

BEHZAD SHAHI

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OBJECTIVES:

A hands-on Engineering Management, or Individual Contributor position in one or more of the areas of Precision Analog, Low Power Analog, Mixed- Signal, or Power Management Integrated Circuit (PMIC) designs to assist boosting the growth of the company.

EDUCATION:

PhD. Delft University of Technology, Delft, The Netherlands.
Thesis: “*High-Performance Operational and Instrumentation Amplifiers*”

M.S.E.E. University of Santa Clara, Santa Clara, CA

B.S.E.E. University of Science and Technology, Tehran, Iran

EMPLOYMENT ELIGIBILITY (U.S.A):

U.S. Citizen

WORK HISTORY:

Semiconductor Sages, LLC Jan. 2016 - Present
Precision Analog / Low-Power IC Design / PMIC Design Consultant
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Integrated Device Technology (IDT); San Jose, CA Feb. 2010 - Jan. 2016
Within IDT worked at two Different Roles and Divisions, Details Follow:

Sr. Dir. of Design and Technology Development at CTO Office

In this capacity, I was responsible for improving Design and Technology development tools and procedures for analog and power products. This included improvements on design methodologies, foundry evaluations, as well as guiding or leading multipurpose cross-functional engineering teams to either design new IPs, or evaluate / troubleshoot existing designs following the Design of Experiments (DOE) procedures. Personally involved in design and / or evaluation of analog and power IP blocks for the Analog and Power Division. Efforts covered the technical evaluation led to the eventual acquisition of ZMDI (A German based Analog and Power Company known in Digital Power Control).

Sr. Dir. of Design and Application Engineering for Analog and Power Division (APD)

Started as a director of design engineering with a small design team of few people

working on definition and design of PMIC, and Wireless Charger products. Grow the team to 50+ members working at different U.S. design centers.

In early 2012 was promoted to Sr. Director of Design and Application Engineering for Analog and Power Division at IDT managing 65+ engineers. Managed to release some 30+ projects, many like wireless charge projects started from concept, and found their ways to release and production.

Have personally been involved in the definition, design, or troubleshooting / redesign (when needed) of many projects within several of my different groups. Some examples in the area of Magnetic-Induction (MI) Wireless Charger Receiver products are IDTP9020, IDTP9022, IDTP9025, IDTP9027, in addition to the MI Transmitters IDTP9030, IDTP9038, and the Magnetic-Resonant (MR) based receiver design of IDTP9750. Such system level chips for receivers contained variety of different Linear and Switching Regulators and PMIC Blocks such as References, Amplifiers, LDO's, Charge-Pumps, Buck Converters, Boost Converters, Synchronous Rectifiers and D/A and A/D designs in addition to circuits such as Half-Bridge / Full-Bridge Inverters in the case of Transmitters. I've worked on many of such blocks within different design teams.

Personally Identified some lurking parasitic and latch-up issues within few designs using Design of Experiments (DOE) methodology. In such cases I also presented the solution (the redesign) to fix the problem and / or reject the low level failures at final test where applicable.

Besides being actively involved in designs; during my five years of service at Analog and Power Division, I established, or modified many procedures and engineering practices. Examples are Good Design Practices and Layout Methodologies, Product Review Document (PRD) guidelines and procedures, Application Road-Test Planning and Procedures, and Characterization procedures and guidelines.

Additionally, established the guidelines for good practices and procedures for RMA's, and Failure Analysis applicable to Analog and Power Chip designs based on my previous experience.

Precision Analog Design Consultant, San Jose CA

Apr. 2009 - Feb. 2010

During this period, I have been working as a consultant in the field of Precision Analog Design with emphasis on very low-power, low-offset operational and instrumentation amplifiers, references, and Data Converters.

Freescale Semiconductor, Milpitas CA

Jun. 2006 - Apr. 2009

Sr. Director / Principal Design Manager III

In 2006 established and headed the Silicon Valley Development Center (SVDC) in Milpitas as a Northern California Engineering Site for Freescale Semiconductor.

Responsibilities included leading design and layout teams, in addition to management role as the site director.

