



AISTATS2019

The 22nd International Conference on Artificial Intelligence and Statistics
April 16 - 18, 2019, Naha, Okinawa, Japan

Program Co-chairs

Kamalika Chaudhuri (University of California, San Diego)
Masashi Sugiyama (RIKEN and University of Tokyo)

Welcome to AISTATS2019!

- Since its inception in 1985, AISTATS has been an interdisciplinary gathering of researchers at the intersection of artificial intelligence, machine learning, statistics, and related areas.



Organizing Committee

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■ Local Chair

- Ichiro Takeuchi
(Nagoya Institute of Technology and RIKEN)



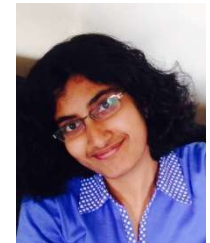
■ Workflow Chairs

- James Foulds
(University of Maryland, Baltimore County)
- Makoto Yamada
(Kyoto University and RIKEN)



■ Publication Chairs

- Purna Sarkar (University of Texas at Austin)
- Akiko Takeda (University of Tokyo and RIKEN)



■ Publicity Chair

- Daniel Hsu (Columbia University)



113 Area Chairs

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- Aaditya Ramdas (Carnegie Mellon University)
- Adrian Weller (University of Cambridge)
- Alex Dimakis (University of Texas at Austin)
- Alp Kucukelbir (Columbia University)
- Amin Karbasi (Yale University)
- Amir Globerson (Tel Aviv University, Google)
- Andrew Dai (Google Brain)
- Andrew Gordon Wilson (Cornell University)
- Andriy Mnih (DeepMind)
- Antti Honkela (University of Helsinki)
- Arindam Banerjee (University of Minnesota)
- Armand Joulin (Facebook AI Research)
- Aryeh Kontorovich (Ben-Gurion University of the Negev)
- Balaji Lakshminarayanan (Google DeepMind)
- Barbara Engelhardt (Princeton University)
- Barnabas Póczos (Carnegie Mellon University)
- Been Kim (Google)
- Bharath Sriperumbudur (Pennsylvania State University)
- Boqing Gong (Tencent AI Lab)
- Borja Balle (Amazon)
- Brian Kulis (Boston University)
- Byron Boots (Georgia Institute of Technology)
- Chicheng Zhang (Microsoft Research)
- Claire Monteleoni (University of Colorado Boulder)
- Daniel Hernandez-Lobato (Universidad Autonoma de Madrid)
- Daniel Hsu (Columbia University)
- Daniel Sheldon (University of Massachusetts, Amherst)
- Danilo Jimenez Rezende (Google DeepMind)
- Dino Sejdinovic (University of Oxford)
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- Ery Arias-Castro (University of California, San Diego)
- Finale Doshi-Velez (Harvard)
- Francesco Orabona (Boston University)
- Gang Niu (RIKEN)
- Han Liu (Northwestern)
- Hidetoshi Shimodaira (Kyoto University)
- Hossein Mobahi (Google Research)
- Ilya Tolstikhin (Google)
- Isabel Valera (MPI-IS)
- Ivor Tsang (University of Technology Sydney)
- James Tin-Yau Kwok (The Hong Kong University of Science and Technology)
- James Zou (Microsoft)
- Jimmy Ba (University of Toronto)
- Joan Bruna (Courant Institute of Mathematical Sciences)
- John Duchi (Stanford University)
- Jose Miguel Hernandez-Lobato (University of Cambridge)
- Justin Solomon (MIT)
- Katherine Heller (Duke University)
- Kenji Fukumizu (The Institute of Statistical Mathematics)
- Koby Crammer (Technion)
- Laura Balzano (University of Michigan)
- Le Song (Ant Financial and Georgia Institute of Technology)
- Lihong Li (Google Inc.)
- Liwei Wang (Peking University)
- Marco Cuturi (ENSAE/CREST)
- Martin Takac (Lehigh University)
- Matthias Hein (University of Tuebingen)
- Maxim Raginsky (University of Illinois)
- Michael Mahoney (University of California, Berkeley)
- Miguel Carreira-Perpinan (University of California, Merced)
- Mijung Park (MPI Tuebingen)
- Minmin Chen (Google)
- Mladen Kolar (U Chicago)
- Mohammad Emtiyaz Khan (RIKEN)
- Nan Jiang (University of Illinois at Urbana-Champaign)
- Nathan Kallus (Cornell Tech)
- Nathan Srebro (Toyota Technical Institute of Chicago)
- Negar Kiyavash (Georgia Institute of Technology)
- Nihar Shah (Carnegie Mellon University)
- Nika Haghtalab (Cornell University)
- Peter Bartlett (University of California, Berkeley)
- Ping Li (Baidu Research)
- Praneeth Netrapalli (Microsoft Research)
- Prateek Jain (Microsoft Research)
- Purnamrita Sarkar (University of Texas at Austin)
- Rafael Frongillo (CU Boulder)
- Raman Arora (Johns Hopkins University)
- Rebecca Willett (U Chicago)
- Remi Munos (DeepMind)
- Ricardo Silva (UCL)
- Richard Nock (Data61, CSIRO)
- Ruth Uner (York University)
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- Sanjoy Dasgupta (University of California, San Diego)
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- Vikas Sindhwani (Google)
- Vinayak Rao (Purdue University)
- Volkan Cevher (EPFL)
- Wee Sun Lee (NUS)
- Xiaojin Zhu (University of Wisconsin-Madison)
- Yarin Gal (Oxford)
- Yingyu Liang (University of Wisconsin Madison)
- Yingzhen Li (Microsoft Research Cambridge)
- Yisong Yue (Caltech)
- Yutian Chen (Deepmind)
- Yu-Xiang Wang (University of California, Santa Barbara)
- Zico Kolter (Carnegie Mellon University)
- Zoltan Szabo (Ecole Polytechnique)

