SACHIN SETH, PH.D.

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SENIOR PRODUCT MANAGER – SIGNAL SENSING TECHNOLOGIES

- **ENGINEERING EXPERT** • **CUSTOMER CHAMPION** • **GO-TO-MARKET**

- **Well-Rounded Engineering Expert**: Dynamic experience of various roles in R&D, Operations, Product development with over a decade in the B2B high-tech industry
- **Communication Systems Technologist**: Subject Matter Expert in communication technologies for automotive, wireless and IoT applications with 20+ publications in refereed conferences & journals
- **Astute Strategist**: Managing roadmaps, strategy and vision for 90+ products servicing automotive and industrial markets with revenues >$50M/year. Exceeded product line success metrics in 4 consecutive quarters
- **Rapid Innovation Enabler**: Track record of navigating ambiguity and taking both software and hardware products through the iterative phases of Ideation-Prototyping-Improvement in collaboration with Field, Engineering and Testing

EDUCATION

MBA, The Wharton School, University of Pennsylvania, Philadelphia, USA *2017*
Ph.D., Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, USA *2012*
M.S. in Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, USA *2009*
Bachelor of Engineering in Electronics and Communication Engineering, Delhi University, India *2007*

EXPERIENCE

TEXAS INSTRUMENTS INC. **Santa Clara, CA**
Senior Product Manager *2015-Present*

- Product definition, roadmap, strategy for sensing solutions (analog-to-digital, sensors) for automotive and industrial markets
- Managing > 90 products in all stages of the product lifecycle – 6 new product introductions, 11 repurposed products
- Exceeding quarterly product line goals, finishing 2016 with a NR > $50M – growing 2x over market
- Positioning products to address multiple use-cases, generate marketing material to grow in >10 adjacent functional areas
- Proactive monthly tutorials with external customers, field, sales, PR teams to grow business

WHARTON GLOBAL CONSULTING PRACTICUM **Shanghai, China & Palo Alto, CA**
Market Research Specialist and Client Liaison *2015-2016*

- Formulating Go-to-market (China expansion) strategy for a publicly traded client in the enterprise network security domain
- Leading market research, positioning the product in China to align with the client's unique value propositions
- Identifying high-growth verticals and winnable TAM/SAM under a strict regulatory landscape, identifying channel partners

TEXAS INSTRUMENTS INC. **Dallas, TX**
Electrical Design Engineer *2012-2015*

Co-developed a software suite *MACH3* to extract compact mathematical models for transistors that enabled a yearly cost-savings of >$500,000 by eliminating licensing fees for proprietary software such as ICCAP. *MACH3* also improved engineering throughput by up to 500%

Software Product Management

- Leading a global team of three engineers through three successful product release cycles in two years
- Creating PRD and managing use-cases, feature specifications; driving alpha, beta, user-acceptance testing of the software

Hardware Engineering Accomplishments

- Modelling expertise in advanced CMOS, power MOSFETs, bipolar, passive (resistors, capacitors) devices
- Data analysis, interfacing with circuit design teams to expedite release to manufacturing by >100%
- Simplifying statistical and Monte Carlo model extraction by generating templates for 20+ engineers
- Expertise in technology nodes ranging from 28nm and above

IEEE POTENTIALS MAGAZINE **Piscataway, NJ**
Editor-In-Chief *2014-Present*

- Leading a Board of 10 educators and industry experts spread across the globe to enhance the penetration of IEEE Potentials magazine globally and add value to our >100,000 readers' education
- Driving key partnerships such as:
  - Partner development (Business Units and Activity Boards within IEEE)
  - Business development (growth of readers by 100% YoY in Europe, South America, Asia)
  - Volunteer development (recruiting Corresponding Editors for both print and digital media)
- Enhancing industrial & academic collaborations to increase advertising revenue by 200% YoY

GEORGIA INSTITUTE OF TECHNOLOGY **Atlanta, GA**
Graduate Research Scientist *2008-2012*

- Design, test of communication sub-systems (>5 GHz) with mobile, consumer, automotive, & military applications
- Invented systems indifferent to extreme environments such as ionizing radiation and cryogenic temperatures
- Outcomes of research: 1 book chapter, 6 journal papers, 15 conferences & magazine articles

ADDENDUM

Technical Magazine Articles Published:

1. **S. Seth, A. Sonnet**, "Conquering the Kink: A simple compact modeling approach to predict irregularities in power MOSFET behavior," (http://www.edn.com/design/components-and-packaging/4438218/Conquering-the--kink--in-sub-threshold-power-MOSFET-behavior--A-simple-compact-modeling-approach).
2. **S. Seth, A. Sonnet**, "GaN Transistors Poised for Revolution: Compact Modeling for Gallium Nitride Power MOSFETs," *EEWEB Magazine November 2014*. (http://issuu.com/eeweb/docs/11_2014-power_developer_2_pages/13?e=7607911/10305101)
3. **S. Seth**, "Compact Modeling Concerns for Silicon-Based Power MOSFETs," *EEWEB Magazine May 2014*. (http://issuu.com/eeweb/docs/may_2014_power_developer_pages/5?e=7607911/7891828)
4. **S. Seth** et al, "Cutting Edge SPICE Modeling for Analog Circuits," *EEWEB Magazine, Vol. 116, September 2013*. (http://issuu.com/eeweb/docs/volume_116_-_dnv_kema/8?e=7607911/4961896)

Book Chapters Published:

1. **S. Seth**, "Low-Voltage, Weakly Saturated SiGe HBT Circuits," *Extreme Environment Electronics*, CRC Press, 2012.

