Message from the workshop chairs

GrAPL 2020: Workshop on Graphs, Architectures, Programming, and Learning, brings together two closely related topics -- how the synthesis (representation) and analysis of graphs is supported in hardware and software, and the ways graph algorithms interact with machine learning. Driven by the natural outgrowth of a wide range of methods used in large-scale data analytics workflows, GrAPL's scope is broad. GrAPL'2020 is the second edition of the merger between two successful workshop series at IPDPS: GABB and GraML. GABB started at IPDPS'14 with a program of invited-talks and panel discussions. GraML was held at IPDPS in 2017 and 2018.

It is our great pleasure to welcome you to GrAPL 2020, the second in its series. GrAPL focuses on early dissemination of research on the theory, model-based analysis, simulation, and analysis of operational data for graph analytics and related machine learning applications. In this workshop we are interested in graphs, how their synthesis (representation) and analysis is supported in hardware and software, and the ways graph algorithms interact with machine learning. The interaction can be one of two ways – with graph algorithms benefiting learning applications or with learning used to improve graph analytic kernels.

Putting together GrAPL 2020 has been a team effort. We are grateful to the technical program committee for providing high-quality feedback in paper reviews, as well as to the authors for the high-quality submissions. Each paper was reviewed by at least 3 (in some cases, 4) reviewers with conclusive decisions. After a thorough peer review process and rigorous discussions, the program committee selected 8 papers (2 long and 6 short papers) from 14 submissions. The papers accepted this year fit in three broad themes: 1) large graph generation, 2) applications and algorithms for large graph analytics, and 3) implementations of efficient parallel and distributed software.

We thank George Karypis and Saman Amarasinghe for agreeing to deliver the two keynotes of GrAPL'20, and to their organizations for supporting them – University of Minnesota, Minneapolis, and Amazon for George Karypis, and MIT's Computer Science & Artificial Intelligence Laboratory (CSAIL) for Saman Amarasinghe.

Finally, we thank our Steering committee for their guidance, and GrAPL's Little Helpers -- Antonino Tumeo and Tim Mattson -- for their tireless efforts on all aspects of organization.

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