877 reviewers

Submissions/Acceptance

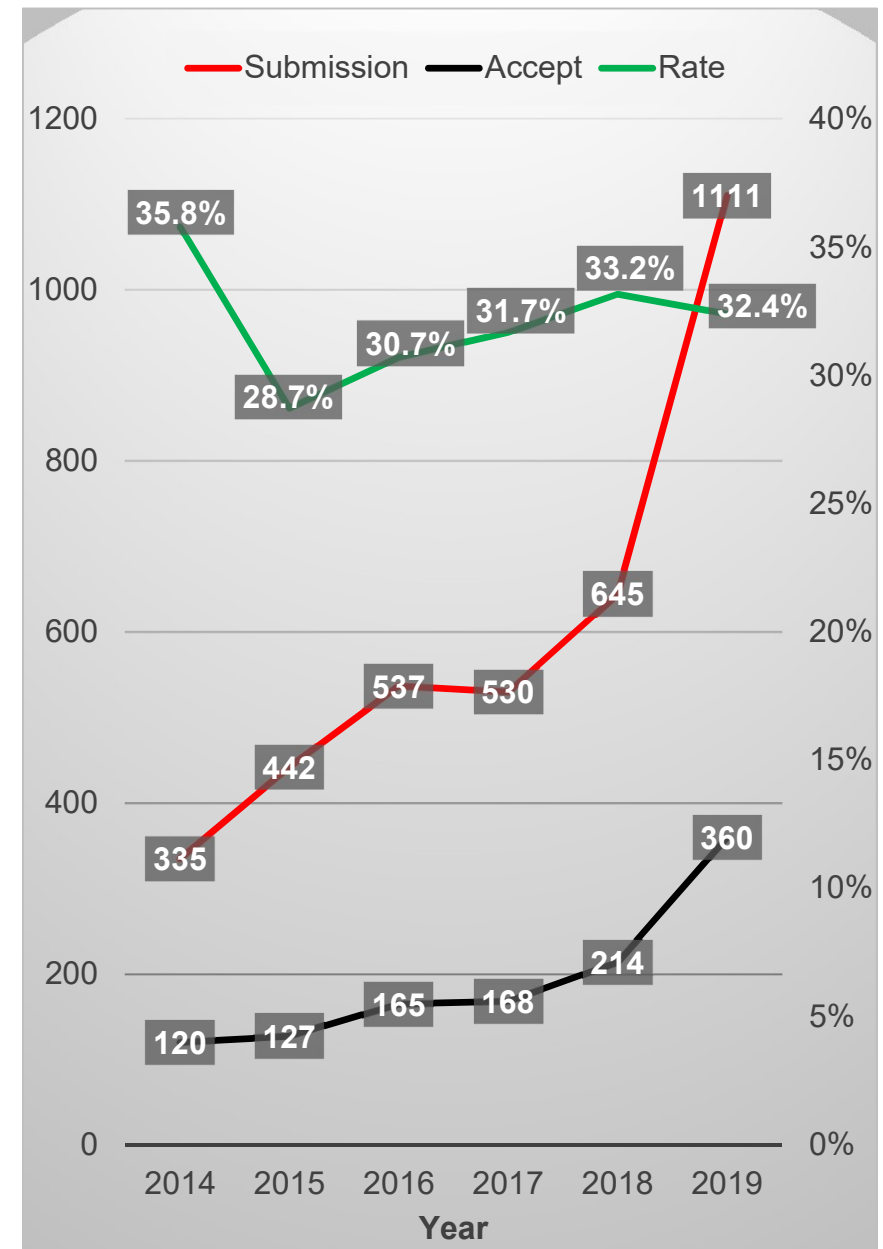
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■ 1,111 submissions:

