

Ankit Singla

CONTACT INFORMATION	asingla@ethz.ch https://people.inf.ethz.ch/asingla/	
ACADEMIC POSITIONS	Assistant Professor, Computer Science ETH Zürich, Switzerland	2016 -
EDUCATION	PhD, Computer Science University of Illinois Urbana-Champaign, USA Advisor: P. Brighten Godfrey	2009 - 2015
	Bachelor of Technology, Computer Science & Engineering Indian Institute of Technology Bombay, India	2004 - 2008
PUBLICATIONS	Beyond fat-trees without antennae, mirrors, and disco-balls [ACM SIGCOMM '17] <i>Simon Kassing, Asaf Valadarsky, Gal Shahaf, Michael Schapira, Ankit Singla</i>	
	A Cloud-based Content Gathering Network [USENIX HotCloud '17] <i>Debopam Bhattacharjee, Muhammad Tirmazi, Ankit Singla</i>	
	Why is the Internet So Slow? [PAM '17, Best Dataset Award] <i>Ilker Nadi Bozkurt, Balakrishnan Chandrasekaran, Anthony Aguirre, P. Brighten Godfrey, Gregory Laughlin, Bruce Maggs, Ankit Singla</i>	
	Fat-Free Topologies [ACM HotNets '16] <i>Ankit Singla</i>	
	Measuring and Understanding Throughput of Topologies [ACM/IEEE Supercomputing '16] <i>Sangeetha Abdu Jyothi, Ankit Singla, P. Brighten Godfrey, Alexandra Kolla</i>	
	Designing Data Center Networks for High Throughput [PhD Thesis '15] <i>Advised by P. Brighten Godfrey</i>	
	The Internet at the Speed of Light [Arxiv manuscript '15, ACM HotNets '14] <i>Ankit Singla, Balakrishnan Chandrasekaran, P. Brighten Godfrey, Bruce Maggs</i>	
	High Throughput Data Center Topology Design [USENIX NSDI '14] <i>Ankit Singla, P. Brighten Godfrey, Alexandra Kolla</i>	
	Measuring and Understanding Throughput of Topologies [Short paper, ACM SIGMETRICS '14] <i>Sangeetha Abdu Jyothi, Ankit Singla, P. Brighten Godfrey, Alexandra Kolla</i>	
	Practical DCB for Improved Data Center Networks [IEEE INFOCOM '14] <i>Brent Stephens, Ankit Singla, Colin Dixon, Wes Felter, John Carter, Alan L. Cox</i>	
	Ensuring Connectivity via Data Plane Mechanisms [USENIX NSDI '13] <i>Junda Liu, Aurojit Panda, Ankit Singla, P. Brighten Godfrey, Michael Schapira, Scott Shenker</i>	
	Jellyfish: Networking Data Centers, Randomly [USENIX NSDI '12] <i>Ankit Singla, Chi-Yao Hong, Lucian Popa, P. Brighten Godfrey</i>	
	An Optical Switching Architecture for Data Center Networks [USENIX NSDI '12] <i>Kai Chen, Ankit Singla, Atul Singh, Kishore Ramachandran, Lei Xu, Yueping Zhang</i> Lead inventor on the patents for this work: US Patents 8705954 and 20120008944A1	

On the Resilience of Routing Tables [Brief Announcement, ACM PODC '12]
Joan Feigenbaum, Brighten Godfrey, Aurojit Panda, Michael Schapira, Scott Shenker, Ankit Singla

Intelligent Design Enables Architectural Evolution [ACM HotNets '11]
Ali Ghodsi, Teemu Koponen, Barath Raghavan, Scott Shenker, Ankit Singla, James Wilcox

Information-Centric Networking: Seeing the Forest for the Trees [ACM HotNets '11]
Ali Ghodsi, Teemu Koponen, Barath Raghavan, Scott Shenker, Ankit Singla, James Wilcox

Proteus: A Topology Malleable Data Center Network [ACM HotNets '10]
Ankit Singla, Atul Singh, Kishore Ramachandran, Lei Xu, Yueping Zhang

Scalable Routing on Flat Names [ACM CoNext '10]
Ankit Singla, Kevin Fall, P. Brighten Godfrey, Gianluca Iannaccone, Sylvia Ratnasamy

Verifiable Network-Performance Measurements [ACM CoNext '10]
Katerina Argyraki, Petros Maniatis, Ankit Singla

PATENTS **Deadlock-free routing using edge-disjoint sub-networks** [US9007962 B2]
John Carter, Colin Dixon, Wes Felter, Ankit Singla

Devolved routing in software-defined networks [US9473398 B2]
John Carter, Colin Dixon, Wes Felter, Ankit Singla

Optical switching network [US20120008944 A1, US8705954 B2]
Ankit Singla, Atul Singh, Kishore Ramachandran, Lei Xu, Yueping Zhang

PRESS
COVERAGE 'Ein Lichtgeschwindigkeits-Internet', Bulletin Electrosuisse/VSE, April 2016.
The 'Internet at the Speed of Light' project [Slashdotted](#), May 19, 2015.
The 'Internet at the Speed of Light' project featured in the [top front page story](#) in San Jose Mercury News, December 1, 2014; republished in [Oakland Tribune](#), [Contra Costa Times](#), [Valley News](#) (New Hampshire), [Minneapolis Star Tribune](#) (Minnesota), [The Bulletin](#) (Oregon), [Newsela](#).
'Jellyfish: Networking Data Centers Randomly' featured as CRA's 'Computing Research Highlight of the Week', June 2012.

TALKS **Related to the speed-of-light Internet project**
Invited talk: LADIS workshop (colocated with EuroSys), April 2017
Invited talk: Google Networking Faculty Summit, Feb 2017
Invited talk: World Web Forum Next Generation, Jan 2017
ETH Inaugural Lecture, Oct 2016

Fat-free topologies, HotNets workshop, Nov 2016

TEACHING [Coursera MOOC](#) on Cloud Networking, since November 2015
Advanced Computer Networks, ETH Spring 2017, 2016
Communication Networks Seminar, ETH Autumn 2017, 2016

AWARDS AND
HONORS Microsoft Azure Research Award, "Turning low-latency content delivery upside down", 2017
Authored with Brighten Godfrey (PI), a proposal on "The Internet at the Speed of Light", that received support of \$84,000 in the form of a Google Research Award, 2014
Best graduate project, "Jellyfish: Networking Data Centers Randomly", at UIUC CS Symposium, 2013
Google PhD Fellowship 2012 (one of 14 US-Canada awardees)
Best poster, "Disco: Distributed Compact Routing", at UIUC Computer Science Graduate Expo, 2009
Gold medal (top 10 at national level) in Indian National Chemistry Olympiad, 2004
1st in Group Mathematical Olympiad conducted all over India, 2004

SERVICE

Program committee member for USENIX NSDI
Program committee member for ACM SIGCOMM

2016, 2017
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