Augustin Chaintreau

1214 Amsterdam Ave New York, NY 10027 $e\text{-mail}: \verb"augustin@cs.columbia.edu" \\ \verb"http://www.cs.columbia.edu" / \sim \verb"augustin" \\$

SPECIALIZATION	Big Data Applications – Social Networks – Networked Algorithms – Performance Analysis, Measurement and Modeling of Computer Systems – Privacy and Transparency
Experience	Columbia UniversityNew York, USAAssociate Professor, Dept of Computer ScienceJan. 2018 - PresentAssistant Professor, Dept of Computer ScienceSep. 2010 - Dec. 2017
	Thomson/Technicolor Research LabParis, FranceMember of Technical StaffOct. 2005 - July 2010
	Intel ResearchCambridge, UKResearch internSep. 2004 - Aug. 2005
	IBM ResearchHawthorne, NY, USAResearch internJuly 2003 - Jan. 2004
	Chennai Mathematical InstituteChennai, IndiaVisiting LecturerJuly 2001 - Oct. 2001
Education	Ph.D. in Computer ScienceINRIA-Ecole Normale Supérieure Paris, Jan. 2006. "Processes of Interaction in Data Networks", (see Distinctions). Advisor: François Baccelli
	M.S. [DEA Probability and Applications] U. Pierre et Marie Curie , Paris, June 2002 B.S. [Mathematics and Computer Sc.] Ecole Normale Supérieure , Paris, June 2001
DISTINCTIONS	 ACM SIGMETRICS Rising Star Award 2013. NSF CAREER award 2013, "Behavioral Network Analytics for Data Transparency". French finalist, ERCIM Cor Baayen Award 2008. Honorable mention, Gilles Kahn Ph.D Prize 2006 sponsored by French Science Academy
AWARDED PAPERS	- Honorable mention INFORMS Nicholson award 2016, for "A Necessary and Suf-

AWARDED PAPERS

- Honorable mention INFORMS Nicholson award 2016, for "A Necessary and Sufficient Condition for Throughput Scalability of Networks with Blocking?", Y. Zheng, A. Chaintreau, D. Towslev and C. Xia.
- Runner up for Best Paper Award at ACM COSN 2015, for "Who Contributes to the Knowledge Sharing Economy?", A. Ramachandran and A. Chaintreau.
- Best paper award at ACM SIGCOMM USENIX IMC 2013, for "Follow the Money: Understanding Economics of Online Aggregation and Advertising", P. Gill, V. Erramilli, A. Chaintreau, B. Krishnamurthy, K. Papagiannaki, and P. Rodriguez.
- Best student paper at Rencontre Algotel 2013, for "De la difficulté de garder ses amis (quand on a des ennemis) !" D. Mazauric, G. Ducoffe, A. Chaintreau.
- Best student paper at IEEE MASS 2011, for "Energy Efficient Offloading of 3G Networks" N. Ristanovic, J.-Y. Le Boudec, A. Chaintreau and V. Erramilli.
- Best paper award at ACM SIGMETRICS 2009, for "The Age of Gossip: Spatial Mean Field Regime", A. Chaintreau, J.-Y. Le Boudec and N. Ristanovic.
- Best paper award at ACM CoNEXT 2007, for "The Diameter of Opportunistic Mobile Networks", A. Chaintreau, A. Mtibaa, C. Diot and L. Massoulié.
- Best in ACM Mobicom Student Res. 2008, S. Ioannidis, A. Chaintreau, L. Massoulié
- Nomination for best paper award at IEEE INFOCOM 2001, for "Impact of TCP-like congestion control on the throughput of multicast groups", A. Chaintreau, F. Baccelli and C. Diot.

SERVICE

Organizing and Editorial roles

- Elected to ACM SIGMETRICS Board of Directors (Sep. 2015-present)
- Founding Editor in Chief, Proceedings of the ACM on Measurement and Analysis of Computing Systems (Nov. 2016-present)
- Member of Steering Committee for journal series Proceedings of the ACM: 2017-present
- Area editor, IEEE Transactions on Mobile Computing (Sep. 2010-2015)
- Area editor, ACM Mobile Computing and Communication Review (Sep. 2009-Jan. 2015)
- Area editor, ACM Computer Communication Review (Sep. 2009-Sep. 2015)
- Program Committee Chair, Conference ACM SIGMETRICS 2017
- General Chair, Conference DTL 2016
- Research Track Program Chair, Conference DTL 2015
- Program Committee Chair, Conference ACM CoNEXT 2014
- Student Travel Grant Chair, Conference ACM COSN 2014
- Student Travel Grant Chair, Conference ACM SIGCOMM 2013
- Workshop Chair, Conference ACM CoNEXT 2012
- Program Committee Chair, Workshop ACM FOMC 2011
- Student Activity Chair, Conference ACM Sigmetrics 2010
- Chair of Student Shadow Program Committee, Conference ACM Sigmetrics 2010
- Program Committee Chair, Workshop Algotel 2009
- Chair of Student Shadow Program Committee, Conference ACM CoNEXT 2008
- Program Committee Chair, Workshop NET-COOP 2008
- Founder, with R. Texeira and A. Soule, of www.paris-networking.org (380 members).

