Candidate for Chair

Murali Annavaram
University of Southern California, Los Angeles, CA, USA

BIOGRAPHY

Academic Background:
PhD, University of Michigan, 2001, Computer Science and Engineering.

Professional Experience:
Professor, University of Southern California, Los Angeles, 2007 – Present;
Visiting Researcher, Nokia Labs, Palo Alto, 2007 – 2007;
Senior Researcher, Intel Corporation, Santa Clara, 2001 – 2007.

Professional Interest:
CPU microarchitecture, GPU microarchitecture, Near-data computing, Distributed machine learning, Fault tolerant computing.

ACM Activities:
ISCA 2018 General Co-Chair, SigArch, 2018 – 2018.

Awards Received:
Inducted into ISCA Hall of Fame, 2017;
Inducted into the ACM SIGMICRO Hall of Fame, 2015;
Inducted into HPCA Hall of Fame, 2015.

STATEMENT

Dear SIGMICRO Members, I am Murali Annavaram from USC. If elected as Chair, I plan to pursue several goals:

(1) Educating a new generation of computer engineers is vital to our growth as computing gets deeply embedded in our society. I will work on initiatives to make microarchitecture curriculum more accessible to students.

(2) I will strive to grow the SIGMICRO community by bringing new computing paradigms, such as quantum computing, into the fold of computer engineering. This adoption requires guidance from the senior members and the enthusiasm for the field from the budding members. I hope to draw on my 7 years of industry experience and 12 years of academic experience in this regard.

(3) Through CARES and other programs, we set the standards for diversity and broadening of participation, and I will work to make these programs even more accessible and visible to our new generation of members.

(4) Our long-standing focus on energy efficiency has made remarkable contributions to sustainable computing. Now it is time for our community to set standards for broader sustainability initiatives, in terms of reducing the carbon footprint of program committee meetings, conference organizations etc.

Candidate for Chair

Onur Mutlu
ETH Zurich, Zurich, Switzerland.

BIOGRAPHY

Academic Background:
PhD, University of Texas at Austin, 2006, Electrical and Computer Engineering.

Professional Experience:
Professor, ETH Zurich, Zurich, Switzerland, 2015 – present;
Strecker Early Career Professor, Carnegie Mellon University, Pittsburgh, Pennsylvania, 2009 – 2016;
Researcher, Microsoft Research, Redmond, WA, 2006 – 2009.

Professional Interest:
Computer Architecture, Computing Systems, Hardware Security, Bioinformatics.

ACM Activities:
MICRO 2012 Program Chair, SIGMICRO, 2012 – 2012;
ICS 2016 Program Co-Chair, SIGARCH, 2016 – 2016;
MICRO Steering Committee Member, SIGMICRO, 2012 – 2020;
MICRO Steering Committee Co-Chair, SIGMICRO, 2017 – 2018.

Membership and Offices in Related Organizations:
Fellow, ACM, 2017 – 2020;
Fellow, IEEE, 2018 – 2020.

Awards Received:
IEEE CS Edward J. McCluskey Technical Achievement Award, 2020;
ACM SIGARCH Maurice Wilkes Award, 2019;
ACM Fellow & Election into Academia Europaea (Academy of Europe), 2018;
IEEE CS TCCA Young Computer Architect Award, 2011.

STATEMENT

I have served the SIGMICRO community in various roles for more than a decade (e.g., MICRO-2012 PC-Chair, MICRO SC-Member/Co-Chair, MICRO ToT-Award Chair/Member).

My goal is to help enable our community to have much wider scientific, educational, industrial impact, especially given the increasing importance of microarchitecture today, and strengthen our community through inclusiveness, positive dialogue, and better scientific practices.

To this end, I would like to work with the community to:

1. Start new educational initiatives (e.g., educational videos, course materials, lecture support, workshops) to broaden microarchitecture knowledge across the world to help initiate students from the high school level to broaden participation from a wide variety of diverse groups/schools

2. Revisit our conference reviewing practices and institute guidelines and rewards for good reviewing, PC/ERC membership to improve the scientific impact of our community to enhance fairness and quality of scientific discourse to expedite big new ideas and help them have impact to improve the mood/participation of especially new members of our community

3. Create awards and opportunities,especially for junior researchers

4. Broaden and strengthen participation and support from industry

5. Improve the SIGMICRO website and communication channels

Candidate for Member at Large

Reetuparna Das
University of Michigan, Ann Arbor, MI, USA

BIOGRAPHY

Academic Background:
Ph.D., Penn State University, 2010, CSE.

