## **Governing Algorithms**

A conference on computation, automation, and control

# Watch all the talks from Governing Algorithms

We are happy to announce that the collection of videos from Governing Algorithms is now complete. The collection includes talks and comments by Paul Dourish, Tarleton Gillespie, Lucas Introna, Evgeny Morozov, Frank Pasquale, Claudia Perlich, Robert Tarjan, and many more.

Catch up with the discussion from the beginning to the end — right here or over at the NYU-MCC Vimeo channel.

If you are interested in the discussion papers, you can find them under the Resources section.

## Opening talks by Robert E. Tarjan and Claudia Perlich now online

© July 3, 2013 ► Resources

The opening talks by Robert E. Tarjan and Claudia Perlich are now online. If you are interested in "Algorithms as a Computer Scientist Sees Them" or want to understand "How Big Data Touches you", the following videos will be a treat.

Discussion: Q&A after Robert E. Tarjan's talk

Discussion: Q&A after Claudia Perlich's talk

We have also added a video section under "Resources", which will be filled with the remaining sessions over the next couple of days.

## Discussion papers updated

If you haven't done so yet, this is probably a good time to check out the wonderful discussion papers the conference speakers submitted. Of course, all contributions are still in draft stage and the authors welcome (and deserve!) any feedback you might have.

As you will see, there are four main papers with two respondents each — an excellent basis for discussion at the conference. Read the discussion papers here.

# Last updates for registered participants

We are already looking forward to welcoming you at New York University this week. Here are a few notes for registered participants to help you prepare for and navigate the conference:

- Access to the building: You will need an ID to enter the Law School buildings. For directions, please see the logistics page.
- **Capacity:** The response has been so enthusiastic that we had to maintain a waiting list. The capacity of the two main venues should be sufficient, but we have secured an overflow room with a live video stream in case it gets too crowded.
- **Discussion papers:** The speaker contributions are now available on the website. Please note that these are draft papers, which should only be shared as indicated by each author.
- Program: You can always find the latest version of the program on our website.
- **Twitter hashtag:** For the Twitter users among you, please use the conference hashtag #govalgo.

See you on Thursday!

## **Conference poster**

If you are based at NYU, you might have seen our swanky-looking conference poster.



Many thanks to Katie Jacoby for her great work.

## What participants recommend you read before the conference

When planning the conference we had the last-minute idea to add a seemingly innocent field to the registration form and ask: "Can you recommend a paper or website that might be of interest to other conference participants?" This turned out to be very productive. About every third person suggested something, resulting in the following list of resources.

Please note that the list is not curated, except for a rough division into media types. Occasionally, we added quotes below the source for context. There is a list of all contributors at the bottom of this post. We will also make sure to update the open reading list accordingly.

Enjoy the ride — there is some really fascinating stuff in there.

#### **Books and research articles**

Aneesh, A. (2009). "Global Labor: Algocratic Modes of Organization," Sociological Theory, 27(4): 347-370.

### "Check out Aneesh's lovely 2009 paper!"

Asaro, Peter (forthcoming 2013). "On Banning Autonomous Lethal Systems: Human Rights, Automation and the Dehumanizing of Lethal Decision-making," Special Issue on New Technologies and Warfare, International Review of the Red Cross.

Blanchette, J.-F. and D. G. Johnson (2002). "Data Retention and the Panoptic Society: The Social Benefits of Forgetfulness," The Information Society 18 (1): 33-45.

Boyd, D. and K. Crawford (2012). "Critical Questions for Big Data: Provocations for a Cultural, Technological, and Scholarly Phenomenon", <a href="http://www.danah.org/papers/2012/BigData-ICS-Draft.pdf">http://www.danah.org/papers/2012/BigData-ICS-Draft.pdf</a>.

Braun, J.A. (forthcoming). "Going Over the Top: Online Television Distribution as Socio-technical System," Communication, Culture & Critique.

Bucher, T. (2012). "Want to Be on the Top? Algorithmic Power and the Threat of Invisibility on Facebook," New Media & Society.

Citron, D. K. (2008). "Technological Due Process," Washington University Law Review 85:1249-1313.

Collins, C. and E. P. Stabler (2011). "A Formalization of Minimalist Syntax," http://ling.auf.net/lingbuzz/001691.

Dixon, B. (1984). "Black Box Blues," The Sciences 24 (March/April).

Donohue, L. K. (2012). "Technological Leap, Statutory Gap, and Constitutional Abyss: Remote Biometric Identification Comes of Age," http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2137838.