As committee member

- Selection committee, ACM SIGMETRICS Rising Star Award: 2015
- Program Committee, American Philosophical Society Symposium on Networks: 2019
- Program Committee, Conference ACM FAT*: 2019
- Program Committee, Conference WWW: 2019, 2018, 2013
- Program Committee, Conference ACM EC: 2018
- Program Committee, Conference ACM WSDM: 2014, 2013
- Program Committee, Conference ACM SIGMETRICS: 2012, 2011, 2010
- Program Committee, Conference ACM SIGCOMM: 2014, 2011, 2010, 2009
- Program Committee, Conference ACM CoNEXT: 2012, 2011, 2010, 2009, 2008, 2007, 2006
- Program Committee, Conference USENIX/ACM IMC: 2011
- Program Committee, Conference ACM COSN: 2013
- Program Committee, Conference AAAI ICWSM: 2015
- Program Committee, Conference ACM MobiCom: 2012, 2009
- Program Committee, Conference ACM MobiHoc: 2010
- Program Committee, Conference IFIP Performance: 2015
- Program Committee, Conference Netmob: 2015, 2013
- Program Committee, Conference IEEE ISIT: 2011
- Program Committee, Conference IEEE Infocom: 2009, 2008, 2007

INVITED TALKS

NB: No talks during Spring, Summer and Fall 2017, parental leave abroad as primary caretaker of my infant daughter, while my wife resumed her full time post-doctoral position.

Keynote & Colloquium

- "Network fairness for Big Data" .. CS Colloquium, Washington U. St. Louis, Nov. 2018.
- "How to Fix Big Data's Disparate Impact" ... ORIE Colloquium, Cornell U., Nov. 2016.

- "Information Highway Revisited", keynote, ACM SIGMETRICS, June 2013. - "Friends, Computing and the Network", Bell Labs' Technical Academy, Nov. 2011.

Invited Seminar

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- Max Planck Institute, Germany		
- Alan Turing Institute, UK		
- University of Cambridge, UK		
- Université de Montreal & McGill U., Canada		
- Stanford University, CA		
- Google, Mountain View, CA	_	
- MIT MediaLab, Boston, MA		
- INRIA-Eurécom, Nice, France		
- Yale University, New Haven, CT		
- Teacher's college, New York, NY		
- Texas Albert and Mary University, College Station, TX		
- École Polytechnique de Lausanne, Lausanne, Switzerland		
- INRIA, Paris, France		
- Google, New York, NY		
- École Polytechnique de Lausanne, Lausanne, Switzerland	June	2012
- University of Illinois at Urbana Champaign, IL	May	2012
- Harvard University, Boston, MA	Apr.	2012
- Polytechnic Institute of NYU, New York, NY	$\ldots {\rm Feb}.$	2012
- Massachusetts Institute of Technology, Boston	Dec.	2011
- INRIA, Sophia Antipolis, France	Nov.	2011
- Universidade Federal do Rio de Janeiro	Oct.	2011
- Telefonica, Barcelona, Spain	July	2011
- Google, New York, NY		
- Technicolor Opening day, Palo Alto		
- Kazakh-British Technical University, Almaty, Kazakstan		
- University of Southern California, CA		
- Columbia University, New York, NY		
- University of Toronto, Canada		
- University of Waterloo, Canada		
- McGill University, Montreal, Canada		
- University of Illinois at Urbana Champaign, IL		
- Ecole Polytechnique Fédérale de Lausanne, Switzerland		
- University of Southern California, LA, CA		
- California Institute of Technology, Pasadena, CA		
- INRIA Sophia Antipolis, France		
- Princeton University, NJ		
- University of Southern California, LA, CA,		
- University of Toronto, Canada,		
- Ecole Polytechnique Fédérale de Lausanne, Switzerland		
- Boston University, Boston, MA		
- University of California San Diego, San Diego, CA		
- University of Cambridge, UK		
- Ecole Normale Supérieure, Paris, talk for the entering class		
- Université Paris 7 Denis Diderot		
- IBM T. J. Watson		
- Columbia University, New York, NY	-	
- IBM T. J. Watson, Hawthorne, NY		
- Indian Inst. Tech. (IIT), Chennai, India		
- Indian Inst. Tech. (III), Chemiai, fidia Indian Inst. Tech. (III), Tata Inst. for Fund. Res. (TIFR), Mumbai, India.		
- Indian Inst. Tech. (III), Tata Inst. for Fund. Res. (IIFK), Mullioal, India Indian Inst. Science (IISc), Bangalore, India		
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	- Indian Inst. Tech. (IIT), Indian Statistical Inst. (ISI) Delhi, IndiaSep. 2001
	Invited Speaker for a Plenary Talk
	 Workshop The Digital Self, Wolfson College, Cambridge UK, ACM MOBICOM MobiArch, NYU CONES Workshop, EURANDOM Workshop on Control and Performance of Large-Scale Networks, July 2014. BIRS Workshop on Asymptotics of Large-Scale Interacting Networks, Feb. 2013. DIMACS Workshop on Economic Aspects of Information Sharing, Feb. 2013. DIMACS Workshop on Connectivity and Resilience for Large-Scale Networks, Apr. 2012. 3rd Southern California Symposium on Network Economics and Game Theory, Nov. 2011. 73rd Annual Meeting of the Institute of Mathematical Statistics, Aug. 2010. 17th Columbia University Applied Probability Day, June 2010. 3rd McGill Workshop on Learning in Networked Systems, Mar. 2010. 5th UCSD Workshop on Information Theory and Applications, Feb. 2010. UCLA IPAM Workshop on New Math. Front. in Network Multi-Res. Analysis, Nov. 2008. Workshop on Algorithms and Graph theory in Dynamic Networks, Sep. 2007. Symposium on Mathematical Theory of Networks and Systems, July 2004.
RESEARCH TUTORIALS	- "Social Audience, under the influence"
Media Coverage	- On algorithmic glass ceiling (Apr. 2018): Times of India (India) brwn.co/glastofi, Daily Mail (UK) brwn.co/glasdmail, The Hindu (India)brwn.co/glashindu, The Economic Times (India) brwn.co/glasecontimes,
	- On social clicks (June 2016): Washington Post brwn.co/cliwapo, Fortune brwn.co/clifortune New Scientist brwn.co/clinscientist, New York Daily News brwn.co/clinydaily, PC Mag brwn.co/clipcmag, Daily Mail (UK) the Times of India (India) Les Echos, Slate.fr, BFM TV (France) La Stampa (Italy), and multiple radio interviews.
	- On location data (Apr. 2016): BuzzFeed brwn.co/locbuzz, Forbes brwn.co/locforbes, CBS