Professional Experience:
Assistant Professor, University of Michigan, Ann Arbor, MI, 2016 – Present;
Assistant Research Scientist, University of Michigan, Ann Arbor, MI, 2011 – 2015;
Research Scientist, Intel Labs, Santa Clara, CA, 2010 – 2011.

Professional Interest:
Computer Architecture, In Memory Computing, Domain Specific Architectures for Precision Health and ML, Interconnection Networks.

ACM Activities:
MICRO Program Committee Chair, SIGMICRO, 2019;
MICRO Test of Time Award Committee, SIGMICRO, 2018 – 2019;
MICRO Steering Committee, SIGMICRO, 2020;
MICRO Program Committee Member, SIGMICRO, 2018.

Awards Received:
Outstanding Researcher Award from Intel, 2020;
Sloan Fellowship, 2019;
CRA-W Borg Early Career Award, 2018;
MICRO Hall of Fame, 2017.

STATEMENT

I am honored to run for the Member at Large position. If elected, I will work to ensure that our community remains a vibrant, visible, and inclusive organization. I plan to focus on several initiatives, discussed below:

It is the golden age for computer architecture, and I am very excited to be a part of it. Over the last decade, the number of accepted papers has doubled, and the number of conference attendees has tripled. Scaling major architecture conferences without losing quality is an important problem facing us today. We can learn from the experience of our sister communities that have addressed this problem (e.g, NeurIPS). I would like to engage and seek input from the broader community to find creative solutions.

We have made significant progress toward improving diversity. I have played my part as a member of the WiCArch organizing committee. For instance, I started an initiative to improve the visibility of women faculty candidates. In the future, I plan to invest efforts in improving the pipeline. For instance, we can provide support to emerging scholars for attending conferences, and host outreach activities (hackathons, demos, and activities for high-school students) on pre-conference days.

Candidate for Member at Large

Jose A. Joao
Arm Inc., Austin, TX, USA

BIOGRAPHY

Academic Background:
PhD, University of Texas at Austin, 2014, Computer Engineering.

Professional Experience:
Research Engineer, Arm Inc., Austin, TX, 2015 – present;
Research/Teaching Assistant, University of Texas at Austin, Austin, TX, 2003 – 2014;
Assistant Professor, Universidad Nacional de la Patagonia San Juan Bosco, Comodoro Rivadavia, Argentina, 1999 – 2003.

Professional Interest:
Large scale system architecture, On-chip resource management, Bottleneck acceleration in parallel applications, CPU Microarchitecture, Compiler-microarchitecture interplay.

Membership and Offices in Related Organizations:
Secretary, IEEE Education Society Chapter of the Argentina Section, 2003 – 2003;
Founder, first Chairman and Counselor, IEEE Student Branch of the UNPSJB, Argentina, 1995 – 2003.

Awards Received:
IEEE Micro Top Picks, 2010;
IEEE Micro Top Picks, 2006.

STATEMENT

My experience in academia and in industry, both in Argentina and in the United States, and my 15 years as an ACM member give me a unique and diverse perspective into the role of SIGMICRO. If elected as a Member-at-Large of the Executive Committee, I plan to focus on:
- Continuing to improve the quality, efficiency and integrity of the conference review process. Anonymous reviewers should receive more recognition and should also be held accountable for their reviews.

- Improving the affordability of our conferences, especially for students. The location and venue selection process should prioritize affordability, and additional investment should be made on grants that enable more students to attend our conferences.
- Improvng collaboration with our sister organizations at ACM (SIGARCH) and IEEE (TCCA and TCuARCH). Since we are all part of the same community, the different organizations should have compatible objectives and policies.

Candidate for Member at Large

Andreas Moshovos
University of Toronto, ON, Canada

BIOGRAPHY

Academic Background:
Ph.D., University of Wisconsin-Madison, 1998, Computer Sciences.

Professional Experience:
Assistant to Full Prof., University of Toronto, ON, 2000 – Present;
Assistant Prof., Northwestern University, Evanston, IL, 1999 – 2000.

Professional Interest:
Computer System Design

ACM Activities
Member, SIGMICRO, 2019 – Present.

Membership and Offices in Related Organizations:
Chair, Steering Committee, ISPASS IEEE, 2019 – 2020

Awards Received:
Maurice Wilkes, 2010

STATEMENT

SIGMICRO has served the architecture community for years as the primary forum for disseminating high-quality and high-impact findings and ideas. As the community has grown, it is imperative for SIGMICRO to continue to adapt and expand by maintaining inclusiveness, adapting its procedures to best serve both authors, reviewers and participants, and encouraging the constructive expression and consideration of different perspectives and opinions.