Espeland, W. N. and M. L. Stevens (1998). "Commensuration as a Social Process," Annual Review of Sociology, 24: 313-343.

Eubanks, V. (2011). "Ch. 5: Technologies of Citizenship," in: Virginia Eubanks, Digital Dead End: Fighting for Social Justice in the Information Age. Cambridge, MA: MIT Press.

"Her new work has to do with the citizenship effects of the computerization of public services, especially Medicaid, welfare, law enforcement and child protective services."

Galloway, A. R. and E. Thacker (2007). The Exploit: A Theory of Networks. Minneapolis, MN: University of Minnesota Press.

Geiger, R. S. (2011). "The lives of bots," in: Lovink, G., & Tkacz, N. (Eds.). Critical Point of View: A Wikipedia reader. Amsterdam: Institute of Network Cultures. Retrieved from <a href="http://networkcultures.org/wpmu/portal/publications/inc-readers/critical-point-of-view-a-wikipedia-reader/">http://networkcultures.org/wpmu/portal/publications/inc-readers/critical-point-of-view-a-wikipedia-reader/</a>.

Gerlitz, C. and A. Helmond (forthcoming 2013). "The Like economy: Social buttons and the data-intensive web," http://nms.sagepub.com/content/early/2013/02/03/1461444812472322.abstract.

Gillespie, T. (forthcoming 2013). "The Relevance of Algorithms," in: T. Gillespie, P. Boczkowski, and K. Foot (eds), Media Technologies: Essays on Communication, Materiality, and Society. Cambridge, MA: MIT Press.

Guattari, F. (1995). "Machinic heterogenesis," in: Chaosmosis: An ethico-aesthetic paradigm, pp. 33-57. Bloomington, IN: Indiana University Press.

Hilbert, M. (2013). "Big Data for Development: From Information- to Knowledge Societies", http://papers.csrn.com/sol3/papers.cfm?abstract\_id=2205145.

"This is a thorough and balanced overview of what big data could mean for international development. The author points out both the benefits (e.g. better decision-making) and costs (e.g. further loss of privacy; the lack of transparency in algorithms) and argues that it will take a lot of region-specific contextual work to make big data deliver on its promises."

Holling, C. S. (2001). "Understanding the Complexity of Economic, Ecological, and Social Systems," Ecosystems (2001) 4: 390–405.

Hromada, D. D. (forthcoming 2013). "Of foundations of Parallel Democracy Model and of first tentatives to implement it in the cyberspace," Teoria Politica, http://dev.kyberia.cz/id/4750224/data.

Lin, T. C. W. (2013). "The New Investor," 60 UCLA L. Rev. 678, available at http://scholarship.law.ufl.edu/facultypub/189.

Manovich, L. (2011). "There is only Software," http://www.manovich.net/DOCS/Manovich.there\_is\_only\_software.pdf.

Marino, M. C. (2006). "Critical Code Studies", http://www.electronicbookreview.com/thread/electropoetics/codology.

> "This article on 'critical code studies' written by Mark C. Marino has an excellent definition of software-based on algorithms: 'Software, it follows, is a cultural practice made up of (a) algorithms...'"

Miyazaki, S. (2012). "Algorhythmics: Understanding Micro-Temporality in Computational Cultures," Computational Culture, http://computationalculture.net/article/algorhythmics-understanding-micro-temporality-in-computational-cultures.

Poon, M. (2008). "From New Deal Institutions to Capital Markets: Commercial Consumer Risk Scores and the Making of Subprime Mortgage Finance," http://papers.ssrn.com/sol3/papers.cfm? abstract\_id=1458545.

Ridgeway, G. (2013). "The Pitfalls of Prediction," NIJ Journal, Issue 271: 34-40, https://www.ncjrs.gov/pdffiles1/nij/240702.pdf.

"Ridgeway (acting director of the National Institute for Justice) defends the use of predictive policing while also articulating seven common pitfalls of prediction systems."

Roque, A. (2011). "Language Technology Enables a Poetics of Interactive Generation," Journal of Electromic Publishing 14(2), http://dx.doi.org/10.3998/3336451.0014.209.

Schrier, K. and D. Gibson (2010). Ethics and Game Design: Teaching Values Through Play. Hershey, PA: Information Science Reference.

Sweeney, L. (2013). "Discrimination in Online Ad Delivery", http://arxiv.org/abs/1301.6822

"This paper is based on an empirical study of racial discrimination practices embedded in Google AdSense algorithms. Having run an experiment on 2184 racially associated personal names across two websites that run Google AdSense, the author — a Harvard academic — found that names primarily given to black babies are much more likely to bring up ads suggestive of an arrest record. Discussion at Technology Review: http://www.technologyreview.com/view/510646/racism-is-poisoning-online-ad-delivery-says-harvard-professor/."

