

Ali Besharatian, Ph.D.

San Jose, California • 734.846.4548 • alibesh@umich.edu • linkedin.com/in/alibesh

Technical Program/Project Manager

Technical-Strategic Leadership • Global Operations • Customer-Supplier Interface

Strategic Planning
New Product Introduction (NPI)
Microelectronic Sensors
FE and BE Manufacturing
Micro-Electro-Mechanical Systems
Reliability and Quality Control
Consumer Electronics
Project Management
Cross-Functional Team Coordination
Global Supply Management

Highly versatile technical program manager with 10+ years of experience in developing MEMS and microelectronic sensors from wafer to module level, serving as the main NPI interface for major Bay Area consumer electronic manufacturers.

Innovative and analytical problem solver, skilled in identifying and developing solutions in fast-paced environments, for complex operational and technical issues from concept to high-volume production. Expert proficiency with design, modeling, microfabrication, assembly, testing, quality, reliability, and failure analysis.

Result-driven, self-motivated, sound decision-maker and natural communicator; managing ramp blockers by bridging gaps between external vendors, end-customers and internal cross-functional technical teams of global operations.

Highly adaptable principal investigator; able to work on wide-range of technologies, and delivering to diverse clients, targeting variety of applications and markets.

PROFESSIONAL EXPERIENCE

INFINEON TECHNOLOGIES — San Jose, California

January 2019 – present

Technical Customer Program Manager – MEMS Microphones and Sensors

Serving as the primary regional technical customer-supplier interface for all new product introduction (NPI) topics of MEMS microphones, to bring Infineon's cutting-edge sensor technology from conception to high-volume production, serving giant Bay Area consumer electronic companies as main customers. Coordinating between and working closely with several cross-functional teams, including PL/BL heads, technical leads, concept engineers, PJMs, FAEs, front-end/back-end operations, quality/reliability, sales/marketing, and supply-chain management of an \$8B+ global operation that runs in several time-zones. Strategically planning different prototypes and engineering builds, from concept to ramp-up to production. Working with external suppliers from materials to machining, assembly and packaging, PCB and flex vendors. **Key Contributions:**

- As the primary NPI interface, successfully transitioned Infineon's new generation microphone technology to high-volume production in 2019 – from MEMS/ASIC development and early prototypes to factory audits for ramp-readiness.
- Successfully managed delivery of 20+ engineering builds at component and module levels, for various consumer electronic products of a major Bay Area customer, from first prototypes to EVT, DVT, risk-ramps, ops-ramps, and PVT.

INNOVATIVE MICRO TECHNOLOGY — Santa Barbara, California

March 2017 – December 2018

Senior Technical Program Manager – Research and Development (directly reporting to CTO)

Orchestrate technical execution of several multimillion-dollar development programs. Direct critical tasks included initial conception, patenting, ensuring regulatory compliance, and demonstrating product feasibility. Apply advanced knowledge of MEMS and microfabrication to a wide-range of applications including, silicon photonics, inertial sensors, silicon optical benches (SiOB), Internet of things (IoT), and virtual and augmented reality (VAR). Maintain regular communication with key stakeholders for current and upcoming projects. Directly supervising four process development engineers while providing hands-on leadership and regular customer progress updates. **Key Contributions:**

- Spearheaded key project; transitioned multimillion-dollar development program from concept and process development to full prototype and release to production (RTP), against highly aggressive timeline (11 months with 8-day cycle times).
- Ensured contract renewal for several development programs worth \$2M+ in total annual revenue.
- Received promotion in June 2018 in recognition of leadership abilities and program management skills.
- Adeptly managed a program that generated revenues 4X higher than forecasted by the sales and management team.

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Page 2 • Career Progression (Cont.)

INNOVATIVE MICRO TECHNOLOGY — Santa Barbara, California

June 2014 – February 2017

Lead Process Development Engineer – Research and Development

Served as project lead, holding full accountability for all process development and cleanroom activities for 3 interdisciplinary programs, while providing consulting support for 20+ active development programs. **Key Contributions:**

- Guided two generations of a DNA-analyzer program from first prototype to release to production.
- Saved 50,000+ hours of manpower by fully automating test setups and custom SPCs for development programs.

ADDITIONAL EXPERIENCE

UNIVERSITY OF MICHIGAN — Ann Arbor, Michigan

May 2013 – June 2014

Research Fellow – Center for Wireless Integrated Microsystems (WIMS)

Lead manufacturability development and implementation of stackable modular acoustic MEMS transducers. Discussed and reviewed findings with graduate students for future studies; provided training and mentorship. Collaborated with top scientists and researchers in field to develop and apply innovative strategies and engineering techniques. **Key Contributions:**

- Filed a patent for modular stacked acoustic transducers for gas micropumps, micro-speakers, and alike.
- Secured \$1.2M in funding from DTRA to develop gas micro pumps for threat reduction applications.

UNIVERSITY OF MICHIGAN — Ann Arbor, Michigan

April 2008 – April 2013

Graduate Student Research Assistant – Electrical Engineering and Computer Science (EECS)

Authored [seven publications](#) in IEEE MEMS, IEEE Transducers, and ASME IMECE. In addition, presented work at 3x DARPA PI meetings, 4x symposiums, 6x industry advisory board meetings (IABs), and 2x workshops. **Key Contributions:**

- Achieved Best Paper Award 3x in 2012, at ASME IMECE, Univ. of Michigan Eng. Grad. Symposium and WIMS IAB meeting.
- Granted the 2nd phase of DARPA contracts (\$5M+), and 2x summer undergrad research experience (SURE) mentorship.

EDUCATION

UNIVERSITY OF MICHIGAN — Ann Arbor, Michigan

Ph.D. in Electrical Engineering and Computer Science, 2013

M.Sc. in Electrical Engineering and Computer Science, 2010

SHARIF UNIVERSITY OF TECHNOLOGY — Tehran, Iran

B.Sc. in Electrical Engineering – Microelectronics, 2007

TECHNICAL SKILLS

FE Microfabrication	PVD/CVD, Thermal Oxidation & Doping, Photolithography, Wet & Plasma Etching (RIE/DRIE/ICP), Ion Milling, Wafer Bonding, CMP, Electroplating.
Process Control and Optimization	Statistical Process and Quality Control (SPC/SQC), Failure Mode and Effect Analysis (FMEA), Failure Analysis, Wafer REL, Lean Manufacturing, Six-Sigma (Yellow Belt).
Programming, CAD, Modeling	MATLAB, C++, Python, VBA, JMP (JSL), Cadence, L-Edit, ANSYS, COMSOL.
Metrology and Inspection	SEM/EDX/FIB, Interferometry, Stress Measurement, Physical/Optical Profilometry.
BE Processes, Assembly, Evaluation	Plasma and Stealth Dicing, Die-Attach, Wire Bonding, Packaging, Module REL.