 ${\tt brwn.co/loccbs},\, {\bf ZDNet}\,\, ({\rm France}).$

- On the fair use of personal data (Mar. 2016): the Economist brwn.co/fairdataecon and ${\bf Slate} \ {\tt brwn.co/adslate}.$
- On web transparency (Aug. 2014): New York Times bits brwn.co/xraynyt, the Guardian Tech Blog brwn.co/xrayguardian, FastCompany co.exist brwn.co/xrayfastco.
- On online advertisement revenue (Oct. 2013): MIT Tech. Review brwn.co/adsmittr.

Media Interviews

- Sharing news online for Seattle's Morning News on KIRO, Lynda Steele Show on CKNW (Canada), and Mike Hosking Breakfast on Newstalk ZB (New Zealand), June 2016.
- Privacy and Internet of Things in O'Reilly Report, brwn.co/badguysoreilly, March 2016.
- Crowdsourcing in MIT Technological Review brwn.co/mitcrowdsourcing, August 2014.
- Privacy in Social Networks in **ThinkProgress** brwn.co/tpchatprivacy, May 2014.
- Geo-Personalization of Search Engines in NY Daily News brwn.co/nydngoogle, April 2014.
- Social Network Dating Apps in Columbia Spectator brwn.co/cspdating, March 2014.

NB: Underlined authors are students or post-docs for whom I was primary advisor at the time. The custom for those venues is to include them first followed by people in advising roles, typically in alphabetical order.

Peer-Reviewed Conferences

- 36. A. Molavi, V. Erramilli, P. Gill, A. Chaintreau, and B. Krishnamurthy, Information Market for Web Browsing: Design, Usability and Incremental Adoption in *Proceedings of IFIP Performance*, Dec. 2018. (12 pages).
- 35. <u>A. Ramachandran</u>, <u>L. Wang</u> and A. Chaintreau, Dynamics and Prediction of Clicks on News from Twitter (short paper) in *Proceedings of ACM Hypertext Conference*, July 2018. (4 pages).
- 34. J.-C. Bermond, <u>G. Ducoffe</u>, <u>D. Mazauric</u>, A. Chaintreau How long does it take for all users in a social network to choose their communities?, *Ninth EATCS International Conference on Fun with Algorithms*, June 2018. (28 pages).
- 33. <u>A. Stoica, C. Riederer</u> and A. Chaintreau, Algorithmic Glass Ceiling in Social Networks in *Proceedings of ACM WWW*, Apr. 2018. (10 pages).
- 32. M. Lecuyer, M. Tucker and A. Chaintreau, Improving the Transparency of the Sharing Economy in *Proceedings of ACM WWW*, Apr. 2017. (10 pages).
- 31. M. Gabielkov, A. Ramachandran, A. Chaintreau, and A. Legout, Social Clicks: What and Who Gets Read on Twitter? in *Proceedings of ACM SIGMETRICS*, June 2016. (12 pages). (see Media Coverage).
- 30. Y. Zeng, A. Chaintreau, D. Towsley, and C. Xia, A Necessary and Sufficient Condition for Throughput Scalability of Fork and Join Networks with Blocking in *Proceedings of ACM SIGMETRICS*, June 2016. (12 pages). (see Distinctions).
- C. Riederer, Y. Kim, A. Chaintreau, N. Korula and S. Lattanzi, Linking Users Across Domains with Location Data: Theory and Validation in *Proceedings of ACM WWW*, Apr. 2016. (12 pages). (see Media Coverage).
- 28. <u>C. Riederer, S. Zimmeck, C. Phanord,</u> A. Chaintreau, and S. M. Bellovin, I don't have a photograph, but you can have my footprints.: Revealing the Demographics of Location Data, in *Proceedings of ACM COSN 2015*, Nov. 2015. (12 pages). (see Media Coverage).
- 27. <u>A. Ramachandran</u> and A. Chaintreau, Who Contributes to the Knowledge Sharing Economy? pp. 3748. in *Proceedings of ACM COSN 2015*, Nov. 2015. (12 pages). (see Distinctions).
- 26. M. Lecuyer, R. Spahn, Y. Spiliopolous, A. Chaintreau, R. Geambasu, and D. Hsu, Sunlight: Fine-grained Targeting Detection at Scale with Statistical Confidence, in *Proceedings of ACM CCS 2015*, Oct. 2015. (13 pages). (see Media Coverage).
- 25. <u>A. Ramachandran</u>, A. Chaintreau. "I knew they clicked when I saw them with their friends" In *Proceedings of ACM COSN 2014*, Oct. 2014. (6 pages)
- 24. M. Lécuyer, G. Ducoffe, F. Lan, A. Papancea, T. Petsios, R. Spahn, A. Chaintreau, and R. Geambasu XRay: Enhancing the Web's Transparency with Differential Correlation In *Proceedings of USENIX Security*, Aug. 2014. (16 pages) (see Media Coverage).
- A. May, A. Chaintreau, N. Korula, S. Lattanzi. Filter & Follow: Do Social Media Encourage Efficient News Curation? In *Proceedings of ACM SIGMETRICS*, June 2014. (13 pages)