Thrift, N. (2012). "The insubstantial pageant: producing an untoward land," Cultural Geographies 19(2): 141-168, http://cgj.sagepub.com/content/19/2/141.abstract.

Turing, A. (1950). "Computing machinery and intelligence," Mind, 59: 433-460, http://www.loebner.net/Prizef/TuringArticle.html.

Vertesi, J. and P. Dourish (2011). "The value of data: considering the context of production in data economies," Proceedings of the ACM Conference on Computer-Supported Cooperative Work, 2011, http://dx.doi.org/10.1145/1958824.1958906.

### Blog posts, talks, essays, music

Adam Curtis, All watched over by machines of loving grace, http://vimeo.com/27393748.

"A documentary, even!"

Advertising Analytics 2.0, Harvard Business Review, <a href="http://hbr.org/2013/03/advertising-analytics-20/ar/1">http://hbr.org/2013/03/advertising-analytics-20/ar/1</a> (\$\$\$).

Alberto Toscano, Gaming the plumbing: High-frequency trading and the spaces of capital, http://www.metamute.org/editorial/articles/gaming-plumbing-high-frequency-trading-and-spaces-capital.

Algorithmic Rape Jokes in the Library of Babel, http://quietbabylon.com/2013/algorithmic-rape-jokes-in-the-library-of-babel/.

Big data needs people, leaders and real-time analytics: A Structure:Data 2013 recap, http://gigaom.com/2013/03/22/structuredata-2013-recap/.

Chris W. Anderson, The Materiality of Algorithms, Culture Digitally, http://culturedigitally.org/2012/11/the-materiality-of-algorithms/.

Data Lockers: The Future of Personal Data?, http://www.facegroup.com/personal-data-lockers-the-future-of-data.html.

Evgeny Morozov, The Meme Hustler, http://www.thebaffler.com/past/the\_meme\_hustler.

FMS Symphony by csv soundsystem, http://fms.csvsoundsystem.com/.

Heather Dewey-Hagborg, "Power/Play," Talk at IGNITE NYC 2010, http://www.youtube.com/watch?v=0YPi2WyO1ml.

"Ignite talk on ML algorithms and surveillance. Creators project interview: http://thecreatorsproject.vice.com/blog/artistcollects-and-analyzes-dna-samples-to-create-3dportraits-in-stranger-visions"

Internet Census 2012, Port scanning /0 using insecure embedded devices, http://internetcensus2012.bitbucket.org/paper.html.

Jenna Burrell, The Ethnographer's Complete Guide to Big Data: Small Data People in a Big Data World, http://ethnographymatters.net/2012/05/28/small-data-people-in-a-big-data-world/.

"Part 2 & 3 of this series are linked in this post."

Kevin Slavin, "Those algorithms that govern our lives," Talk at LIFT 2013, http://videos.liftconference.com/video/1177435/kevin-slavin-those-algorithms.

"Slavin's talk is pretty awesome!"

Marcus Wohlsen, How new delivery algorithms will impact our online shopping economy – and the implications that this shift will have 'on the ground', http://www.wired.com/business/2013/03/online-retailers-faster-than-overnight/all/#.UVmAMzZkzFQ.reddit.

Players only Love you when they're Playin': Community as Algorithm in Programmable Poetics, http://elmcip.net/critical-writing/players-only-love-you-when-theyre-playin-community-algorithm-programmable-poetics.

Privacy Protection Techniques Using Differences in Human and Device Sensitivity: Protecting Photographed Subjects against Invasion of Privacy Caused by Unintentional Capture in Camera Images, <a href="http://www.nii.ac.jp/userimg/press\_20121212e.pdf">http://www.nii.ac.jp/userimg/press\_20121212e.pdf</a>.

Sniper/Six/Editions Zones sensibles, http://montenlair.wordpress.com/2013/01/04/sniper-six-editions-zones-sensibles/.

Tanner Teale, Playing Outside: An Algorithm Recital, http://www.tannerteale.com/playingoutside/.

