

CURRICULUM VITAE

Adish Singla

CONTACT INFORMATION

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EDUCATION

ETH Zurich, Switzerland

- Ph.D. Candidate in Computer Science
- 01/2012 – present
- Advisor: Prof. Andreas Krause
- Dissertation Title: Learning and Incentives in Crowd-Powered Systems

EPFL, Switzerland

- M. Sc. in Computer Science
- 10/2006 – 08/2008

Indian Institute of Technology (IIT) Delhi, India

- Bachelor of Technology in Computer Science and Engineering
- 07/2001 – 05/2006

PROFESSIONAL EXPERIENCE

Microsoft Research, Cambridge, UK

- Research Intern with Dr. Pushmeet Kohli and Dr. Eric Horvitz
- 09/2014 – 11/2014

Microsoft Research, Redmond, USA

- Research Intern with Dr. Ryen White and Dr. Eric Horvitz
- 09/2013 – 11/2013

Microsoft Bing, Bellevue, USA

- Senior Development Lead
- 10/2008 – 01/2012

Logitech-EPFL Incubator, Lausanne, Switzerland

- Research Intern with Pascal Eichenberger and Prof. Touradj Ebrahimi
- 02/2008 – 08/2008

ICSI, Berkeley, USA

- Research Fellow with Dr. Dilek Hakkani-Tür and Prof. Nelson Morgan
- 09/2007 – 02/2008

EPFL, Switzerland

- Research Intern with Prof. Roger Hersch
- 01/2005 – 07/2005

AWARDS AND ACHIEVEMENTS

- Facebook Fellowship in the area of Machine Learning, 2015
- Microsoft Research Tech Transfer Award, 2011
- Microsoft Gold Star Award, 2010
- Scholarship by IDIAP, Switzerland for pursuing a research fellowship at ICSI, Berkeley, USA, 2007
- Scholarship awarded by EPFL for the entire period of Master studies, 2006
- Secured All India Rank 7 and IIT Delhi Zone Rank 1 in the nationwide IIT examinations, 2001
- Scholarship awarded by the National Talent Search Examination (NTSE) program for the entire period of education in India, 1999

TEACHING ASSISTANT AT ETH ZURICH

- Probabilistic Foundations of Artificial Intelligence (Fall 2015, Fall 2012)
- Data Mining: Learning from Large Data Sets (Spring 2014, Spring 2013, Spring 2012)
- Introduction to Learning and Intelligent Systems (Spring 2016, Spring 2015)

ADVISING EXPERIENCE AT ETH ZURICH

Michael Hochstrasser, Master Thesis

- Topic: Automated Species Identification from Sound using Machine Learning
- 11/2016 – present

Simon Hatt, Master Thesis

- Topic: Predictive Planning for Shared Mobility Systems
- 05/2016 – 10/2016

Christoph Hirnschall, Master Thesis

- Topic: Online Learning with Structural Information with Applications to Online Marketplaces
- 04/2016 – 09/2016

Nico Neureiter, Master Thesis

- Topic: A Bayesian Approach to Learning Hemimetrics
- 03/2016 – 08/2016

Pushpak Pati, Semester Project

- Topic: Learning to Incentivize Users for Exploration and Information Gathering
- 02/2016 – 06/2016

Philippe Fatio, Master Thesis

- Topic: Understanding Station-Less, Free-Floating Electric Scooter Sharing Systems
- 09/2015 – 02/2016

Alexander Cebulla, Semester Project

- Topic: Feature Transformation and Selection for Predicting Ultrafine Particle Concentrations
- 02/2015 – 06/2015

Philippe Fatio, Semester Project

- Topic: Bike Sensing
- 08/2014 – 10/2014

Marco Santoni, Master Thesis

- Topic: Incentives for Optimizing Bike Sharing Systems
- 02/2014 – 07/2014

Ian Lienert, Master Thesis

- Topic: Exploiting Side Information in Partial Monitoring Games
- 05/2013 – 10/2013

Marco Santoni, Semester Project

- Topic: Budget Feasible Mechanisms for Adaptive Submodular Utility Functions
- 02/2013 – 06/2013

Andreas Tschofen, Master Thesis

- Topic: Joint Inference of Concepts and Networks of Documents
- 10/2012 – 03/2013

PROFESSIONAL SERVICE

Workshop Organization

- NIPS 2016 Workshop on Crowdsourcing and Machine Learning (CrowdML), with Prof. Rafael Frongillo and Dr. Matteo Venanzi
- ICML 2015 Workshop on Crowdsourcing and Machine Learning (CrowdML), with Prof. Rafael Frongillo and Dr. Matteo Venanzi
- NIPS 2014 Workshop on Crowdsourcing and Machine Learning (CrowdML), with Dr. Chien-Ju Ho, Prof. David Parkes, Nihar Shah, and Dr. Dengyong Zhou
- ICML 2013 Workshop on Crowdsourcing and Human Computation, with Prof. Xi Chen, Dr. Gagan Goel, Nihar Shah, and Dr. Dengyong Zhou

