

Ümit V. Çatalyürek, IEEE Computer Society TCPP Chair Candidate

Position Statement:

Dear members of IEEE Technical Committee on Parallel Processing (TCPP), I am interested in serving you as the next chair of TCPP and I seek your support and vote in this regard.

It would be preaching to the choir if I talk about the ubiquity and importance of parallel computing in everyone's life today. Many research disciplines and communities are using parallel processing in their daily research, yet many of those lack the proper education or community support to improve their knowledge and research.

If elected, my main goal as TCPP chair will be to make the TCPP one strong educational and scientific community for everyone in parallel processing. To achieve that, I will:

1) Serve the community by a) continuing to support best practices, but at the same time reassessing and prioritizing activities to adapt to the changing environment; b) facilitating open communication and enabling ideas from TCPP members; c) identifying and honoring the outstanding contributions made by our community members.

2) Strive for stronger and more impactful TCPP community by a) strengthening our community events with new program initiatives; b) reaching out to a wider audience by focusing the geographical and topical diversity of our members and events; and c) increasing our collaboration with other communities, for example, work with IEEE-CS and other sister technical committees, and also foster bridges to other professional organizations and communities to increase the visibility and impact of TCPP.

3) Enhance the educational efforts by a) continuing to support standardization and dissemination of parallel processing education to a wider undergraduate and graduate population; b) developing new tutorials and hands on workshops to educate new researchers and attract more students to our research field; and c) developing and deploying one-stop online resources for (new) researchers and our community at large.

I am well equipped to handle all of these challenges and take on such an important leadership role both in terms of my research and service/administrative experience. I have more than two decades of research experience in parallel processing algorithms, systems, and application areas. My research has always been very interdisciplinary and translational. My group designs and develops runtime systems and algorithms to solve large-scale scientific and biomedical problems varying from oil reservoir simulation to nuclear power simulations, from analysis of histopathology images to high throughput next generation sequencing data.

I have also been very active in research service, and I have served on editorial boards and in leadership roles in high quality journals and conferences, as well as professional organizations. For example, in parallel processing areas, I currently serve as an editor for TPDS, JPDC, and PARCO, and as the Algorithms Track Chair for SC 2015 and IPDPS 2016. Examples of my activities in other research areas include roles like Vice-chair elect for ACM SIGBio and General Chair for ACM-BCB 2016. For more information about my service roles and research activities please visit my web page at go.osu.edu/umit.

Biographical Sketch:

Ümit V. Çatalyürek is a Professor and Vice Chair of the Department of Biomedical Informatics, and a Professor in the Departments of Electrical & Computer Engineering, and Computer Science & Engineering at the Ohio State University. Dr. Çatalyürek received his Ph.D. in 2000 from Bilkent University, and prior to joining the Ohio State University in 2001, he worked at Johns Hopkins University as a Research Associate and at the University of Maryland as a Visiting Research Scientist. Dr. Çatalyürek is a recipient of an NSF CAREER award and is the primary investigator of several awards from the Department of Energy, the National Institute of Health, and the National Science Foundation. Dr. Çatalyürek currently serves as an Associate Editor for Parallel Computing, and as an editorial board member for IEEE Transactions on Parallel and Distributed Computing, the Journal of Parallel and Distributed Computing, and Network Modeling and Analysis in Health Informatics and Bioinformatics. In the past, he also served on the editorial board of the SIAM Journal of Scientific Computing. Dr. Çatalyürek was the founding General Chair of the 1st ACM International Health Informatics Symposium in 2010, the Program Chair of the 5th ACM Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB) in 2014, and the Workshops Chair of IPDPS 2010-2015. He currently serves as the Algorithms track Chair of SC15 and IPDPS 2016, and General Chair of ACM-BCB 2016. He also serves on the program committees and organizing committees of numerous international conferences. He is a senior member of IEEE, member of ACM and SIAM, and a Vice-Chair elect for ACM SIGBio for 2015-2018 term. Dr. Çatalyürek has co-authored more than 200 peer-reviewed articles, invited book chapters and papers. His main research areas are in parallel computing, combinatorial scientific computing and biomedical informatics. More information about Dr. Çatalyürek and his research group can be found at go.osu.edu/umit and go.osu.edu/hpc.