Have participated (hands-on) in the design and development of high performance analog and mixed mode, low-voltage / low-power CMOS, PMIC (Buck, Boost, LDOs), and high frequency circuits. As an individual contributor designed some precision references, low power / low offset Op-Amps, and a 400MHz amplifier for video applications.

Maxim Integrated Products, Sunnyvale CA**Oct. 1997- Jun. 2006*****Senior Member of Technical Staff in Design Engineering***

Responsibilities included design and development of RS232 transceivers, very low-power comparators and references, supervisory system chips, very low-offset high precision Chopper Stabilized-Chopper Instrumentation and Operational Amplifiers, Low Drop-Out (LDO), Switched Capacitor / Charged Pump Regulators, and Data Converters within different system-level or stand-alone designs.

As an example of stand-alone products, designed a low power family of supervisory products (MAX6412 – MAX6420) with a supply current of about 2uA, which at the time was considered one of the best in class. Many products from the competitions had supply currents of about three times or higher, with similar specification for the reference accuracies.

A family of my Ultra-Low Offset/Drift Precision Instrumentation Amplifier designs with typical offset, Gain Error, and PSRR specifications of 3uV, 0.01%, and -140dB were awarded the 2008 En-Genius Product of the Year in this category (MAX4208 / MAX4209 family of products).

Philips Semiconductor, Sunnyvale CA**Sep. 1991 - Oct. 1997*****Staff Analog IC Design Engineer and Manager of Failure Analysis Department***

Responsibilities included the design of linear / mixed mode analog circuits in CMOS and BiCMOS technologies including op-amps, references, DACs, high-speed comparators, and other custom designs. Due to my previous experience in the field of Failure Analysis, early on I had the joint responsibility of managing the Failure Analysis (F/A) Group for a while. This included the New Product Designs, as well as the critical customer returns. In this role as a very hands-on manager, I was personally working on the critical issues, besides directing / mentoring the F/A engineers as needed.

Micropower Systems, Santa Clara CA**Jul. 1989 – Sep. 1991*****Sr. Product Engineer / Product Eng. Manager in New Product Development***

Responsibilities included Product development / modifying the existing designs (older revisions) to improve their performances as needed. Managed a group of two Product Engineers for Analog IC developments which included Op-amps, D/A and A/D Convertors, Comparators, and Custom Designs where applicable. Other responsibilities included design of test setups, DOE experiments, characterization of new designs, direct involvement with failure analysis department to debug the chips, and guiding / training the technicians.

Siliconix Inc., Santa Clara CA**Jun. 1987– Jul.1989*****Analog IC Product Engineer for New Product Development and Design***

Responsibilities included Product Development and Characterization of Analog ICs such as Analog Switches, Data Convertors, Operational Amplifier and Customer Specific Products. Other duties were conducting DOE experiments to resolve the issues, Design of test fixtures, performing necessary improvements on the assigned projects, and assisting engineers in failure analysis tasks as required.

RECENT PUBLICATIONS:

B. Shahi “High-Performance Operational and Instrumentation Amplifiers”

Publisher: Ipskamp Drukkers Publishing Company, Rotterdam, The Netherlands, 2015

ISBN: 978-94-6259-856-0

EARLY PUBLICATIONS:

B. Shahi, “Practical Applications of transistors”, Publisher: Honar Publications; Tehran Iran, 1980.

B. Shahi, “A Short Review of Electronic Tubes as Early Voltage Controlled Transconductance Amplifiers”, Publisher: Tehran Technical Institute; Tehran Iran, 1980.

ISSUED PATENTS:

Patent Number:	Title of the Patent:	Issued Date:
7209000	<i>Frequency stabilization of chopper-stabilized amplifiers.</i>	April 24, 2007
7202738	<i>Accurate voltage to current converters for rail-sensing current-feedback instrumentation amplifiers.</i>	April 10, 2007
7132883	<i>Chopper chopper-stabilized instrumentation and operational amplifiers</i>	November 7, 2006
6559720	<i>GM-controlled current-isolated indirect-feedback instrumentation amplifiers</i>	May 6, 2003
6118341	<i>Device with common mode feedback for a differential output</i>	September 12, 2000

REFERENCES:

Reference(s) will be furnished upon request.