



---

## SKILLS/QUALIFICATIONS PROFILE

---

- Proficient in conducting all stages of product development in compliance with FDA QSR.
- Technical skills – mechanical design with focus on manufacturability, ergonomics/human factors focused design, CNC and manual milling, general lathe work, MIG welding, laser welding, general fabrication/prototyping with most materials, and 3D print prototyping.
- Software –Solidworks, Mastercam, Onshape, Fusion 360, Spaceclaim
- Patents – 29 issued, 48 pending
- Experience with offshore manufacturing and prototyping.
- Familiarity with surgical operating room procedures.
- Conversational Spanish
- United States Government Security Clearance granted in June 2020 (Level – Secret)

---

## EMPLOYMENT HISTORY

---

**Engineering Consultant** Feb 2018 – Present

*Copious Imaging, Lexington, MA*

- Designed and fabricated field auxiliary power units for LWIR persistent surveillance system.
- Participated in field testing at secure government facilities.
- Organized and executed environmental, dynamic and EMC/EMI testing per MIL-STD.
- Worked in close collaboration with electrical and software engineers, manufacturing and support staff.

**Co-Founder/VP of Engineering/Advisor** Nov 2016 – Present

*Trella Technologies, Bourne, MA*

- Designed, developed and fabricated a horizontal plant training system used in indoor growing. System maximizes plant growing efficiency, whilst collecting data to help increase growth rate and yield.

**Engineering Consultant** Nov 2014 – April 2020

*Various Companies, Boston, MA*

- Artificial intelligence driven battlefield robotic system:
  - Designed and fabricated robotic drive mechanisms.
  - Developed and evaluated hand held user interface.
  - Provided guidance on FDA QSR.
- Hospitality Robot:
  - Door and drawer open/closure mechanism design.
  - Prototype and build strategy.
  - Sourcing and building of initial prototype.
- Consumer products:
  - Research activities with clients and users.
  - Functional design conceptualization and implementation.
  - Industrial design implementation of various products.
  - Design and fabrication of fitness equipment.

**Engineering Consultant** Dec 2014 – Nov 2017

*Covidien/Medtronic, Boston, MA*

- Served as development lead for capital equipment subsystem, focused on design for manufacturability.
- Established new rapid sourcing channels for COV/MDT.
- Worked closely with COV/MDT engineers, consultants and vendors across multiple disciplines and locations.

- Supported manufacturing process development and transfer to contract manufacturer.
- Managed relationships with key outside design firms, vendors, and primary manufacturer.

**Engineering Consultant**

Dec 2015 – Jun 2016

*Fractyl Laboratories, Waltham, MA*

- Created design specification and prototyped next generation delivery/deployment system.
- Identified alternate materials and construction methods for disposable portion of product.
- Served as independent reviewer in design reviews for current product.
- Created and conducted verification tests for new concepts.

**R&D Program Manager**

Feb 2012 – Nov 2014

*GI Dynamics, Inc., Lexington, MA*

- Managed new design and development efforts for implant anchoring, delivery system and retrieval system.
- Managed continuous improvement efforts for delivery system and retrieval system.
- Managed animal lab activities – animal studies, user trainings and demonstrations.
- Worked closely with clinical and marketing groups.
- Supported manufacturing process development.

**Co-Founder/Development Engineer/Research & Development Manager**

Aug 2004 – Jan 2012

*Cambridge Endoscopic Devices, Inc., Framingham, MA*

- Served as technical/hands-on lead on company's founding team.
- Developed and released company's first product to market in 12 months on a "shoe-string" budget.
- Served as development lead for all products company has developed for market – 29 total.
- Lead technical aspect of design, development, and evaluation activities for all products.
- Worked closely with surgeons and marketing to develop new surgical products.
- Responsible for evaluating technical aptitude of potential low-cost manufacturers.
- Served as technical lead on manufacturing transfer to China.

**Development Engineer**

Dec 2003 – Jul 2004

*GI Dynamics, Inc., Watertown, MA*

- Contributed in design and development of delivery system for deploying EndoBarrier device.
- Developed prototyping (and later production) methods for EndoBarrier.
- Participated in decision process for EndoBarrier material selection.
- Performed acute and survival animal studies.

**Engineering Co-op/Engineering Consultant/Mechanical Engineer**

Jun 2000 – Nov 2003

*endoVia Medical, Inc. (Formerly Brock Rogers Surgical), Norwood, MA*

- Developed fast prototyping method for key component of endoluminal surgical tools, enabling quick turnaround on design revisions.
- Performed functional analysis of critical parameters on robotic surgical instruments at manufacturer.

**OTHER RELEVANT EXPERIENCE**

- Automotive projects – simple repairs to full restorations.
- General home repair, rebuild and restoration.
- Home fabrication shop includes 3.5 axis cnc with toolchanger, toolroom lathe, CMM, optical comparator, welders, plasma cutter, laser engraver/cutter, and 3D printer.

**EDUCATION**

**Mechanical Engineering Technology**  
*Northeastern University, Boston, MA*

1998 – 2003