- Each paper reviewed by 3 reviewers.
- Rebuttal from authors.
- Discussion by Area Chairs and reviewers.

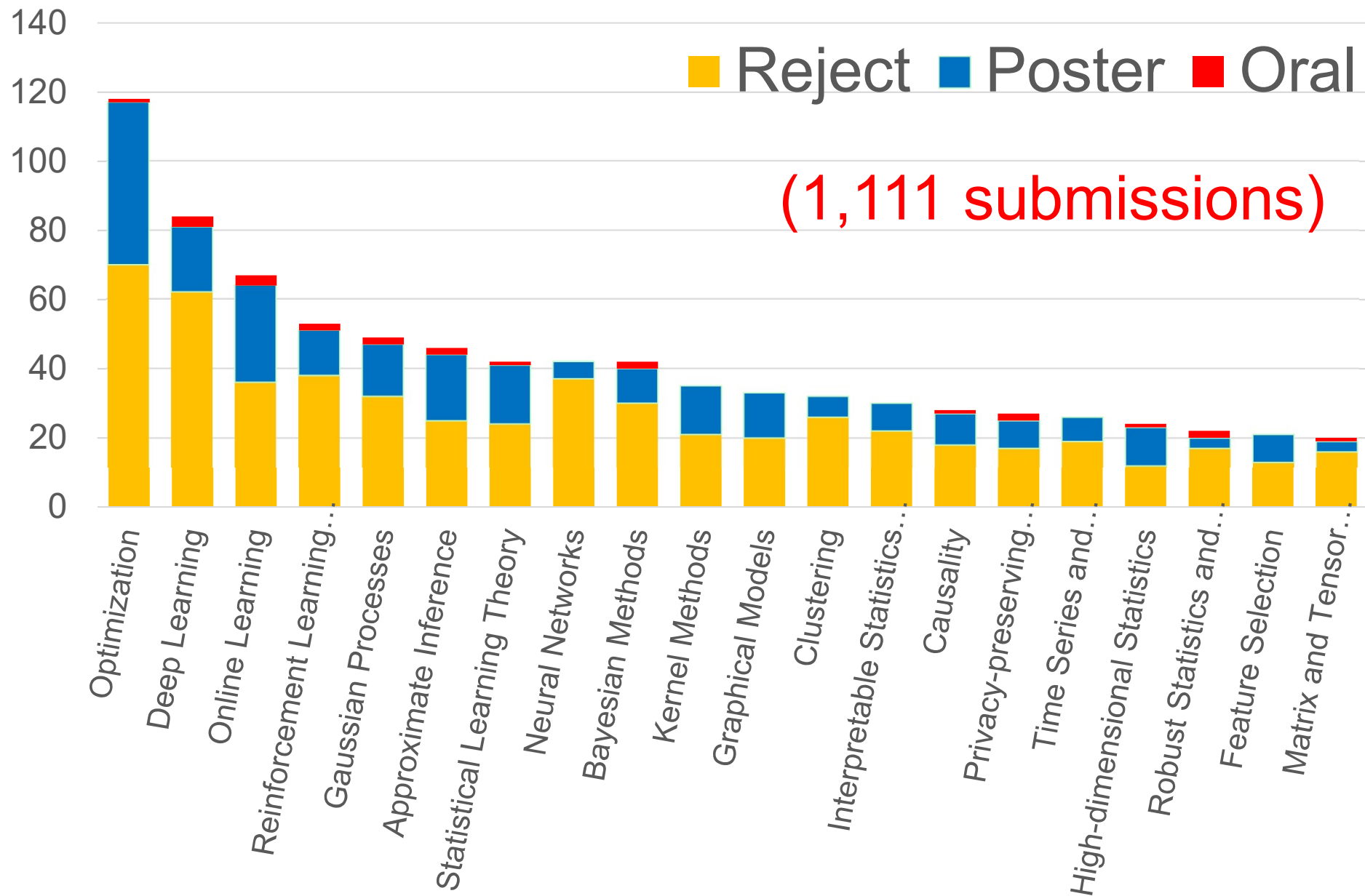
■ 360 accepted papers (32.4% acceptance):

