Welcome

On behalf of the Organizing Committee, I would like to welcome you to Vancouver for the 2014 Genetic and Evolutionary Computation Conference (GECCO 2014). This year’s GECCO is comprised of 20 tracks, including the new Artificial Immune Systems and Hot Off the Press (HOP) tracks. The latter offers authors of outstanding research recently published in journals and other conferences the opportunity to present their work to the GECCO community. Under the guidance of Editor-in-Chief Christian Igel, the Track Chairs and Program Committee have selected 180 out of the 544 submissions received in all tracks (excluding HOP) for oral presentation as full papers, resulting in an acceptance rate of 33%. Close to 100 short papers will be presented in the poster session.

Highlights of the conference include keynote talks by Yoshua Bengio on “Deep Learning and Cultural Evolution”, and by Dario Floreano on “Bridging Natural and Artificial Evolution”, as well as an invited talk by Sumit Gulwani in the Genetic Programming track. Altogether 32 tutorials cover topics ranging from broad and introductory to specialized and at the frontier of current research. GECCO also hosts fifteen workshops, including several new ones as well as at least one that predates GECCO itself. Further high points include the 11th Annual “Humies” Awards for Human-Competitive Results, which are again generously supported by John Koza, and five competitions, ranging from Art, Design, and Creativity to the Industrial Challenge. Finally, Evolutionary Computation in Practice continues to be an important and integral part of GECCO.

I would like to thank the entire Organizing Committee for their work and dedication over the past year. Thanks also go to the Track Chairs and the Program Committee for their careful reviewing of the large number of submissions received. Finally, thanks are due to Roxane Rose and Cara Candler from Executive Events, who have been in charge of logistical aspects and registration, Lisa Tolles and her team at Sheridan Communications for the production of the proceedings, Mark Montague and his team at Linklings for their conference management tool and support of the reviewing process, and Gerardo Valencia for artwork and website management.

I wish you all a productive and enjoyable conference.

Dirk Arnold
General Chair
A Word from the Chair of SIGEVO

Welcome to the Proceedings of GECCO 2014, the sixteenth GECCO, the “recombination” of the 23rd International Conference on Genetic Algorithms (ICGA) and the 19th Genetic Programming Conference (GP). This year, Dirk Arnold was General Chair of GECCO 2014 acting with great diligence and care. Christian Igel, the Editor-in-Chief of GECCO-2014 has done an excellent job at coordinating the reviewing process and leading the effort to select papers for publication. The results of the effort of them and their team are presented here.

GECCO is the premiere venue for presenting papers in the area of Genetic and Evolutionary Computation worldwide. The quality of papers submitted to GECCO is very high, and GECCO has a rigorous paper selection process. This means that the best and most important work in Evolutionary Computation and on related topics is presented at GECCO. Our conference is consistently ranked at the top of Evolutionary Computation conferences, exceeding in citation counts well known journals and other venues.

If you were not able to attend GECCO 2014 in person, the Proceedings are in the ACM Digital Library; they are globally accessible and readily found, which benefits both readers and authors.

ACM SIGEVO

Members of ACM SIGEVO, sponsor of GECCO, continue to draw major benefits from joining ACM. First is a discount at SIGEVO sponsored conferences, at GECCO as much as $100 per registrant. Members have, for a fee, access to the ACM Digital Library, a large and continuously growing resource for research in computing. Another key benefit is the outstanding newsletter SIGEVOlution produced by Pier Luca Lanzi and his excellent editorial board. If you are accessing these proceedings and are not a member of SIGEVO, please consider joining (for the low price of $25/year for non-students, and $10/year for student members). This will help us a lot in promoting our community.

Involvement in ACM SIGEVO

SIGEVO became a Special Interest Group (SIG) of the ACM in 2005. ACM considers its SIGs as the lifeblood of the organization. We are governed by bylaws available on the SIGEVO web pages. There, you also find a list of members of the 18-member Executive Committee.

Since 2011, I serve as chair of SIGEVO, together with a team of officers: Una-May O’Reily (Vice-Chair), Marc Schoenauer (Secretary), and Franz Rothlauf (Treasurer). The Executive, its Officers and I are dedicated to continuously improve our organization. If you have any suggestions how to make GECCO or SIGEVO better, please let us know.

Wolfgang Banzhaf
SIGEVO Chair
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