- 22. P. Gill, V. Erramilli, A. Chaintreau, B. Krishnamurthy, K. Papagiannaki, and P. Rodriguez. Follow the Money: Understanding Economics of Online Aggregation and Advertising In *Proceedings of ACM SIGCOMM USENIX IMC*, Oct. 2013. (7 pages) (see Distinctions). (see Media Coverage).
- 21. N. Ristanovic, J.-Y. Le Boudec, A. Chaintreau and V. Erramilli. Energy Efficient Offloading of 3G Networks In *Proceedings of IEEE MASS*, Oct. 2011. (10 pages) (see Distinctions).
- S. Isaacman, S. Ioannidis, A. Chaintreau and M. Martonosi. Distributed Rating Prediction in User Generated Content Streams In *Proceedings of ACM RecSys*, Oct. 2011. (8 pages)
- 19. <u>S. Isaacman</u>, S. Ioannidis, A. Chaintreau and M. Martonosi. Distributed Collaborative Filtering Over Social Networks In *Proceedings of Allerton*, Sep. 2011. (invited paper) (6 pages)
- V. Misra, <u>S. Ioannidis</u>, A. Chaintreau and L. Massoulie. Incentivizing Peer-Assisted Services: A Fluid Shapley Value Approach. In *Proceedings of ACM SIGMETRICS*, June 2010. (12 pages)
- 17. <u>S. Ioannidis</u>, L. Massoulie and A. Chaintreau. Distributed Caching over Heterogeneous Mobile Networks. In *Proceedings of ACM SIGMETRICS*, June 2010. (12 pages)
- 16. <u>J. Reich</u> and A. Chaintreau. The Age of Impatience: Optimal Replication Schemes for Opportunistic Networks. In *Proceedings of ACM CoNEXT*, Dec. 2009. (12 pages)
- 15. <u>J. Reich</u> and A. Chaintreau. Replication Schemes for Opportunistic Networks with Impatient Users. In *Proceedings of Allerton*, Sep. 2009. (invited paper) (6 pages)
- 14. A. Chaintreau J.-Y. Le Boudec and N. Ristanovic. The Age of Gossip: Spatial Mean Field Regime. In *Proceedings of ACM SIGMETRICS*, June 2009. (12 pages) (see Distinctions).
- 13. <u>S. Ioannidis</u>, A. Chaintreau and L. Massoulié, Optimal and Scalable Distribution of Content Updates over a Mobile Social Network. In *Proceedings of IEEE INFOCOM*, Apr. 2009. (9 pages) (see Distinctions).
- 12. A. Chaintreau, P. Fraigniaud, and E. Lebhar. Networks become navigable as people move and forget. In *Proceedings of ICALP*, July 2008. (12 pages)
- 11. A. Chaintreau. Sharpness: a tight condition for throughput scalability. In *Proceedings of SIROCCO*, June 2008. (15 pages)
- 10. <u>V. Erramilli</u>, A. Chaintreau, M. Crovella, and C. Diot. Delegation forwarding. In *Proceedings of ACM MobiHoc*, May 2008. (9 pages)
- 9. A. Chaintreau and L. Massoulié. Phase transition in opportunistic mobile networks. In *Proceedings of IEEE International Zurich Seminar on Communication*, Mar. 2008. (invited paper) (4 pages)
- 8. A. Chaintreau, <u>A. Mtibaa</u>, L. Massoulié, and C. Diot. The Diameter of opportunistic mobile networks. In *Proceedings of ACM CoNEXT*, Dec. 2007. (12 pages) (see Distinctions).
- 7. <u>V. Erramilli</u>, A. Chaintreau, M. Crovella, and C. Diot. Diversity of forwarding paths in pocket switched networks. In *Proceedings of ACM/USENIX Internet Measurement Conference*, Oct. 2007. (13 pages)