- All papers have posters.
- 28 oral talks.
- 3 notable papers.

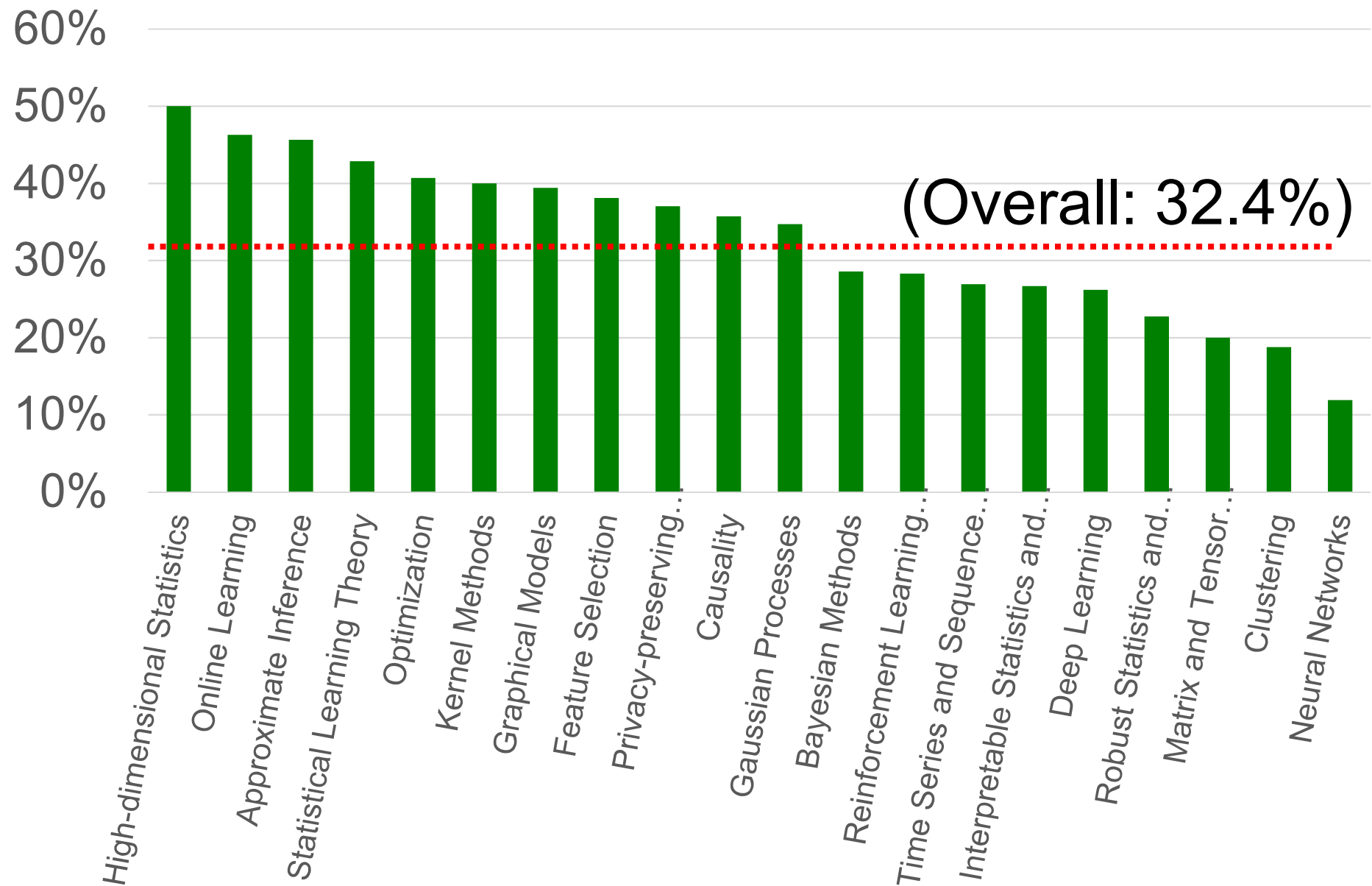


Paper-Subject Distribution

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Subjectwise Acceptance Rate ⁷



3 Notable Paper Awards

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- Ryan Giordano, William Stephenson, Runjing Liu, Michael Jordan, and Tamara Broderick:
A Swiss Army Infinitesimal Jackknife.
(Talk on Day 1 at 15:20)
- Pashupati Hegde, Markus Heinonen, Harri Lahdesmaki, and Samuel Kaski:
Deep Learning with Differential Gaussian Process Flows.
(Talk on Day 2 at 11:30)
- Yu-Xiang Wang, Borja Balle, and Shiva Kasiviswanathan:
Subsampled Renyi Differential Privacy and Analytical Moments Accountant.
(Talk on Day 2 at 14:50)

3 Invited Talks

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- Day 1: **Po-Ling Loh**
(University of Wisconsin-Madison, USA)
 - *Data Science for Networked Data.*



- Day 2: **Robert Tibshirani**
(Stanford University, USA)
 - *Statistical Learning and Sparsity.*



- Day 3: **Zhi-Hua Zhou**
(Nanjing University, China)
 - *An Exploration to Non-NN Deep Models based on Non-Differentiable Modules.*



Program

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Tuesday, 16 April		Wednesday, 17 April		Thursday, 18 April	