#### Websites

Accountability and Identifiability, <a href="http://dimacs.rutgers.edu/~adj/accountability/">http://dimacs.rutgers.edu/~adj/accountability/</a>

ACLU on Artificial Intelligence, <a href="http://www.aclu.org/node/35703">http://www.aclu.org/node/35703</a>

Claudia Venturelli's blog, http://claudiaventurelli.blogspot.com.ar/

Dissent Magazine, www.dissentmagazine.org

ID3, www.idcubed.org

"Look at the papers on Digital Law – Rule of Law Engine – Social Stack etc.; also Law Lab at Harvard Berkman Center – Computational Term Sheets"

Imprints Research Project, http://imprintsfutures.org/

Journal of Peer Production, <a href="http://peerproduction.net/">http://peerproduction.net/</a>

Julie Cohen's website, www.juliecohen.com

Kaggle, http://www.kaggle.com/

"Kaggle is fun!"

Mammoth Blog, <a href="http://m.ammoth.us/blog/">http://m.ammoth.us/blog/</a>

Mathbabe, <a href="http://mathbabe.org/">http://mathbabe.org/</a>

Nanex's research into High Frequency Trading scandals, http://www.nanex.net/flashcrash/ongoingresearch.html

News at Y Combinator, <a href="https://news.ycombinator.com/">https://news.ycombinator.com/</a>

OTI's policy papers, http://oti.newamerica.net/archives/policydocs/1487

Peter Asaro's website, www.peterasaro.org

Post-Media Lab, www.postmedialab.org

Privacy SOS, http://privacysos.org/blog

Reddit – Algorithms, http://www.reddit.com/r/algorithms

Re-search blog, http://networkcultures.org/wpmu/re-search/

Software Studies Initiative, www.softwarestudies.com

The Status Project, Irational.org, http://status.irational.org/

The New Inquiry, www.thenewinquiry.com

"Covers a tremendous amount of emerging technology from a cultural criticism angle."

Wethedata, http://wethedata.org/

Various algorithm research papers, http://front.math.ucdavis.edu/

#### **Contributors**

Many thanks to C.W. Anderson, Peter Asaro, Fred Benenson, danah boyd, Josh Braun, Georgia Bullen, John Clippinger, Julie Cohen, Kade Crockford, Darius Cuplinskas, Kate Davids, Patrick Davison, Heather Dewey-Hagborg, Mark DuRocher, Virginia Eubanks, Noah Feehan, Joan Feigenbaum, Vera Franz, Jacob Gaboury, Seeta Peña Gangadharan, Bill Garate, Robert Gardner, Tarleton Gillespie, Kevin Gotkin, Melissa Gregg, Benjamin Haber, Paula Helm, Anne Helmond, Daniel Hromada, Margot Kaminski, Prudence Katze, René König, Hari Kunzru, Sarah Leonard, Thomas Levine, Karen Levy, Jen Lowe, Lisa Lucas, Lev Manovich, Francesca Musiani, Monika Norwid, Catherine Oneil, Chris Peterson, Jake Porway, Serge Proulx, Sajan Ravindran, Camille Reyes, David Robinson, Seyyed Ali Sajjadi, Kamron Saniee, Sharla Sava, Joseph Savirimuthu, Joshua Scannell, Suzanna Schmeelk, Carter Schonwald, Karen Schrier, Aaron Schumacher, Geoffrey Schwartz, Phoebe Sengers, Sava Saheli Singh, Jay Stanley, Tanner Teale, Neal Thomas, Claudia Venturelli, Janet Vertesi, Jason Windawi, Tyler Zang, Tengchao Zhou for their contributions.

# Registration update: We're at capacity, but the waiting list is open

Thank you to everyone who already registered for the conference. The response has been overwhelming, and we are now at full capacity. Although it is no longer possible to register directly, we have started a waiting list. Please sign up as before, and we will let you know if and when a space becomes available.

For those who will not be able to come to New York in May, we are currently exploring the possibility of making the talks available online. More on that soon.

## Hello algorithms!

This blog will accompany the Governing Algorithms conference on May 16-17, 2013 at New York University. Over the next few weeks, we hope to use this space for conference updates, logistical announcements, and exciting news around the topic of "governing algorithms".

Besides the usual conference information, this website contains a Resources section. The section features a number of materials that we found useful in preparing for the conference. This includes an open reading list, to which you are more than welcome to contribute, and the provocation piece, which we wrote to stimulate discussion.

Closer to the conference, we will publish here the papers by the four main contributors Tarleton Gillespie, Lucas Introna, Daniel Neyland, and Frank Pasquale. These will be followed by response papers from discussants, including Mike Annany, Kate Crawford, Lisa Gitelman, Moritz Hardt, Matthew Jones, Karrie Karahalios, Martha Poon — and most importantly your comments on this website.

We hope you'll join us on May 16-17, 2013!