Conference Reviewing

- Conference on Computer-Supported Cooperative Work and Social Computing (CSCW): 2017
- International Conference on Machine Learning (ICML): 2016, 2015
- AAAI Conference on Human Computation and Crowdsourcing (HCOMP): 2016, 2013
- International Conference on Artificial Intelligence and Statistics (AISTATS): 2016
- Conference on Neural Information Processing Systems (NIPS): 2015, 2014
- International Joint Conference on Artificial Intelligence (IJCAI): 2015, 2013
- Conference on Artificial Intelligence (AAAI): 2015
- International Conference on Knowledge Discovery and Data Mining (KDD): 2015, 2014
- International World Wide Web Conference (WWW): 2014, 2013
- Conference on Web and Internet Economics (WINE): 2014, 2013

Journal Reviewing

- Journal of Artificial Intelligence Research (JAIR): 2016, 2015, 2014
- Neural Computation (NECO): 2015
- Transactions on Intelligent Systems and Technology (TIST): 2016, 2014
- Transactions on Mobile Computing (TMC): 2016, 2015, 2014
- Transactions on Modeling and Performance Evaluation of Computing Systems (ToMPECS): 2015
- Transactions on Sensor Networks (TOSN): 2014

INVITED TALKS

Learning and Incentives in Crowd-Powered Systems

- Microsoft Research, Redmond (02/2016)
- University of Washington, Seattle (02/2016)
- Stanford University (11/2015)
- Facebook, Menlo Park (11/2015)

Mechanism Design for Crowdsourcing Markets with Heterogeneous Tasks

- Conference of the International Federation of Operational Research Societies (IFORS), Barcelona (07/2014)

Human Learning and Teaching

- Microsoft Research Asia, Beijing (06/2014)

Learning and Incentives in Human Computation

- Harvard University (12/2014)
- University of Washington, Seattle (12/2013)

PUBLICATIONS

Conference Papers

- (C1) Actively Learning Hemimetrics with Applications to Eliciting User Preferences
 - Adish Singla, Sebastian Tschiatschek, and Andreas Krause
 - International Conference on Machine Learning (ICML), 2016
- (C2) Noisy Submodular Maximization via Adaptive Sampling with Applications to Crowdsourced Image Collection Summarization
 - Adish Singla, Sebastian Tschiatschek, and Andreas Krause
 - Conference on Artificial Intelligence (AAAI), 2016
- (C3) Learning and Feature Selection under Budget Constraints in Crowdsourcing
 - Besmira Nushi, Adish Singla, Andreas Krause, and Donald Kossmann
 - AAAI Conference on Human Computation and Crowdsourcing (HCOMP), 2016
- (C4) Evaluating Task-Dependent Taxonomies for Navigation
 - Yuyin Sun, Adish Singla, Tori Yan, Andreas Krause, and Dieter Fox
 - AAAI Conference on Human Computation and Crowdsourcing (HCOMP), 2016
- (C5) Incentivizing Users for Balancing Bike Sharing Systems
 - Adish Singla, Marco Santoni, Gábor Bartók, Pratik Mukerji, Moritz Meenen, and Andreas Krause
 - Conference on Artificial Intelligence (AAAI), 2015
- (C6) Information Gathering in Networks via Active Exploration
 - Adish Singla, Eric Horvitz, Pushmeet Kohli, Ryen White, and Andreas Krause
 - International Joint Conference on Artificial Intelligence (IJCAI), 2015
- (C7) Building Hierarchies of Concepts via Crowdsourcing
 - Yuyin Sun, Adish Singla, Dieter Fox, and Andreas Krause
 - International Joint Conference on Artificial Intelligence (IJCAI), 2015
- (C8) Crowd Access Path Optimization: Diversity Matters
 - Besmira Nushi, Adish Singla, Anja Gruenheid, Erfan Zamanian, Andreas Krause, and Donald Kossmann