- B. Kauffmann, F. Baccelli, A. Chaintreau, V. Mhatre, D. Papagiannaki, and C. Diot. Measurement-based self organization of interfering 802.11 wireless access networks. In Proceedings of IEEE INFOCOM, Apr. 2007. (9 pages)
- 5. A. Chaintreau, P. Hui, J. Scott, R. Gass, J. Crowcroft, and C. Diot. Impact of human mobility on opportunistic forwarding algorithms. In *Proceedings of IEEE INFOCOM*, Apr. 2006. (13 pages)
- F. Baccelli, A. Chaintreau, Z. Liu, and A. Riabov. The one-to-many TCP overlay: A scalable and reliable multicast architecture. In *Proceedings of IEEE INFOCOM*, May 2005. (12 pages)
- 3. F. Baccelli, A. Chaintreau, D. De Vleeschauwer, and D. R. McDonald. A Mean-Field Analysis of Short Lived Interacting TCP Flows In *Proceedings of ACM SIGMETRICS*, June 2004. (12 pages)
- 2. F. Baccelli, A. Chaintreau, Z. Liu, A. Riabov, and S. Sahu. Scalability of reliable group communication using overlays. In *Proceedings of IEEE INFOCOM*, Apr. 2004. (12 pages)
- 1. A. Chaintreau, F. Baccelli, and C. Diot. Impact of window-flow control on the throughput of multicast groups. In *Proceedings of IEEE INFOCOM* Apr. 2001. (10 pages) (see Distinctions).

Journals

- Yun Zeng, A. Chaintreau, D. Towsley and C. Xia Throughput scalability analysis
 of fork-join queueing networks accepted INFORMS Operations Research, 2018. (30
 pages)
- 6. <u>S. Ioannidis</u>, L. Massoulie and A. Chaintreau. Distributed Caching in Heterogeneous Mobile Networks *Queueing Systems and Applications*, 72(4):279–309 Dec. 2012. (31 pages)
- 5. <u>J. He</u>, A. Chaintreau and C. Diot. A performance evaluation of scalable live video streaming with nano data centers. *Elsevier Computer Networks*, 53(2):153–167, 2008. (15 pages)
- 4. A. Chaintreau, <u>P. Hui</u>, J. Scott, R. Gass, J. Crowcroft, and C. Diot. Impact of human mobility on opportunistic forwarding algorithms. *IEEE Trans. Mob. Comp.*, 6(6):606–620, 2007. (15 pages)
- 3. F. Baccelli, A. Chaintreau, D. De Vleeschauwer, and D. R. McDonald. HTTP turbulence. AIMS Networks and Heterogeneous Media, 1(1):1–40, 2006. (40 pages)
- 2. A. Chaintreau and D. De Vleeschauwer. A closed form formula for long-lived TCP connections throughput. *Perform. Eval.*, 49(1-4):57–76, 2002. (20 pages)
- 1. A. Chaintreau, F. Baccelli, and C. Diot. Impact of TCP-like congestion control on the throughput of multicast groups. *IEEE/ACM Trans. Netw.*, 10(4):500–512, 2002. (13 pages)

Peer-Reviewed Workshops (excluding those superseded by later publications)

17. N. Wolanski, and A. Chaintreau, The Price of Fairness in Location Based Advertising, *Proceedings of ACM Workshop on Mechanism Design for Social Good (MD4SG)*, June 2018.

- 16. <u>C. Riederer</u>, and A. Chaintreau, The Price of Fairness in Location Based Advertising, *Proceedings of ACM Workshop on Fairness*, *Accountability and Transparency in Recommender Systems*, Aug. 2017.
- L. Wang, <u>A. Ramachandran</u>, and A. Chaintreau, Measuring Click and Share Dynamics on Social Media: A Reproducible and Validated Approach, *Proceedings of AAAI ICWSM Workshop on News and Public Opinion*, May 2016.
- 14. <u>C. Riederer</u> and A. Chaintreau, Scaling Up the Census with Social Media, *Proceedings of AAAI ICWSM Workshop on The Social Media and Demographic Research Workshop*, May 2016.
- 13. <u>C. Riederer, D. Echikson, S. Huang</u>, and A. Chaintreau, FindYou: A Personal Location Privacy Auditing Tool (demo), *Proceedings of ACM WWW*, Apr. 2016.
- 12. <u>A. Ramachandran</u> and A. Chaintreau, The Network Effect of Privacy Choices, *Proceedings of ACM NETECON*, Nov. 2015.
- 11. <u>L. Navarro, M. Gabielkov, M. L. Tucker</u>, and A. Chaintreau, Zero-Knowledge Transparency: Safe Audit Tools for End Users (short talk), *Annual Conference of Data Transparency Lab*, Nov. 2015.
- 10. <u>G. Ducoffe</u>, M. Lcuyer, A. Chaintreau, and R. Geambasu, Web Transparency for Complex Targeting: Algorithms, Limits, and Tradeoffs (poster), *Proceedings of the ACM SIGMETRICS*, June 2015.
- 9. <u>C. Riederer</u>, A. Chaintreau, J. Cahan, and V. Erramilli The Place (and Price) Is Right: An Economic Solution to Location Privacy, In *Proceedings of the 12th Workshop on on Privacy in the Electronic Society (WPES)*, Nov. 2013.
- 8. <u>G. Ducoffe</u>, <u>D. Mazauric</u>, and A. Chaintreau, De la difficulté de garder ses amis (quand on a des ennemis)!, *Proceedings of Algotel*, June 2013. (see Distinctions).
- 7. K. Biscuitwala, W. Bult, M. Lécuyer, M. Ross, A. Chaintreau, M. Lam, C. Haseman and S. McGregor, Weaving a safe web for news, In *Proceedings of ACM Workshop on Social News on the Web (SNOW)*, May 2013.
- 6. <u>C. Riederer</u>, V. Erramilli, A. Chaintreau, B. Krishnamurty and P. Rodriguez, For Sale: Your data; By: You, In *Proceedings of ACM SIGCOMM Workshop on Hot Topics in Networks (HotNets-X)*, Nov. 2011.
- 5. K.-W. Kwong, A. Chaintreau, and R. Guerin. Quantifying content consistency improvements through opportunistic contacts. In *Proceedings of ACM Workshop on Challenged Networks (CHANTS)*, Sep. 2009.
- 4. <u>S. Ioannidis</u> and A. Chaintreau. On the strength of weak ties in mobile social networks. In *Proceedings of the Second ACM Workshop on Social Network Systems* (SNS), Mar. 2009.
- 3. A. Chaintreau, P. Fraigniaud, and E. Lebhar. Opportunistic spatial gossip over mobile social networks. In *Proceedings of ACM SIGCOMM Workshop on Online Social Network (WOSN)*, Aug. 2008.
- A. Mtibaa, A. Chaintreau, J. LeBrun, E. Oliver, A-K. Pietilainen, and C. Diot. Are you moved by your social networks application? In *Proceedings of ACM SIGCOMM Workshop on Online Social Network (WOSN)*, Aug. 2008.
- 1. P. Hui, A. Chaintreau, J. Scott, R. Gass, J. Crowcroft, and C. Diot. Pocket switched networks and the consequences of human mobility in conference environments. In *Proceedings of ACM SIGCOMM first workshop on delay tolerant networking and related topics (WDTN)*, 2005.

