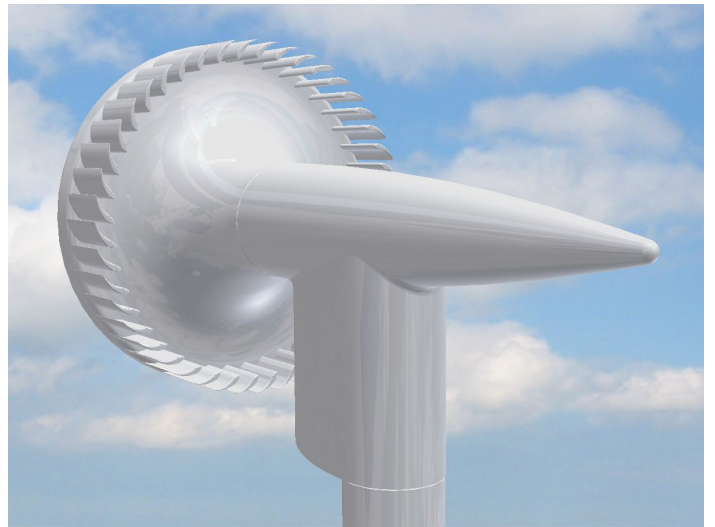
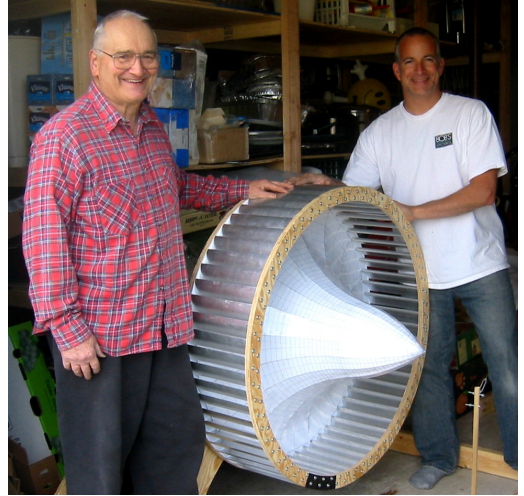
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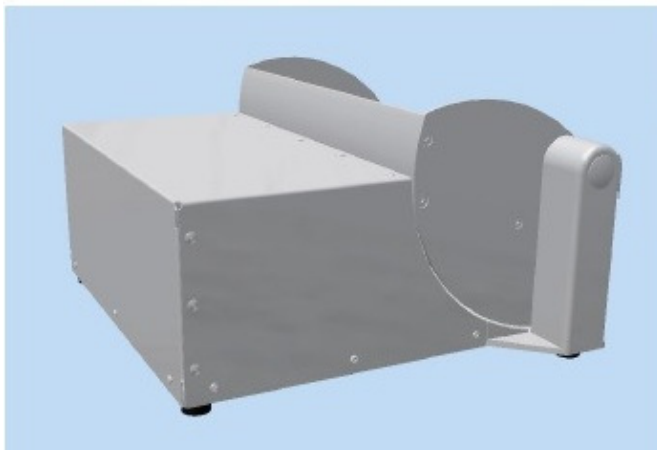
Proposed 6-axis lifting tool for the Ground-based Mid-course Defense INTERCEPTOR INTEGRATION FACILITY

Peter Yeh

Custom Product Proposal: 6-Axis Material Handling Machine for Space Vehicle Payload Assembly.



Axial Vane Wind Turbine – 20 inch and 40 inch prototype testing and Offshore Wind Farm Concept



Design / Development / Build: A Human-Powered Preventative Health Machine called "Treadwell"  
 15 Design Iterations, 5 Versions built and tested. [www.treadwellness.com](http://www.treadwellness.com)