

ALEKSANDR PASECHNIK

al@megamicron.net • +1 (908) 907-6953 • <http://megamicron.net>

PROFILE

Biomedical engineer and programmer with experience in laboratory, clinical, and manufacturing settings. Flexible in the application of hardware and software skills to problem solving and device design.

WORK EXPERIENCE

ARTANN LABORATORIES

Senior Biomedical Engineer

October 2009 - Present • Ewing, NJ

- Redesigned and manufactured the Colonoscopy Force Monitor for increased comfort and unobtrusive operation based on operator feedback.
- Analyzing clinical test data and statistics in Matlab to guide user training and generate reports and scientific publications.
- Developing LabView control systems for automated electromechanical device calibration, testing, and verification systems.
- Systematically investigating improvements for tactile pressure sensor arrays to expand the potential use cases of the technology.
- Built, tested, and analyzed an infra-red fluorescence positioning device as part of a joint project with the Children's Hospital of Philadelphia.
- Coordinating clinical testing of experimental devices and working with clinicians to improve device usability and efficacy.
- Setting up and maintaining the ownCloud document management system for seamless sharing of all key documentation and data among the team members.
- Training new operators on the safe operation of manufacturing machines.
- Writing and editing documentation, patents, and grants for technical accuracy and grammatical correctness.

ADVANCED TACTILE IMAGING

Director of Manufacturing

January 2014 - Present • Trenton, NJ

- Coordinating the manufacturing team to build medical devices.
- Devising and optimizing scalable manufacturing procedures.
- Performing delicate microscope augmented manufacturing steps.
- Writing, editing, and maintaining ISO 13485 compliant documentation to codify the medical device manufacturing process.
- Designing parts for injection molding and other contract manufacturing.
- Researching, designing, and prototyping new medical device iterations.
- Maintaining the manufacturing inventory system.
- Coordinating contract manufacturing of parts and subassemblies.
- Attending trade shows and conferences to explain the technical aspects of our novel medical technology to potential clients and investors.

VOX VAPES

Mechanical Engineering Consultant

February 2015 - Present • Cherry Hill, NJ

- Designing and prototyping new products in a fast-paced, competitive market.
- Coordinating product machining with contract manufacturers.

CHILDREN'S HOSPITAL OF PHILADELPHIA

Biomedical Engineer, Neonatology

March - August 2012; Philadelphia, PA

- Completed clinical testing of an infra-red fluorescence positioning device.
- Worked closely with doctors, pathologists, and clinical technicians to successfully and quickly carry out experiments in constrained conditions.

A F COMMUNICATIONS

Network Administrator and International Business Assistant

Fall 2003 - Present • Manalapan, NJ

- Developing a 2-way radio call logging and recording server for public safety networks. System is based on PostgreSQL + Python/Django + JavaScript/HTML5.
- Configuring and maintaining IP network infrastructure in Kiev spanning multiple sites and supporting an emergency response radio network.
- Translating English/Russian technical documents and business communications.

GWU MARVIN CENTER

Audio-Video Technician

February - August 2009 • Washington DC

- Established the foundation for the center's webcasting service, enabling live AV streaming of client events online
- Assisted clients with AV and computer equipment setup and operation during meetings and large conferences.

PATENTS AND PUBLICATIONS

- U.S. Patent 8033991 B2: Handgrip for assessment of colonoscope manipulation
- DDW 2014 Poster: Colonoscopy Force Monitoring: Development and Validation of Next Generation Force Sensing Technology Using Model and Human Colonoscopy
- DDW 2015 Poster: Randomized Trial of Effect of Propofol vs Moderate Sedation on Colonoscopy Force Generation: An Interim Analysis

EDUCATION

THE GEORGE WASHINGTON UNIVERSITY

B.S. in Biomedical Engineering, Instrumentation Concentration (*cum laude*)

Senior Design Project: 3D Optical Scanning System

Senior Design Award in Biomedical Engineering for depth of knowledge, novelty of design, ability to work independently, and helpful support for peers.

SKILLS

SOFTWARE DEVELOPMENT

- Python, Django
- Matlab
- Labview
- C
- Objective-C
- Javascript, HTML, CSS

SYSTEM ADMINISTRATION

- Mikrotik RouterOS
- Linux Server (CentOS)
- ownCloud data storage

ENGINEERING TOOLS

- SolidWorks
- Mastercam
- KiCAD
- Haas G-Code
- Soldering (Standard, Miniature, Rework)
- Machining (CNC Mill, Manual Mill and Lathe)
- 3D Printing

LANGUAGES

English and Russian bilingual proficiency