7:30-9:00	Breakfast (90 min)	7:30-9:00	Breakfast (90 min)	7:30-9:00	Breakfast (90 min)
9:00-9:10	opening (10 min)	9:00-10:00	Invited talk 2 (1h) <i>Speaker: Robert Tibshirani</i>	9:00-10:20	session 3a (20 min x 4) <i>Optimization</i>
9:10 - 10:10	Invited talk 1 (1h) <i>Speaker: Po-Ling Loh</i>	10:00-10:30	coffee break (30 min)	10:20-10:40	coffee break (20 min)
10:10-10:30	coffee break (20 min)	10:30 - 11:50	session 2a (20 min x 4) <i>Bayesian Methods</i>	10:40 - 12:00	session 3b (20 min x 4) <i>Reinforcement Learning and Bandits</i>
10:30 - 11:50	session 1a (20 min x 4) <i>Learning Theory</i>	11:50-13:30	lunch (100 min)	12:00-13:30	lunch (90 min)
11:50-13:20	lunch (90 min)	13:30 - 14:30	session 2b (20 min x 3) <i>Inference</i>	13:30 - 16:30	poster session 3 (3 hours)
13:20 - 14:20	session 1b (20 min x 3) <i>Statistics and Machine Learning 1</i>	14:30-14:50	coffee break (20 min)	16:30 - 17:30	Invited talk 3 (1h) <i>Speaker: Zhi-Hua Zhou</i>
14:20-14:40	coffee break (20 min)	14:50 - 15:50	session 2c (20 min x 3) <i>Privacy and Fairness</i>	17:30 - 17:40	closing (10 min)
14:40 - 15:40	session 1c (20 min x 3) <i>Statistics and Machine Learning 2</i>	15:50 - 18:50	poster session 2 (3 hours)		
15:40 - 18:40	poster session 1 (3 hours)	19:00 - 21:00	Banquet		

Sponsors

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Enjoy the conference!