Under review

- 1. R. Netzorg, L. Arnett, X. Liu, H. Nilforoshan, A. Chaintreau, E. Wu. PopFactor: What Behaviors Beget Popularity on Twitch, AAAI International Conference on Web and Social Media, May 2019. (10 pages) in submission after receiving a "Fast Track Resubmission".
- 2. <u>G. Ducoffe, M. Lecuyer, F. Lan, A. Chaintreau, R. Geambasu.</u> What are the scaling limits of Web Transparency Tools?, *ACM SIGMETRICS*, June 2019. (18 pages) resubmission planned after receiving a "one-shot revision" (already presented at poster @ ACM SIGMETRICS)
- 3. <u>C. Riederer</u>, A. Chaintreau. Scaling the Census with Social Media, resubmission planned after receiving a revision for *Demographic Research*, June 2018. (12 pages)
- 4. A. Molavi, V. Erramilli, P. Gill, A. Chaintreau, and B. Krishnamurthy Designing and Testing a Market for Browsing Data, recommended by IFIP Performance conference to appear in a special issue *INFORMS Stochastic Systems*, Feb. 2019. (18 pages)

FUNDING AWARDED

- 8. 2018-2021: PI for National Science Foundation Collaborative Proposal Spokes-1761810 "Data Science Foundry: A Collaborative Platform for Computational Social Science" (NB: This is a collaborative proposal lead by MIT (PI: Devavrat Shah) and in collaboration with Princeton (PI: Matthew Sagalnik), I am PI for Columbia) (total \$1,000,000, Columbia share: \$250,000, my share: \$250,000)
- 7. 2015-2019: co-PI for National Science Foundation Award CNS 1514437 "Scalable Web Transparency: New Scientific Building Blocks, Tools, and Measurements to Tame the Data Driven Web," (PI: Roxana Geambasu) (total \$1,199,873, my share: \$599,936)
- 6. 2014-2015: PI for Brown Institute Magic Grant for "Deglass: Building Web Transparency tools for Investigative Journalists". (total \$120,000, my share: \$120,000)
- 2013-2018: PI for National Science Foundation CAREER Award CNS 1254035 "Banalytics: Behavioral Network Analytics for Data Transparency" (total \$499,998, my share: \$499,998)
- 4. 2012-2013: co-PI for Brown Institute Magic Grant for "Dispatch: a publishing tool for conflict reporting". (other co-PIs: Susan McGregor, Monica Lam, Stanford) (total \$266,165, my share: \$108,998)
- 3. 2011-2012: co-PI for National Science Foundation Award ICES #1139915 "Social Information Dissemination: A Market Based Approach" (PI: Xi Chen, other co-PI: Vishal Misra) (total \$249,993, my share: \$83,331)
- 2. 2009-2010: PI for PROSE, a 3-year basic research project funded by Agence Nationale de la Recherche (four universities, one industry lab and one start-up).
- 1. 2006-2010: co-PI for HAGGLE, a 4-year basic research project funded by European Union's Framework Programme 6. (PI: Christophe Diot)

Funding Pending

1. 2020-2025: co-PI for National Science Foundation Proposal Expeditions-1836183 "Trustworthy AI" (PI: Jeannette Wing, other co-PI: Shipra Agarwal, senior personnel: David Blei, Bo Cowgill, Roxana Geambasu, Daniel Hsu, Suman Jana, Desmond Patton, Carl Vondrick, Eugene Wu, Junfeng Yang) (total \$9,999,005, my share: \$833,250) invited by the NSF for a full proposal following the review of our 10-page preliminary proposal.

