

PROFILE:

- **Multi-Disciplined** – *One Stop Abilities Shopping* – **Napkin to Product** - Scientific Instrumentation, Electronics, Mechanical Engineering and Design, Optics, Physics, Biophysics, Medicine, Trades, Writing, Business Administration and Presentations; competent at Ph.D. level
- **Remote Multispectral Sensing** – Developed novel techniques for use in the glass, fiber, ceramic, advanced-life-sciences and Advanced Engineering environments using light from deep UV – Vis – IR; LIDAR, RADAR, Sound and X-rays
- **Non Destructive Evaluation** – System invention, design, fabrication and deployment X-ray, Ultrasound, light and other novel probes
- **Phase Conjugate Optics** – Invented system to analyze planar distortion of 3m x 3m x 0.5mm LCD glass during production in a harsh environment
- Measurement instrumentation - **Expert Designer** of– nuclear, spectral, optical, electronic etc
- **High Temperature Characterization** – Designed, Fabricated and Deployed characterization instruments used from 100°C through 2,200°C for lab and production applications
- **Nano Particulates** – **Invented** means to produce semiconductor nano particles in an atmosphere
- **Proficient** using CAD - *SolidWorks 7, COMSOL, Paint Shop Pro 8, MultiSim 7, Ultiboard 7* and, *OptiCAD (Zemax-like), LabView, Matlab*
- **Projects Manager** – From individual contributor through team using *MS Project*, staffing, external contractors and budget
- **Troubleshooting, Repair and Calibration** of complex scientific instrumentation to component level
- **Leadership** – Staff, Students and projects of multi-million dollar budgets – reporting to director, vice president, CEO and Board
- **Inventive** - *Proven and Continuous* – Patents in diverse technology areas; products to market
- **Pioneering** – willing to ask the hard-questions; not afraid to fly in the face of “peer-wisdom”

EXPERIENCE:

Science and Technology Problem Solvers, Inc. July 2009 to Present

Consultant/ Owner

Design, develop and deploy characterization instruments for use in any environment

Expert designer of non-destructive evaluation

Delivered research to customers which include *Nano Materials Innovation Center* (Jon Wilder), Alfred University; O'Reilly Collins law firm (CA); The *Boccardo Law Firm Inc* (CA) and more

Perform independent research on novel characterization methods including X-ray diffraction, CT Microscopy, and other non-destructive characterization

Samaritan Hospital, Watertown, NY September 2011 to Present

Director: Biomedical Engineering Department

Coordinate daily activities for a 289 bed hospital biomedical engineering department including patient safety, budgets, Regulators (Joint Commission, NY Dept of Health, and Liability Carriers)

Train and supervise staff – including evaluations, hiring and discipline

Prepare capital budgets (>\$15M) for clinical/ Patient care equipment

Establish protocols, policies and procedures

Corning Incorporated R & D

August 1997 to March 2009

➤ **Sr. Research Scientist 9 US Patents**

Responsible for developing characterization instruments for use in the lab and at production facilities. Many of these devices were intended for high temperature applications which include fusion-draws, fiber draws, HPFS lay-down, catalytic converter production.

- Developed Nano-particulates and characterizations (Scanning Electron Microscope (SEM), Confocal microscopy and fluorescence microscopy techniques, X-ray diffraction and spectroscopy)
- Improved selects to 97% of *Micro Reactor Assemblies* using X-ray laminography
- Rescued \$3B optical-fiber business from infringement by improving process
- Enabled completion of the National Ignition Facility main LASER-line window using scanning interferometry
- Saved \$3M print-head loss for Corning Genomics deploying automated CT scanner
- Leads Engineering Projects, Teams, Groups of Investigators as well as an adept individual contributor
- Operating Budgets from small-change to \$ millions
- Enabled new product line with understanding of *ultra-capacitor* anatomy analysis using NDE
- Eliminated \$2k/filter of platinum waste in diesel particulate filters with automated x-ray analysis.
- Designed and deployed high-temperature mechanical testing including: conductivity, tensile strength, optical parameters, temperature, spectroscopy (emission, X-ray, absorption. . .)
- Directly supervised student interns projects, training and evaluation
- Expert in the design and operation of characterization instruments in-general
- **Hired-Gun:** Deployed to any Corning Incorporated site that had an “unsolvable” characterization issue
- Published

MBS Foundry, Inc

January 1990 to August 1997

Principal

Served as PI for *National Institutes of Health* grant to develop endoscopic calipers

Invented the *RetrospeX Rear Vision System for Large Vehicles*; Patented

Invented, Designed, Developed and Prototyped instruments for customers such as Potentiostats, micro quantity injectors, night-vision, remote temperature sensing and x-ray detectors.

Interacted with Customers, developed sales strategies, market research, and procured venture capital

Independent Research: Energy Sources; Trans-dermal/coetaneous oxygenation and sample acquisition; Non-Contact Neuronal Interface(s)

Education State University College of New York at Buffalo; BA Biophysics. Minor EE; SUNY at Buffalo, Ph.D. Biophysics (incomplete) 2001

Community Service

Scientist-In-Residence, Authentic Scientific Research Class, Campbell/Savona HS; Mentored Summer Interns; Engaged kids with science for *Bring Your Kid to Work Day*; Warden, Trinity Episcopal Church, Mt. Morris, NY

Military Service: Graduated 1st. in-class US Navy *Advanced Electronics Command*, Honorable Discharge

Member: *IEEE and OSA* - Optical Society of America

Clearance: SSBI Aug 1977; Top Secret, Crypto-endorsement – Inactive

Passport: Current with expired China-visa (10/2010)

SUMMARY

Extremely energetic, a gift for solving complex problems in a fast-paced environment, exceptional interpersonal skills, committed to excellence, I have an innovative and challenging spirit, new innovations and products are always in the offing; a cross-functional/multi-disciplined *scientist-with-personality* that is able to communicate at all levels; most importantly are abilities to define what the Customer *really needs* versus wants. Profoundly effective in a management role, I prefer the thrill of hands-on creativity in the shop, lab and field; the key to my success is ability to do-it-all and do it well.

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