

Saraju Mohanty

(For more info: <http://www.smohanty.org>)

Biography

Dr. Saraju P. Mohanty is a Professor in the Department of Computer Science and Engineering (CSE), University of North Texas (UNT), Denton, TX; a Tier-One (R1) Research University as per Carnegie Classification. He serves as the Associate Chair (Computer Engineering) and directs the NanoSystem Design Laboratory (NSDL) at the CSE department. He obtained a Ph.D. in Computer Science and Engineering (CSE) in 2003, from the University of South Florida (USF). His Masters' degree in Systems Science and Automation is from the highest ranked research institute in India, the Indian Institute of Science (IISc), Bangalore, in 1999. He obtained a Bachelors' degree with Honors in Electrical Engineering from the Government College of Engineering and Technology at Bhubaneswar (CETB), India, in 1995. Prof. Mohanty's research is in "Energy-Efficient High-Performance Secure Electronic Systems". Dr. Mohanty is an inventor of 4 US patents. **Prof. Mohanty is author of 200 peer-reviewed research articles and 3 books.** His publications are well received by the worldwide peers with a total of 2,500 citations leading to an **h-index of 25 and i10-index of 67 (from Google Scholar)**. His book titled "Nanoelectronic Mixed-Signal System Design" published by McGraw-Hill in 2015 is a best seller. This book received the 2016 PROSE (Professional & Scholarly Excellence) Award for best Textbook in Physical Sciences & Mathematics from the Association of American Publishers (AAP). Prof. Mohanty's research has been funded by the National Science Foundation (NSF), the Semiconductor Research Corporation (SRC), and the Air Force. Prof. Mohanty has supervised 8 Ph.D. dissertations and 24 M.S. theses. Eight of his advisees have received outstanding student awards at UNT. Prof. Mohanty is a senior member of IEEE and ACM. Prof. Mohanty has been serving on the **editorial board of several peer-reviewed international journals/transactions**, including IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), ACM Journal on Emerging Technologies in Computing Systems (JETC), and IET Circuits, Devices & Systems Journal (CDS). He is currently the **Editor-in-Chief (EiC) of the IEEE Consumer Electronics Magazine (CEM)**. He serves as a founding Editor-in-Chief (EiC) of the VLSI Circuits and Systems Letter (VCAL). He has been serving as a guest editor for many prestigious journals including ACM Journal on Emerging Technologies in Computing Systems (JETC) and IEEE Transactions on Emerging Topics in Computing (TETC). Prof. Mohanty has been serving as the Chair of Technical Committee on Very Large Scale Integration (TCVLSI), IEEE Computer Society (IEEE-CS) to oversee a dozen IEEE conferences. He serves on the organizing and program committees of several international conferences. **General Chair:** IEEE-CS Symposium on VLSI (ISVLSI) – 2014, 2012; IEEE International Symposium on Nanoelectronic and Information Systems (iNIS) – 2016, 2015; and International Conference on Information Technology (ICIT) – 2016, 2014. **Program Chair:** IEEE-CS Symposium on VLSI (ISVLSI) – 2016, 2015; International Conference on Information Technology (ICIT) - 2006. **Publication Chair:** ISVLSI - 2009 and ICIT – 2015, 2009. **Publicity Chair:** ICIT – 2007, ICWA – 2007, IMSAA - 2007. **Steering Committee member:** ISVLSI, iNIS, ICIT. **Track Chair:** ICCE – 2017; GLSVLSI – 2014, 2015; ISQED – 2012; VLSID – 2012; ISQED – 2011; ICIT - 2008. **Session Chair:** GLSVLSI - 2014, ISQED - 2011, GLSVLSI - 2010, ISQED-2010, VLSID - 2010, ICIT - 2009, BICA - 2009, ISQED - 2009, VLSID - 2009, ICIT - 2008, GLSVLSI- 2008, VLSID - 2008, ISCE - 2007, ICIT - 2005. **Program Committee Member:** ICCD – 2016, 2015, 2014, 2013, 2012; VLSID – 2013, 2011, 2010, 2009, 2008; GLSVLSI – 2016, 2013, 2012, 2011, 2010, 2009, 2008; ISQED – 2014, 2013, 2010, 2009; ASQED – 2013, 2012, 2011, 2010, 2009; ISVLSI -- 2011, 2010, 2009; IIH-MSP -- 2010, 2009, 2008, 2007; VDAT – 2014, 2012; IMSAA -- 2009, 2008, 2007. Student Design Contest Judge, Design Automation Conference – 2010, 2009, 2008, 2007, 2006, 2005.

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Position Statement

I have been the Chair of Technical Committee on VLSI for 2014-2016. It is a great privilege and an honor to be nominated for the position of the Chair of Technical Committee on VLSI (TCVLSI) of IEEE-CS for a 2nd term. I am a senior member of IEEE-CS, taking part in both publishing in IEEE Transactions and conferences as well as organizing multiple conferences related to VLSI. I am well aware of the challenges faced by our VLSI community and would consider myself well-qualified to help the community in addressing them. I have been attending the **IEEE Panel of Conference Organizers (POCO)** to learn the inside details of organizing IEEE conferences. I have also gone through **IEEE compliance training** to learn IEEE policies and best practices. I will work to promote the mission of IEEE-CS TCVLSI as stated in its charter statement.