INVENTIONS

Patents Granted

1. Method and apparatus for group communication with end-to-end reliability, Z. Liu, F. Baccelli, A. Chaintreau, A. Riabov

US 7,355,975 (2008), KR100946108 (2010), CA2564363 (2010), EP 1747644 B1 (2013), JP2007535879 (filed)

2. Apparatus for scalable reliable group communication, F. Baccelli, A. Chaintreau, Z. Liu, A. Riabov, S. Sahu

US 7,710,881 (2010)

3. Multimedia content delivery method and system, A. Boudani, A. Chaintreau, M.-L. Champel, C. Diot, P. Houeix, C. Neumann, A. Soule, K. Suh

US 7,680,894 (2010), EP 1972092 A1 (filed)

- Device and method for controlling dissemination of data by transfer of sets of instructions between peers having wireless communication capacities, A. Chaintreau, J. Reich EP 2252035 B1 (2012), US 8,924,474 (2014)
- 5. Device and method for controlling dissemination of contents between peers having wireless communication capacities, depending on impatience reaction functions, A. Chaintreau, J. Reich

EP 2249545 B1 (Mar 14, 2012), US 8,856,327 (2014)

- Representation of a delay path in mobile networks, A. Chaintreau EP 2020127 A2 (Feb 4, 2009), US 8,509,084 (2013)
- 7. Device and method for controlling dissemination of contents between peers having wireless communication capacities, depending on vote vectors, A. Chaintreau, S. Ioannidis, L. Massoulie

EP 2372976 A1 (Oct 5, 2011), US 8,706,831 (2014)

Patent Applications filed

1. Method and device for managing information of social type and for opportunistic forwarding, A. Chaintreau, C. Diot, A. Mtibaa,

EP 2178038 A1 (Apr 21, 2010), US 20100064006 A1 (Mar 11, 2010)

 Devices, system and method for computing an optimal n-dimensional vector of content injection rates for user communication equipments, A. Chaintreau, S. Ioannidis, L. Massoulie

EP 2194690 A1 (Jun 9, 2010)

3. Classifying content, A. Chaintreau, S. Ioannidis, S. Isaacman EP 2434723 A1 (Mar 28, 2012)

Teaching

Columbia University CSEE 4995: Intro to Network And Crowds

Spring 2019 enrollment: 36, median student evaluation: unavailable

Columbia University CSEE 4119: Computer Networks

enrollment: 140, median student evaluation: 4.06/5 Spring 2015 Spring 2014 enrollment: 104, median student evaluation: 4.25/5 Spring 2013 enrollment: 66, median student evaluation: 4.29/5 Spring 2012 enrollment: 88, median student evaluation: 3.95/5

Columbia University COMS 4995: Introduction to Social Networks

Fall 2016 enrollment: 28, median student evaluation: 4.25/5 Fall 2012 enrollment: 23, median student evaluation: 3.83/5 Fall 2011 enrollment: 10, median student evaluation: 4.71/5

Columbia University COMS 6998: Social Networks

Fall 2018 enrollment: 20, median student evaluation: 4.0/5 enrollment: 29, median student evaluation: 4.19/5 Spring 2018 Fall 2014 enrollment: 39, median student evaluation: 4.19/5 Fall 2013 enrollment: 20, median student evaluation: 4.09/5 Spring 2011 enrollment: 12, median student evaluation: not available

Ecole Normale Supérieure, Paris, France

Computer Networks Spring 2010 Spring 2007 Computer Networks

Dual MS CS and Journalism

Chennai Mathematical Institute, Chennai, India

Spring 2001 Introduction to Probability & Statistics.

University Service - As chair

Academic Career Catalyst 2018-- As member of Executive Committee Working Group on Computational Social Science 2018-- As committee member CS Dept Outreach 2017-2018 Data Science New Media Center 2013-2015 CS Dept Students nominations 2013-2014 CS Dept Faculty recruiting 2011-2012 CS Dept Ph.D recruiting 2010-2011

- As track advisor and mentor

CS Master of Science Track Advisor 2010-Egleston Scholar Faculty Mentor 2013-

POSTDOC ADVISOR

- Sandrine Mueller Sep. 2018-Sep. 2020 received Data Science Institute Fellowship - Dorian Mazauric Dec. 2011-Dec. 2012 now Permanent Researcher, INRIA