Further, SIGMICRO must foster coordination with sister conferences and publications while respecting their respective roles, without compromising quality and participation. The candidate brings 25 years of experience serving as both PC member and General Chair for several venues (including MICRO). The candidate can serve well in role as a Member at Large. The candidate being located in Canada will bring awareness of perspectives and challenges for non-US based community members.

Candidate for Member-at-Large

Xuehai Qian
University of Southern California, Los Angeles, CA, USA.

BIOGRAPHY

Academic Background:
Ph.D., University of Illinois, Urbana-Champaign, 2013, Computer Science.

Professional Experience:
Assistant Professor, University of Southern California, Los Angeles, CA, 2015 – Present;
Postdoctoral Researcher, University of California Berkeley, Berkeley, CA, 2013 – 2015.

Professional Interest:
Domain-specific system and architecture, Parallel computer architecture, Performance model of computer systems, System and architecture with emerging technology, Quantum computing.

Awards Received:
IEEE Senior Member, 2019;
ACSIC (American Chinese Scholar In Computing) Rising Star Award, 2019;
NSF CAREER Award, 2018;
W.J. Poppelbaum Memorial Award, 2013.

STATEMENT

I am honored to be nominated for Member-at-Large of SIGMICRO. I have been in computer architecture community for more than 10 years and inducted into most of the “Hall of Fame” of top architecture conferences. I have served on the organizing/program committees of many conferences and as the guest editor of a special issue of IEEE Transactions on Computers. If elected, I have the following agenda:

Outreach: to improve the competitiveness of computer architecture, I plan to create a new platform to enable more exchanges of ideas, supporting features such as: short lightening research videos; interviews of notable researchers; virtual research talks, etc.

Reviewing process: to provide a healthy research environment, I believe the key is to improve the review accountability. I want to promote new approaches with less biased and more transparency. We need to develop efficient mechanisms to integrate them with traditional PC meetings.

Global participation: to enhance the visibility of architecture community, I intend to create initiatives to translate successful research stories in widely circulated journals in other languages (e.g., CCCF, the flagship journal of China Computer Federation). To encourage involvements, I want to establish some joint awards of SIGMICRO and computer society of other countries.

Candidate for Member at Large

Karthik Swaminathan
IBM T. J Watson Research Center, Yorktown Heights, NY, USA

BIOGRAPHY

Academic Background:
Ph.D., Pennsylvania State University, 2014, Computer Science and Engineering.

Professional Experience:
Research Staff Member, IBM T. J Watson Research Center, Yorktown Heights, NY, 2014 – Present;
Graduate Researcher, Penn State University, University Park, PA, 2009 – 2014;
Project Researcher, IBM India Research Labs, New Delhi, India, 2008 – 2009.

Professional Interest:
Reliability-aware computer architecture, Power-efficient architectures,
Machine Learning and deep learning, VLSI Design, Emerging device technology.

ACM Activities:
Member, SIGMICRO, 2017 – Present;
Member, SIGARCH, 2015 – 2016.

Membership and Offices in Related Organizations:
Member, IEEE, 2015 – Present;
Student Member, IEEE, 2009 – 2014.

Awards Received:
Best Paper Award - IEEE SELSE Workshop, 2019;
Best Paper Award - IEEE HPCA Conference, 2015;
IBM Ph. D. Fellowship Award (2012-2013), 2012.

STATEMENT:

I am inspired by ACM SIGMICRO's vision and its initiative to define, integrate, and secure the role and future of processor microarchitecture research, as well as encourage interdisciplinary research across allied fields. My experience with open-source hardware designs such as RISC-V and IBM POWER-based processors has led me to be an advocate of community-sourced system design across both academia and industry. In my opinion, these initiatives have fueled key microarchitecture and system-level innovations, particularly for low-cost hardware in both general-purpose and domain-specific processors.

I have also been leading IBM’s involvement in MLPerf, an industry-wide consortium to develop representative machine-learning benchmarks for the design and evaluation of next-generation AI systems. I believe leading similar efforts under the ambit of SIGMICRO will spur innovation through agile design methodologies for rapid prototyping of design ideas, and standardization of evaluation practices. Finally, I feel that the various outreach efforts currently spearheaded by SIGMICRO, including globally broadcast virtual lectures and workshops, are essential in motivating interest among potential researchers and if elected, I would be a strong proponent of such educational seminars targeted toward high school and undergraduate students as well.