A. Summary of achievements in the last 2 years as Chair of TCVLSI:

- 1) A website for TCVLSI is hosted in www.computer.org which clearly suggests TCVLSI is part of IEEE-CS. Then a domain called www.ieee-tcvlsi.org is registered for easy access to attract more member visits.
- 2) A Wikipage has been created and maintained for TCVLSI at https://en.wikipedia.org/wiki/Technical_Committee_on_VLSI to improve visibility of TCVLSI. The Wikipage has been continuously updated to add steering committee information of various sponsored conferences.
- 3) The organizers of various TCVLSI sponsored meetings have been continuously contacted to list TCVLSI sponsored meetings as “Sister Conferences” to promote each other. TCVLSI sister conferences include a league of well-known meetings such as ARITH, ASAP, and ISVLSI.
- 4) In many parts of the world, the majority of VLSI related meetings are mostly technically co-sponsored by IEEE-CS. There are many opportunities for financially sponsored meetings as well as a technical gap to meet the current technology trends. Thus, a new meeting, IEEE International Symposium on Nanoelectronic and Information Systems (INIS, <http://www.ieee-inis.org>) was initiated in 2015.
- 5) TCVLSI awarded a total of 12 student travel grants of \$250 each for the financially sponsored conferences for the last two years.
- 6) TCVLSI awarded 4 best student paper awards of \$200 each in the TCVLSI financially sponsored conferences for the last two years.
- 7) A new newsletter called “VLSI Circuits and Systems Letter (VCAL)” was initiated by TCVLSI for communications in the TCVLSI community and also for fast dissemination of new ideas and trends in VLSI/nanoelectronics/CAD. VCAL provides the members with a medium through which they can contribute and communicate with each other. Recruitment of several associate editors from diverse locations around the globe was completed for VCAL during this tenure as the Chair, TCVLSI. Several issues of VCAL have been published at: <https://www.computer.org/web/tcvlsi/circuits-and-systems-letter>.
- 8) As TCVLSI chair, a funding of \$2000 from IEEE Circuits and Systems Society (CASS) Outreach Initiative was received, which was used to provide 4 student travel awards and also to support quality keynote speakers.

B. My primary focus for the next 2 years will be the following:

- 1) I envisioned that the “VLSI Circuits and Systems Letter (VCAL)” in the long run will become a forum for quick research dissemination, communication, and student activity

medium. Thus, there is need to archive it in a more formal fashion, e.g. in IEEE Xplore. This will be one of my major focus in the 2nd term as Chair of TCVLSI.

- 2) I will work to maintain quality and financial surplus for financially sponsored (or co-sponsored) VLSI and related conferences. In this regard, I plan to work more closely with General Chairs of the conferences so that appropriate budgetary targets will be set to generate surplus.
- 3) In many financially sponsored conferences account closure is delayed due to various reasons. As Chair of TCVLSI, I will work with the general and finance chairs to advise them on the budget and importance of account closure on time. This ensures easy sponsorship approval for the following year's event as well as any surplus generated can potentially be given back to the conferences as travel grants or best paper awards.
- 4) I will work to enhance quality control of VLSI and related conferences while providing technical co-sponsorship. The process will be more streamlined so that the application processing will be efficient. I will work with General Chairs and Program Chairs of the conferences to provide low registration fee for IEEE members and to include the maximum possible number of IEEE members as technical committee members. I will also take steps to enforce strict paper review policies.
- 5) Student travel grants in the conferences attract students to the meeting. I will work to increase the number of student travel grants for the TCVLSI financially sponsored meetings.
- 6) Student best paper awards in the conferences attract students to the meeting. I will work to increase the number of best paper awards for the TCVLSI financially sponsored meetings.
- 7) I will work to expand the executive committee of the TCVLSI to widen the visibility of TCVLSI in the academic and industry communities.
- 8) I will maintain a facebook page for IEEE TCVLSI to widely publicize TCVLSI goals and VLSI/nanoelectronics/CAD as a discipline.
- 9) I will encourage more collaboration between the VLSI research community and industry practitioners. This will be achieved by recommending industry people for talks and paper submission in IEEE sponsored conferences.
- 10) I will promote collaboration with other technical committees for broader participation of IEEE members in VLSI by expanding/consolidating conferences, symposia, and workshops currently sponsored by TCVLSI or co-sponsored with other technical committees. Also, I will encourage active collaboration among TCs.
- 11) I will work for more active collaboration among various IEEE societies, such as IEEE-CS, IEEE-CAS, and IEEE-CES, for interaction of different researchers which may lead to efficient development of electronics systems such as smart mobile phones.
- 12) I will work to institute awards such as "TCVLSI life-time achievement award" and "TCVLSI best service award" to recognize contributions of VLSI researchers and to increase the profile of TCVLSI in IEEE-CS and IEEE.