

KDD 2018 Chairs' Welcome Message

On behalf of the organizing committee, it is our great pleasure to welcome you to the historic city of London for the 24th ACM Conference on Knowledge Discovery and Data Mining – KDD 2018.

These are very exciting times for our community. The terms “Data Science”, “Artificial Intelligence”, “Machine Learning”, “Data Mining” and “Big Data” have, in the last few years, grown out of research labs and gained presence in the media and in everyday conversations. We hear these terms on social media and from decision makers at various level, both in governments and corporations. The impact of these technologies is felt in almost every walk of life with novel applications in self driving cars, AI assistants and in the discovery of new cures. Importantly, the current rapid progress in data science is facilitated by the timely sharing of newly discovered approaches across research and industry. It is the hallmark of KDD conferences in the past that they have been the bridge between theory and practice, a great facilitator and catalyst for this exchange. Researchers and practitioners meet and interact in person over several days. Our program, with its keynotes and interactive tutorials, is designed to bring these two groups together.

It is also a very exciting time for London, which has recently been named as the “the AI capital of Europe”. We could have chosen no better place to host this year’s conference. London is home to more than 750 AI companies, operating in more than 30 industrial sectors, with almost half of these enterprises having a non-UK founder, and about a third with founders from a minority background. It is also home to many world-leading academic institutions and research centers. This confirms London’s international and open nature as a leading hub for innovation and technology.

The conference this year continues with its tradition of a strong engaging and hands-on program including a full day of tutorials on Sunday and plenty of cutting edge workshops on Monday. The final three days are devoted to peer reviewed contributed technical papers, describing both novel, important research contributions, and applied, innovative solutions. Four stellar keynote talks, by British Academy Fellow David Hand, Nobel Laureate Alvin E. Roth, Columbia Univ. Data Science Director Jeannette M. Wing and Oxford University Professor Yee Whye Teh, will touch on some of the important, emerging issues in the field of data mining. With a growing industry around AI, our KDD Panel brings together experts to spawn discussions and exchange ideas about how AI can be used for social good. We have an outstanding lineup of industry speakers sharing their experiences and expertise in deploying industrial data mining solutions. Thanks to a strong hands-on tutorial program, participants will learn how to use practical data science tools.

KDD 2018 puts a strong emphasis on AI development with mainstream applications featured by KDD Cup of Fresh Air with 4173 teams around the globe participating in a challenge to predict air quality in cities like London and Beijing; a unique Deep Learning day, with world class research leaders addressing the frontiers in deep learning research and applications; and a Global AI Initiatives Session where major government initiatives in AI will be presented by representatives from various countries including UK, USA, China etc. We hope that the content and the professional networking opportunities at KDD 2018 will help you to succeed professionally, identify new technology trends, learn from contributed papers, presentations, and posters, discover new tools, processes and practices, identify new job opportunities and hire new team members.

KDD 2018 awarded a record USD 145k for student travel and set aside USD 25k to enable smaller startups to attend. Of particular interest is our “Social Impact” program, which has been an integral part

of KDD for years. Its work to highlight the impact of data science on projects of broad social relevance included relevant scientific papers as well as the development of programs such as data science for social good and projects that help NGO's and administrations to use data science to enhance life quality. As part of the Impact Awards program, 7 proposals for projects that bring together academia and social partners from different parts of the world, have been awarded a one-year grant, renewable based on their impact, scale and promise. We specially encourage the participation of underrepresented and resource-constrained parts of society so that the benefits of technologies are shared and available more broadly.

We are therefore confident that KDD 2018 will be a wonderful place for researchers, practitioners, funding agencies and investors willing to create new algorithmic solutions and maximize their economic and societal impact.

The table below summarizes (numerically) different elements of the conference program and provides acceptance rates, whenever applicable.

Venue or Track	Reviewed	Accepted	Acceptance Rate (%)
Research Track Papers	983	107*, 74 ⁺	10.9*, 7.5 ⁺
Applied Data Science Track Papers	497	40*, 72 ⁺	8.0*, 14.5 ⁺
Workshops	52	28	53.8
Tutorials	44	29	65.9
Hands-on Tutorials	12	5 (3 invited)	41.6
Applied Data Science Talks	Invited	12	NA
Regular Keynotes	Invited	4	NA
Panels	Invited	1	NA

Papers: *oral, +poster

Putting together KDD 2018 has been a wonderful team effort by the members of the entire organizing committee. We thank the authors and the speakers for providing the content of the program. We are grateful to the program committee and the senior program committee, who worked very hard in reviewing papers and providing feedback for authors. Finally, we thank the numerous sponsors, the ACM SIGKDD and the Data Science Institute at Imperial for their support in organizing the conference.

We hope that you will find this program interesting and thought-provoking, and that the conference will provide you with a valuable opportunity to share ideas with other researchers and practitioners from institutions around the world.

Yi-Ke Guo (*General Chair*) **Faisal Farooq** (*General Chair*)