- AAAI Conference on Human Computation and Crowdsourcing (HCOMP), 2015
- (C9) Near-Optimally Teaching the Crowd to Classify
 - Adish Singla, Ilija Bogunovic, Gábor Bartók, Amin Karbasi, and Andreas Krause
 - International Conference on Machine Learning (ICML), 2014
- (C10) Stochastic Privacy
 - Adish Singla, Eric Horvitz, Ece Kamar, and Ryen White
 - Conference on Artificial Intelligence (AAAI), 2014
- (C11) Mechanism Design for Crowdsourcing Markets with Heterogeneous Tasks
 - Gagan Goel, Afshin Nikzad, and Adish Singla
 - AAAI Conference on Human Computation and Crowdsourcing (HCOMP), 2014
- (C12) From Devices to People: Attribution of Search Activity in Multi-User Settings
 - Ryen White, Ahmed Hassan, Adish Singla, and Eric Horvitz
 - International World Wide Web Conference (WWW), 2014
- (C13) Quantifying Web-Search Privacy
 - Arthur Gervais, Reza Shokri, Adish Singla, Srdjan Capkun, and Vincent Lenders
 - Conference on Computer and Communications Security (CCS), 2014
- (C14) Truthful Incentives in Crowdsourcing Tasks using Regret Minimization Mechanisms
 - Adish Singla and Andreas Krause
 - International Conference on World Wide Web (WWW), 2013
- (C15) Incentives for Privacy Tradeoff in Community Sensing
 - Adish Singla and Andreas Krause
 - AAAI Conference on Human Computation and Crowdsourcing (HCOMP), 2013
- (C16) A Noise-Aware Click Model for Web Search
 - Weizhu Chen, Dong Wang, Yuchen Zhang, Zheng Chen, Adish Singla, and Qiang Yang
 - International Conference on Web Search and Data Mining (WSDM), 2012
- (C17) Studying Trailfinding Algorithms for Enhanced Web Search
 - Adish Singla, Ryen White, and Jeff Huang
 - International Conference on Research & Development in Information Retrieval (SIGIR), 2010
- (C18) Camera Brand Congruence in the Flickr Social Graph
 - Adish Singla and Ingmar Weber
 - International Conference on Web Search and Data Mining (WSDM), 2009.
- (C19) Cross-Lingual Sentence Extraction for Information Distillation
 - Adish Singla and Dilek Hakkani-Tür
 - Conference of the International Speech Communication Association (INTERSPEECH), 2008.
- (C20) An Ink Spreading Model for Dot-on-Dot Spectral Prediction
 - Roger Hersch and Adish Singla
 - Color and Imaging Conference (CIC), 2006

Journal Articles and Book Chapters

- (J1) Camera Brand Congruence and Camera Model Propagation in the Flickr Social Graph
 - Adish Singla and Ingmar Weber
 - Transactions on the Web (TWEB), 2011
- (J2) Statistical Sentence Extraction for Information Distillation
 - Dilek Hakkani-Tür, Gokhan Tür, Michael Levit, Daniel Gillick, Adish Singla, and Sibel Yaman
 - Chapter in the “Handbook of Natural Language Processing and Machine Translation: DARPA Global Autonomous Language Exploitation (GALE) Program”, Olive, McCary, Dietrich, Christianson (Eds.), Springer, 2011
- (J3) Calibrating the Yule–Nielsen Modified Spectral Neugebauer Model with Ink Spreading Curves Derived from Digitized RGB Calibration Patch Images
 - Neha Garg, Adish Singla, and Roger Hersch
 - Journal of Imaging Science and Technology (JIST), 2008

Conference Posters and Short Papers

- (S1) Learning to Hire Teams
 - Adish Singla, Eric Horvitz, Pushmeet Kohli, and Andreas Krause
 - AAAI Conference on Human Computation and Crowdsourcing (HCOMP), WiP short paper, 2015
- (S2) Allocating Tasks to Workers with Matching Constraints: Truthful Mechanisms for Crowdsourcing Markets
 - Gagan Goel, Afshin Nikzad, and Adish Singla
 - International World Wide Web Conference (WWW), 2014
- (S3) Enhancing Personalization via Search Activity Attribution
 - Adish Singla, Ryen White, Ahmed Hassan, and Eric Horvitz
 - International Conference on Research & Development in Information Retrieval (SIGIR), 2014
- (S4) Contextual Procurement in Online Crowdsourcing Markets
 - Adish Singla, Ian Lienert, Gábor Bartók, and Andreas Krause
 - AAAI Conference on Human Computation and Crowdsourcing, WiP short paper, 2014
- (S5) Finding Our Way on the Web: Exploring the Role of Waypoints in Search Interaction
 - Ryen White and Adish Singla
 - International World Wide Web Conference (WWW), 2011
- (S6) Sampling High-Quality Clicks from Noisy Click Data
 - Adish Singla and Ryen White
 - International World Wide Web Conference (WWW), 2010
- (S7) Tagging and Navigability
 - Adish Singla and Ingmar Weber
 - International World Wide Web Conference (WWW), 2010

Patents

- (P1) Stochastic Privacy
 - Eric Horvitz, Ece Kamar, Ryen White, and Adish Singla
 - US Patent Number 20160034705, 2016
- (P2) Attribution of Search Activity in Multi-User Settings
 - Ryen White, Ahmed Hassan, Adish Singla, and Eric Horvitz
 - US Patent Number 20150262077, 2015
- (P3) Click Noise Characterization Model
 - Weizhu Chen, Zheng Chen, and Adish Singla
 - US Patent Number 20130173571, 2013
- (P4) Detect Version Intent in Queries and Provide Interface to Capture Version Input in Structured Fashion
 - Sree Nagaralu, Puneet Agrawal, Adish Singla, and Vijay Krishnan
 - Microsoft Patent Number 334190.02, 2011
- (P5) Establishing Search Results and Deeplinks using Trails
 - Ryen White, Peter Bailey, Nikhil Dandekar, Adish Singla, and Jeff Huang
 - US Patent Number 20110264673, 2011

REFERENCES

Available upon request