

# Sandra González-Bailón

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(last updated: January 2021)

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## Appointments

- 2018-today Associate Professor (with tenure), Annenberg School, University of Pennsylvania.
- 2013-2018 Assistant Professor, Annenberg School, University of Pennsylvania.
- 2008-2013 Research Fellow, Internet Institute & Nuffield College, University of Oxford.
- 2007-2008 Postdoctoral Fellow, Sociology Dept. & Nuffield College, University of Oxford.

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## Education

- 2004-2007 DPhil Sociology, Nuffield College, University of Oxford.  
Thesis: *Mapping Civil Society on the Web: Networks, Alliances and Informational Landscapes*.
- 2003-2004 MSc Sociology (distinction), Lady Margaret Hall, University of Oxford.  
Thesis: *The Role of Dynamic Networks in Social Capital: a Simulation Experiment*.

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## Publications

### A. Books

2. Foucault-Welles, B. and González-Bailón, S. (eds.) (2020). *The Oxford Handbook of Networked Communication*, Oxford: Oxford University Press.
1. González-Bailón, S. (2017). *Decoding the Social World. Data Science and the Unintended Consequences of Communication*, Boston, MA: MIT Press.

### B. Journal Articles

32. González-Bailón, S., and De Domenico, M. (2021). “Bots are Less Central than Verified Accounts during Contentious Political Events”, *Proceedings of the National Academy of Sciences*, forthcoming.
31. Yang, T., Majó-Vázquez, S., Nielsen, R. K., and González-Bailón, S. (2020). “Exposure to News Grows Less Fragmented with an Increase in Mobile Access”, *Proceedings of the National Academy of Sciences*, 117(46): 28678–28683.
30. Lazer, D., Pentland, M. J., A., Watts, D. J., Aral, S., Athey, S., Contractor, N. ., Freelon, D., Gonzalez-Bailon, S., King, G., Margetts, H., Nelson, A., Salganik, M. J., Strohmaier, M., Vespignani, A., and Wagner, C. (2020). "Computational social science: Obstacles and opportunities." *Science*, 369(6507): 1060-1062.
29. Hilbert, M., Barnett, G., Blumenstock, J., Contractor, N., Diesner, J., Frey, S., González-Bailón, S., Lamberson, P.J., Pan, J., Peng, T.Q., Shen, C., Smaldino, P.E., van Atteveldt, W., Waldherr,

- A., Zhang, J., Zhu, J. J. H. (2019). Computational Communication Science: A Methodological Catalyzer for a Maturing Discipline. *International Journal of Communication*, 13: 3912-34.
28. Majó-Vázquez, S., Nielsen, R. K., and González-Bailón, S. (2019). “The Backbone Structure of Audience Networks: A New Approach to Comparing Online News Consumption across Countries”, *Political Communication*, 36(2): 227-240.
27. Piedrahita, P., Borge-Holthoefer, J., Moreno, Y., and González-Bailón, S. (2018). “The Contagion Effects of Repeated Activation in Social Networks”, *Social Networks*, 54, 326-335.
26. Mukerjee, S., Majó-Vázquez, S., and González-Bailón, S. (2018). “Networks of Audience Overlap in the Consumption of Digital News”, *Journal of Communication*, 68(1): 26-50.
25. Majó-Vázquez, S., Cardenal, A.S., and González-Bailón, S. (2017). "Digital News Consumption and Copyright Intervention: Evidence from Spain before and after the 2015 ‘Link Tax’". *Journal of Computer-Mediated Communication*, 22(5): 284–301.
24. Borge-Holthoefer, J., Perra, N., Gonçalves, B., González-Bailón, S., Arenas, A., Moreno, Y., Vespignani, A. (2016). “The Dynamics of Information-Driven Coordination Phenomena: a Transfer Entropy Analysis”, *Science Advances*, 2(4).
23. González-Bailón, S., and Wang, N. (2016). “Networked Discontent. The Anatomy of Protest Campaigns in Social Media”, *Social Networks*, 44: 95-104.
22. Barberá, P., Wang, N., Bonneau, R., Jost, J.T., Nagler, J., Tucker, J., and González-Bailón, S. (2015). “The Critical Periphery in the Growth of Social Protests”, *PLoS ONE*, 10 (11).
21. Mai, B., Liu, J., and González-Bailón, S. (2015). “Network Effects in the Academic Market: Mechanisms for Hiring and Placing Ph.D.s in Communication (2007-2014)”, *Journal of Communication*, 65(3), 558–583.
20. González-Bailón, S., and Paltoglou, G. (2015). “Signals of Public Opinion in Online Communication: A Comparison of Methods and Data Sources”, *ANNALS of the American Academy of Political and Social Science*, 659(1), 95-107.
19. González-Bailón, S., Wang, N., and Borge-Holthoefer, J. (2014). “The Emergence of Roles in Large-Scale Networks of Communication”, *EPJ Data Science*, 3:32.
18. González-Bailón, S., Wang, N., Rivero, A., Borge-Holthoefer, J., Moreno, Y. (2014). “Assessing the Bias in Samples of Large Online Networks”, *Social Networks*, 38(1), 16-27.
17. González-Bailón, S. (2013). “Big Data and the Fabric of Human Geography”, *Dialogues in Human Geography*, 3(3), 292-296.
16. Baños, R., Borge-Holthoefer, J., Wang, N., Moreno, Y., and González-Bailón, S. (2013). “Diffusion Dynamics with Changing Network Composition”, *Entropy* (special issue on *Social Networks and Information Diffusion*), 15(11): 4553-4568.
15. González-Bailón, S. (2013). “Social Science in the Era of Big Data”, *Policy & Internet*, 5(2), 147-160.
14. Borge-Holthoefer, J., Baños, R., González-Bailón, S., and Moreno, Y. (2013). “Cascading Behaviour in Complex Socio-Technical Networks”, *Journal of Complex Networks*, 1(1), 3-24.
13. González-Bailón, S., Borge-Holthoefer, J., and Moreno, Y. (2013). “Broadcasters and Hidden Influentials in Online Protest Diffusion”, *American Behavioral Scientist*, 57(7): 943-965.