2012-2016

- Stratis Ioannidis Sep. 2009-Sep. 2010 now Assistant Professor, Northeastern,

Ph.D Supervision	- Yiguang Zhang	Sep. 2018- Finalist for Adobe Rese	B.S. John Hopkins, $M.S.$ Stanford earch Scholarship 2019-2020
	- Roland Maio	Sep. 2018- NSF Graduate Research	$B.S. \ {\rm City} \ {\rm College}$ h Fellowship, SEAS Presidential Fellowship
	- Ana Stoica	Sep. 2016- JP Morgan Fellowship 2	B.S. Princeton U. 2019-2020
	- Mathias Lécuyer	Sep. 2012- Brown Institute Magic	$B.S. \ {\rm Ecole \ Polytechnique}$ Grant Award 2012-2013
	- Christopher Riederer		$B.S. \ {\rm Yale \ U.}$ ship 2012-2013, now Research engineer at Square
	- Arthi Ramachandran	•	h Fellowship, Microsoft Graduate Women's Scholarship
VISITING STUDENT & INTERNS	- Maksym Gabielkov	May 2015-Dec. 2015	INRIA
	- Dimitrios Milioris	Sep. 2014-Dec. 2014	now Post-Doctoral Researcher, U. Helsinki Ecole Polytechnique now Research Associate & Lecturer, MIT
	- Francis Lan	Apr. 2014-Aug. 2014	Ecole Polytechnique now Cognitive Software Engineer IBM Watson
	- Ken Chanseau	Apr. 2014-Aug. 2014	Ecole Normale Supérieure, Paris now MBA, HEC Paris
	- Guillaume Ducoffe	June 2012-Sep. 2012, Mar. 2014-Aug. 2014	Ecole Normale Supérieure, Paris now Ph.D student, INRIA
	Superv	vision before Columb	bia University indicated below:
	- Nikodin Ristanovic - Sibren Isaacman	Mar. 2010-July 2010 Sep. 2009-Jan. 2010	EPFL Princeton U. now Assistant Professor, Loyola U. Maryland
	- Joshua Reich	Oct. 2008-Mar. 2009	Columbia U. now Researcher at AT&T
	- Kin-Wah Kwong	June 2008-Oct. 2008	U. Pennsylvania now Software Engineer at Cisco
	- Stratis Ioannidis	Nov. 2007-Mar. 2008 won student research com	U. of Toronto p. at ACM Mobicom 2008, 2nd prize ACM Grand Finals
	- Vijay Erramilli	May 2006-Oct. 2006	now Assistant Professor, Northeastern Boston U. now Researcher at Telefonica Labs
	- Jiayue He	June 2006-Nov. 2006	Princeton U. now Associate Partner at McKinsey

Undergraduate
SUPERVISIONS

- Vivien Nguyen	Columbia U.	June 2018-present
- Lauren Arnett	Columbia U.	June 2018-present
- Robert Netzorg	Columbia U.	Sep. 2017-present
- Lucy Wang	Columbia U.	Jan. 2016-present
		now Data Scientist, Buzzfeed
- Yunsung Kim	Columbia U.	July 2014-June 2016
	Bashkow Research Award, Fi	nalist CRA Undergraduate Award
		now Ph.D student, Stanford U.
- Larissa Navarro	U. Fed. de Pernambuco	July 2015-Aug. 2015
		now Software Engineer at In Loco Media
- Daniel Echikson	Columbia U.	July 2015-Aug. 2015
	Nominated by Columbia Univ	versity for Marshall Scholarship
- Stephanie Huang	Columbia U.	July 2015-Aug. 2015
		now Software Developer at Redfin
- Cecilia Reyes	Columbia U.	Sep. 2014-June 2015
	Brown Magic Grant	now Google Journalism Fellow
- Coralie Phanord	Dartmouth C.	June 2013-Aug. 2013
		now Engineer at Magnopus
- Jake Cahan	Brown U.	June 2013-Aug. 2013
		now Founder at Debtsy
- Guillaume Ducoffe	PolyTech Nice-Sophia	June 2012-Sep. 2012
	-	now Researcher, ICI Romania

Ph.D Thesis Committees	- Lyudmila Yartseva	Ecole Polytechnique Fédérale de Lausanne, Jan. 2017 Principal advisors: M. Grossglauser
	- Sebastian Zimmeck	Columbia University, CS, Sep. 2016 Principal advisors: S. Bellovin
	- Zeinab Abbassi	Columbia University, CS, Feb. 2016 Principal advisors: V. Misra
	- Evangelia Skiani	Columbia University, EE, June 2015 Principal advisors: P. Jelenkovic
	- Mohamed Kafsi	Ecole Polytechnique Fédérale de Lausanne, May 2015 Principal advisors: M. Grossglauser & P. Thiran
	- Berk Birand	Columbia University, EE, June 2014 Principal advisor: G. Zussman
	- Farid Movahedi Naini	Ecole Polytechnique Fédérale de Lausanne, Mar. 2014 Principal advisors: M. Vetterli & P. Thiran
	- Swapneel Seth	Columbia University, CS, Dec. 2013 Principal advisor: G. Kaiser
	- Maria Gorlatova	Columbia University, EE, Apr. 2013 Principal advisor: G. Zussman
	- Ionut Trestian	Northwestern University, July 2012 Principal advisor: A. Kuzmanovic
	- Nikodin Ristanovic	Ecole Polytechnique Fédérale de Lausanne, June 2012 Principal advisor: J-Y. Le Boudec
	- Joe Wenjie Wang	Princeton University, Jan. 2012 Principal advisors: M. Chiang and J. Rexford
	- Dorian Mazauric	INRIA and Université de Nice, Nov. 2011 Principal advisors: J-C. Bermond and P. Nain
	- Bert Huang	Columbia University, CS, July 2011 Principal advisor: T. Jebara
	- Blake Shaw	Columbia University, CS, July 2011

Principal advisor: T. Jebara