

Utkarsh Upadhyay  
Ph.D. candidate at MPI-SWS

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## Research Interest

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Developing large scale data-driven models and methods for understanding, predicting and improving the creation, consumption and dissemination of information and knowledge on real-world networks.

## Education

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Jan '15 – *present* Ph.D. Candidate at MPI-SWS, supervised by Dr. Manuel Gomez Rodriguez  
Sept '09 – Feb '12 M.S. in Computer Science at EPFL, Switzerland, GPA: **5.7/6**  
Aug '05 – May '09 B.Tech. in Electrical Eng. at Indian Institute of Technology, Kanpur; CPI: **9.5/10**

## Work

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May '15 – *present* Technical advisor for [SpeaQWith.Me](http://SpeaQWith.Me) in Saarbrücken, Germany  
Apr '12 – Dec '14 Data analytics, visualisation and web-client developer at Better AG, Zürich, Switzerland  
Aug '10 – Feb '11 Internship at CCIL-NEC, Japan on *Information diffusion on Twitter*  
May '08 – July '08 Internship at Microsoft Research, Redmond on *RoboCopy* replacement, *RoboClone*

## Academic Honors

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2017-18 Yahoo! Academic Research Program (ARP) Collaborator  
2016 Travel award for attending KDD '16  
2012 Awarded *Prix ECLA Informatique* for highest GPA in Computer Science MS at EPFL  
2009-10 Awarded the Academic Excellence scholarship for studying at EPFL  
2009 Silver medal at the programming competition ACM-SWERC '09  
2005-09 Recipient of the Aditya Birla Scholarship (Given to 10 students all over India)  
2005-06 Recipient of the Academic Excellence Award at IITK  
2005 Secured 108<sup>th</sup> rank in Joint Entrance Examination for IITs (Percentile: 99.97%)

## Publications

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- A. Zarezade, A. De, **U. Upadhyay**, H. R. Rabiee, M. Gomez-Rodriguez. *Steering Social Activity: A Stochastic Optimal Control Point of View*. Submitted to Journal of Machine Learning Research (JMLR).
- B. Tabibian, **U. Upadhyay**, A. De, A. Zarezade, B. Schölkopf, M. Gomez-Rodriguez. *Optimizing Human learning*. Workshop on Teaching Machines, Robots and Humans Workshop at Neural Information Processing Systems (NIPS) 2017.
- **U. Upadhyay**, I. Valera, M. Gomez-Rodriguez. *Uncovering the Dynamics of Crowdlearning and the Value of Knowledge*. ACM International Conference on Web Search and Data Mining (WSDM) 2017.
- A. Zarezade, **U. Upadhyay**, H. Rabiee, M. Gomez-Rodriguez. *RedQueen: An Online Algorithm for Smart Broadcasting in Social Networks*. ACM International Conference on Web Search and Data Mining (WSDM) 2017.
- S. L. Blond, C. Gilbert, **U. Upadhyay**, M. Gomez-Rodriguez, D. Choffnes. *A Broad View of the Ecosystem of Socially Engineered Exploit Documents*. Network and Distributed System Security symp. (NDSS) 2017.

- **U. Upadhyay**, I. Valera, M. Gomez-Rodriguez. *On Crowdlearning: How do People Learn in the Wild?* Workshop on Machine Learning for Education in Conference on Neural Information Processing Systems (NIPS) 2016.
- N. Du, H. Dai, R. Trivedi, **U. Upadhyay**, M. Gomez-Rodriguez, L. Song. *Recurrent Temporal Point Processes: Embedding Event History to Vector*, ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2016.
- R. Khalili, N. Gast, M. Popovic, **U. Upadhyay**, J.-Y. Le Boudec. *MPTCP is not Pareto-optimal: Performance issues and a possible solution. Best Paper Award*, ACM SIGCOMM International Conference on emerging Networking Experiments and Technologies (CoNEXT) 2012.
- G. Mermoud, M. Mastrangeli, **U. Upadhyay**, A. Martinoli. *Real-Time Automated Modeling and Control of Self-Assembling Systems*. IEEE International Conference on Robotics and Automation (ICRA) 2012.
- **U. Upadhyay**, N. Yoshinaga, S. Itaya, R. Tanaka, T. Konishi, S. Doi, K. Yamada, P. Davis. *Evaluation of Participants in Group-discussions on Twitter*. 8<sup>th</sup> Applications of Social Network Analysis (ASNA) 2011.
- G. Mermoud, **U. Upadhyay**, W. C. Evans, A. Martinoli. *Top-Down vs Bottom-Up Model-Based Methodologies for Distributed Control: A Comparative Experimental Study*, International Symposium on Experimental Robotics (ISER) 2010.
- R. Arora, **U. Upadhyay**, R. Tulshyan, K. Deb, J. Dutta. *A Parallel Randomized Algorithm for Solving Large Convex Minimax Problem*. Conference on Simulated Evolution and Learning (SEAL) 2010. Appears in LNCS, Springer, Vol. 6475.

## Technical skills

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Programming	Python, TypeScript, JavaScript, R, C++, C, Java, Haskell
OSS Contributor	CPython, scipy, scikit-learn, cvxpy, IPython, <a href="#">@first_tmr5_only</a> , <a href="#">@musically-ut</a>
Languages spoken	English (fluent), Hindi (native), German (beginner)

## Interests & activities

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- Invited talk at Yahoo! Research NYC on *RedQueen* on Dec. '17.
- Prizes in puzzle solving and programming competitions:
  - Won Startup Weekend Saarbrücken in May '15 and co-founded [SpeaQWith.Me](#)
  - Silver medal at Swiss national *HC<sup>2</sup>* '10 programming competition at EPFL
  - Silver medal at ACM-SWERC '09 programming competition at Madrid, Spain
  - 2<sup>nd</sup> place twice in Chaos programming contest (Techkriti '06 and '07)
  - 2<sup>nd</sup> place in 99 word story writing competition in Alfaaz '08, the literary festival
  - 1<sup>st</sup> place in Electronic Circuit Design Competition, Techkriti '06
- Positions of responsibility held:
  - Volunteer for NIPS 2017, Program Committee for NIPS 2016
  - Co-organized Machine Learning Summer School 2016 in Cádiz, Spain
  - Coordinator of SciMaTeX, the pure science events, and Tesseract, the online puzzle solving competition in Techkriti (technical festival) '08
  - Secretary for Electronics club and English Literary Society events in Antragni (cultural festival) '07
  - A problem setter for International Online Programming Competition, conducted in Techkriti '08
- Teaching activity:
  - Taught a tutorial on Point Processes in Machine Learning Summer School 2016 in Cádiz, Spain
  - Taught a tutorial on Network Analysis in Machine Learning Summer School 2017 in Tübingen, Germany
  - Teaching assistant for the seminar course on Social and Information Networks at TU-KL, 2016
- Reviewer for: WSDM ('16), NIPS ('17, '16, '15), IJCAI ('16), KDD ('16), SDM ('16), WWW ('16), AISTATS ('16), AAAI ('16), CIKM ('15), ICML ('18)