12. González-Bailón, S., and Murphy, T. (2013). “The Effects of Social Interactions on Fertility Decline in Nineteenth-Century France: an Agent-Based Simulation Experiment”, *Population Studies*, 67(2), 135-155.
11. González-Bailón, S., Jennings, W., and Lodge, M. (2012). “Politics in the Boardroom: Corporate Pay, Networks and Recruitment of former Parliamentarians, Ministers and Civil Servants in Britain”, *Political Studies*, 61(4), 850-873.
10. González-Bailón, S., Banchs, R., and Kaltenbrunner, A. (2012). “Emotions, Public Opinion and U.S. Presidential Approval Rates: A 5 Year Analysis of Online Political Discussions”, *Human Communication Research*, 38(2): 121-143.
9. González-Bailón, S., Borge-Holthoefer, J., Rivero, A., and Moreno, Y. (2011). “The Dynamics of Protest Recruitment through an Online Network”, *Scientific Reports*, 1, 197.
8. González-Bailón, S., Kaltenbrunner, A., and Banchs, R. (2010). “The Structure of Political Discussion Networks: A Model for the Analysis of Online Deliberation“, *Journal of Information Technology*, 25 (2): 230-243.
7. González-Bailón, S. (2009). “Traps on the Web: the Impact of Economic Resources and Traditional News Media on Online Traffic Flow”, *Information, Communication and Society*, 12 (8): 1140-1173.
6. González-Bailón, S. (2009). “Opening the Black Box of Link Formation: Social Factors Underlying the Structure of the Web”, *Social Networks*, 31(4): 271-280.
5. González-Bailón, S. (2009). “Networks and Mechanisms of Interdependence: Theoretical Developments Beyond the Rational Action Model”, *Revista Internacional de Sociología*, 67(3).
4. González-Bailón, S. (2006). “The role of Dynamic Networks in Social Capital: a Simulation Experiment”, *Papers. Revista de Sociología*, 80: 171-194.
3. González-Bailón, S. (2004). “Artificial Societies? An Introduction to Social Simulation”, *Revista Internacional de Sociología*, n. 39.
2. González-Bailón, S. (2002). “Simulation and Social Change: an Evolutionary Approach”, *Revista Catalana de Sociologia*, n. 18.
1. González-Bailón, S. (2000). “Homo Sociologicus: the Action Guided by Social Norms”, *Revista Catalana de Sociologia*, n. 13.

### C. Book Chapters

11. Majó-Vázquez, S., Nielsen, R., and González-Bailón, S., (2020). “El Consumo de Noticias en Internet y en Redes Sociales en España”, in *Informe sobre la Democracia en España*, Madrid: Fundación Alternativas.
10. Mukerjee, S., González-Bailón, S., (2019). “Social Media Data: Quantitative Analysis”, in Atkinson, P. A. (ed) *SAGE Research Methods Foundations*, London: Sage.
9. Majó-Vázquez, S., and González-Bailón, S., (2018). “Digital News and the Consumption of Political Information”, in Dutton, W.H. and Graham, M. (eds) *Society and the Internet*, 2<sup>nd</sup> Edition. Oxford: OUP.