Journals/Letters Published:

1. **S. Seth** et al, "On the performance of Forward and Inverse Mode SiGe HBT RF switches on thick-film SOI," *IEEE Transactions on Electron Devices*, vol. 59, no. 9, pp. 2531-2533, 2012..
2. **S. Seth** *et al*, "On the RF properties of weakly-saturated SiGe HBTs and their potential use in Ultra-low-power circuits," *IEEE Electron Device Letters*, vol. 32, no. 1, pp. 3 – 5, 2011.
3. P. Cheng, **S. Seth** *et al*, "An Investigation of DC and RF Safe-Operating-Area of npn + pnp SiGe HBTs on SOI," *IEEE Transactions on Electron Devices*, vol. 58, no. 8, pp. 2573 – 2581, 2011.
4. R, Arora, E. X. Zhang, **S. Seth** *et al*, "Trade-offs between RF performance and total-dose tolerance in 45nm RF-CMOS," *IEEE Transactions on Nuclear Sciences*, vol. 58, no. 6, part 1, pp. 2830 – 2837, 2011.
5. C.H. Poh, **S. Seth** *et al*, "A Monolithic X-Band Tuneable Band Pass Filter Implemented in SiGe BiCMOS Technology," *submitted to IEEE Transactions on Microwave Theory and Techniques*.
6. C.H. Poh, **S. Seth** *et al*, "A low-power and low-voltage X-Band SiGe HBT Low-Noise Amplifier," *submitted to IEEE Transactions of Microwave Theory and Techniques*.

Conference Proceedings Published:

1. **S. Seth** *et al*, "Using Saturated SiGe HBTs to realize ultra-low-voltage/power X-band Low Noise Amplifiers," *Proc. IEEE BCTM*, 2011, pp. 103 – 106.
2. **S. Seth** *et al*, "A comparison of intermodulation distortion performance of HICUM and VBIC compact models for *pnp* SiGe HBTs on SOI," *Proc IEEE SiRF*, 2012, pp. 219 – 222.
3. A.S. Cardoso, R. L. Schmid, T.D. England, **S. Seth** *et al*, "High-Isolation, Wideband SPST and SP4T switch design in 130nm SiGe BiCMOS technology," *submitted to IEEE SiRF 2012*.
4. **S. Seth** *et al*, "A large signal reliability study of complementary SiGe HBTs for use in wireless applications," *Proc IEEE BCTM*, 2010, pp133-136.
5. R. Arora, **S. Seth** *et al*, "Impact of Source/Drain Contact and Gate Finger Spacing on the RF reliability of 45-nm nMOSFETs," *IEEE IRPS*, 2011.
6. A. Madan, **S. Seth** *et al*, "Understanding and modelling of linearity in Silicon-Germanium Heterojunction bipolar transistors," *Proc. Techcon*, 2010.
7. P. Cheng, S. Horst, S. Phillips, **S. Seth** *et al*, "An investigation of low frequency noise in complementary SiGe HBTs on SOI", *Proc IEEE BCTM*, 2010, pp 165-168.
8. A. Madan, T. Thrivikraman, **S. Seth** *et al*, "A new and simple measurement approach for characterizing intermodulation distortion without using a spectrum analyser," *Proc. IEEE SiRF*, 2010, pp 88-91.
9. **S. Seth** *et al*, "Comparing RF linearity of npn and pnp SiGe HBTs," *Proc. IEEE BCTM*, 2009, pp 29-32.
10. P. Cheng, **S. Seth** *et al*, "Understanding the RF safe operating area (SOA) of SiGe HBTs on SOI", *Proc. IEEE BCTM*, 2009, pp 17-20.
11. C.M. Grens, **S. Seth** *et al*, "Common-Base intermodulation characteristics in advanced SiGe HBTs," *Proc. IEEE BCTM*, 2008, pp 244-247.

Student Leadership Articles Published:

1. **Student Editorials for all issues of IEEE Potentials magazine in 2011-12**
2. **S. Seth**, "Things I wish I knew," *IEEE Potentials*, vol. 30, no. 4, 2011.

OTHERS ACCOMPLISHMENTS

1. Brand Ambassador and University Recruitment Leader for Texas Instruments at Georgia Tech
2. Career Development Chair for the New Employee Initiative at Texas Instruments
3. Recipient of 2011/2012 Sam Nunn Security Program Pre-Doctoral Fellowship at Georgia Tech