

LANA PANASYUK, PhD, MBA
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SENIOR SCIENTIST

Highly accomplished R&D Leader with over 20 years of scientific (in academia & industry) and 8 years of technical & management experience in Scientific Instruments, Application Software, and Medical Device industries. Successful & thriving collaborator in cross-discipline teams with 8 years of directing technology product from discovery to commercialization in start-up environment.

Analysis, Modeling, Optimization, Statistics for Multidimensional Data of Complicated Systems
Remote Sensing • Hyperspectral Imaging • Registration • Pattern Recognition • Feature Extraction
Imaging, Optical and Multi-Sensor Technology • Medical Applications
Research & Product Development • New Product Vision & Roadmaps
Product Requirements Gathering, Specification & Design • Full Cycle Software & UI Development

PROFESSIONAL EXPERIENCE

JEF CORE, INC.

Weston, Massachusetts • 2007 to Present

Consulting company focusing on integrating business, technology & medicine.

Chief Technology Officer

Evaluated technical solutions, pricing strategy and opportunities in new product development, delivered market analysis. Prepared grant applications and business plans for early development.

CONFIDENTIAL, INC.

Waltham, Massachusetts • 2004 to 2007

Fast growing medical device company, commercializing novel imaging modality that combines advanced optics with sophisticated mathematical algorithms to identify subtle changes in composition.

Co-founder, Senior Vice President of Research & Development

Spearheaded development of hyperspectral imaging technology for medical applications. Completed early market analysis, identified customer needs, product specifications and requirements, designed and developed product roadmap. Devised several generations of product to enhance accuracy, improve customer satisfaction, and ease market penetration. Led development of proprietary software platform, ensured GMP compliance and timely product/service delivery to early customers. Hired, mentored, trained, evaluated, and led cross-functional team of 12 employees.

- Assembled hardware and software engineering teams and led product development from a pilot, through technical and clinical validation, to a commercial, FDA-cleared product.
- Successfully deployed & supported 10 research grade instruments to 8 collaborating medical centers nation-wide, installed bases of early technology adapting customers.
- Led ground-breaking research projects that established company's pioneering role in industry via publications in leading journals, conferences & trade shows. Authored & developed several patents.
- Launched 3 new pilot products for different applications to expand future market share.

DIMENSIONAL PHOTONICS, INC.

Southborough, Massachusetts • 2003 to 2004

Startup developer of 3D digital shape scanning systems, based on a revolutionary technology (Accordion Fringe Interferometry) developed at LL MIT, technology rights acquired by FARO.

Senior Scientist, Director of Calibration

Completely reformulated analytical description of the AFI technology to allow for easy modeling and optimization of the instrument and its performance. Piloted reconfiguration of the existing product according to the new approach & led engineering team to incorporate the changes. More than tripled product performance (accuracy and precision) reaching limits of existing hardware.

- Designed & implemented calibration methodology for receiver optics and detector, interference sources, triangulation positioning system. Designed image processing algorithms, developed production-level software that simplified user interface significantly.
- Designed & supported experiments to troubleshoot problems. Participated in customer & product support nation-wide and abroad.

ARGOSE, INC.**Waltham, Massachusetts • 2002 to 2003**

Medical device start-up company developing non-invasive glucose monitors for detecting and monitoring glucose levels in children and adults, out of business.

Senior Scientist, Director of Calibration

Designed algorithms & developed Matlab libraries to analyze spectra & images of fluorescence using methods of chemometrics & multivariate analyses, classification & quantitative regression.

- Led research projects on numerical simulation of photon migration in turbid media using Monte Carlo method, developed optimization algorithms to invert for tissue scattering & absorption.
- Designed, planned, and conducted clinical experiments in collaboration with clinical group.

THE MATHWORKS, INC.**Natick, Massachusetts • 2000 to 2002**

The leading developer and supplier of technical computing software in the world.

Remote Sensing Scientist, Software developer

Worked in full cycle of software development: planning, design, implementation, testing, & documenting.

- Developed deconvolution library in Image Processing Toolbox.
- Developed Java prototype of image processing GUI using object-oriented analysis & design.
- Assisted in defining Remote Sensing project and first release features, planning, customer visits.

HARVARD UNIVERSITY**Cambridge, Massachusetts • 1998 to 2001****Fellowship Scientist**

Developed method for inverse modeling of Earth structure using optimization techniques that account for uncertainties in data and model. Developed model of hemi-spherical surface deformation under assumptions of compressibility, gravitational loading, and boundary constraints for velocity.

- Developed numerical-analytical model of planet deformation.
- Developed Matlab library for functions in spectral/spatial domains, and world-wide projections.
- Collaborated with international seismology labs to design and develop web-site for interactive comparison, display & cross-conversion of eleven models of Earth seismic structure.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY Cambridge, Massachusetts • 1992 to 1998**Research, Teaching, and Management Assistant**

Taught in Geodynamics, Gravity Field, Phase transitions, Continuum Mechanics, GeoSystems, Satellite Geodesy, GPS data & error analysis, instrument control, software.

- Created several GUI-aided numerical models for Department Courses, consulted & led several seminars on Matlab programming.
- Organized, participated & facilitated meetings in Washington DC, Cape Code, Boston, Kirgizia, and Kazakhstan for international project.

Early Career (details on request):

Research Assistant, UCLA (1990) Participated in seismology experiment to explore LA basin crust.

Visiting Scientist, Caltech (1990) Participated in GPS experiment to measure San Andreas Fault.

Research Scientist, Russian Academy of Sciences (1985-1992).

EDUCATION**MS, Applied Physics and Technology**

Moscow Institute of Physics and Technology (MIPT)

PhD, Geophysics

Massachusetts Institute of Technology (MIT)

Bunting & Postdoctoral Fellowship, Geophysics

Harvard University

MBA, Entrepreneurship and managing of growing business

Babson College, F.W. Olin Graduate School of Business

Patents & publications are available on request.