8. Borge-Holthoefer, J. and González-Bailón, S. (2017). “Scale, Time and Activity Patterns: Advanced Methods for the Analysis of Online Networks”, in Fielding, N., Lee, R., and Blank, G. (eds). *Handbook of Online Research Methods*, Thousand Oaks: Sage.
7. Yang, S. and González-Bailón, S. (2016). “Semantic Networks and the Analysis of Public Opinion”, in Victor, J.N., Lubell, M., and Montgomery, A.H. (eds) *The Oxford Handbook of Political Networks*, Oxford: Oxford University Press.
6. González-Bailón, S. (2015) Social Protest and New Media. In: James D. Wright (editor-in-chief), *International Encyclopaedia of the Social & Behavioral Sciences*, 2nd edition, Vol 22. Oxford: Elsevier. pp. 512–517.
5. Petchler, R., and González-Bailón, S. (2015). “Automated Content Analysis of Online Political Communication”, in Coleman, S. and Freelon, D. (eds) *Handbook of Digital Politics*, London: Edward Elgar.
4. González-Bailón, S. (2014). “Online Networks and Bottom Up Politics”, in Dutton, W.H. and Graham, M. (eds) *Society and the Internet: How Information and Social Networks are Changing our Lives*, Oxford: OUP.
3. González-Bailón, S., Borge-Holthoefer, J., and Moreno, Y. (2014). “Online Networks and the Diffusion of Protest”, in Manzo, G. (ed) *Analytical Sociology: Norms, Actions, and Networks*, London: Wiley.
2. Borge-Holthoefer, J., González-Bailón, S., Rivero, A., and Moreno, Y. (2014). “The Spanish 'Indignados' Movement: Time Dynamics, Geographical Distribution, and Recruitment Mechanisms”, in Agarwal, N., Lim, M., and Wigand, R. (eds) *Online Collective Action: Dynamics of the Crowd in Social Media*, NY: Springer.
1. González-Bailón, S. (2010). “El Papel de las Redes Sociales en el Capital Social y los Experimentos de Simulación”, in Noguera, Jose A. (ed.) *Teoría Sociológica Analítica*, Madrid: CIS [Spanish].

#### D. Book Reviews

8. González-Bailón, S. (2020). *Frenemies: How Social Media Polarizes America*, by Jaime E. Settle, *Journalism and Mass Communication Quarterly*, doi.org/10.1177/1077699020952130.
7. González-Bailón, S. (2019). *Bit by Bit: Social Research in the Digital Age*, by Matthew J. Salganik, *Journal of Mathematical Sociology*, doi.org/10.1080/0022250X.2019.1682802.
6. González-Bailón, S. (2015). *Networked. The New Social Operating System*, by Lee Rainie and Barry Wellman, *Information, Communication, & Society*, 18 (12): 1428-1429.
5. González-Bailón, S. (2014). *Big Data: A Revolution That Will Transform How We Live, Work and Think*, by Kenneth Cukier and Viktor Mayer-Schönberger, *Information Polity*, 19(1-2).
4. González-Bailón, S. (2012). *Everything is Obvious\* Once you Know the Answer* by Duncan J. Watts, *Revista Española de Investigaciones Sociológicas*, v. 137, n. 1 [Spanish].
3. González-Bailón, S. (2008). *Network Power. The Social Dynamics of Globalisation* by David Singh Grewal, *Primera Revista Latinoamericana de Libros*, n. 6 [Spanish].

2. González-Bailón, S. (2006). *On Sociology* by J.H. Goldthorpe and *Social Mechanisms* edited by P. Hedström and R.S. Swedberg, *Papers. Revista de Sociología*, n. 80 [Spanish].
1. González-Bailón, S. (2003). *Dynamic Social Network Modelling and Analysis: Workshop Summary and Papers*, edited by Ronald Breiger, Kathleen Carley and Philippa Pattison, *Journal of Artificial Societies and Social Simulation*, v. 6, n. 4.

#### E. Op-Eds and Commentary

8. González-Bailón, S. and Gorham, A. E. (2018) “Want to Change Facebook? Don’t Delete your Account—Use it for Good”, *Quartz*, <https://qz.com/1244750>, April 4.
7. Corbett-Davies, S., Goel, S., and González-Bailón, S. (2017) “Even Imperfect Algorithms Can Improve the Criminal Justice System. A Way to Combat the Capricious and Biased Nature of Human Decisions”, *The New York Times*, <https://goo.gl/KUB3VU>, December 20.
6. González-Bailón, S. (2016) “Could online ‘slacktivists’ actually help Making a Murderer’s Steven Avery?”, *The Conversation*, <http://goo.gl/rkFaIC>, January 11.
5. González-Bailón, S. and Barberá, P. (2015). “Why Everyone in a Network is Important for Movements – even the Slacktivists”, *Washington Post*, <https://goo.gl/dHeTA4>, November 30.
4. Barberá, P., and González-Bailón, S. (2013). “The Dynamics of Information Diffusion in the Turkish Protests”, *The Monkey Cage*, <http://themonkeycage.org/2013/06/30822/>, June 9.
3. González-Bailón, S. (2013). “15M, ¿nos vemos en las redes?”, *Piedras de Papel*, [www.eldiario.es/piedrasdepapel/vemos-redes-sociales\\_6\\_132346779.html](http://www.eldiario.es/piedrasdepapel/vemos-redes-sociales_6_132346779.html), 14 May.
2. González-Bailón, S. (2013). “From Chiapas to Tahrir: Networks and the Diffusion of Protest”, *World Politics Review*, [www.worldpoliticsreview.com/features/106/mobilizing-dissent-local-protest-global-audience](http://www.worldpoliticsreview.com/features/106/mobilizing-dissent-local-protest-global-audience), 16 April.
1. González-Bailón, S. (2012). “Where did the Revolution Go?”, *Al Jazeera English*, [www.aljazeera.com/indepth/opinion/profile/sandra-gonzalez-bailon.html](http://www.aljazeera.com/indepth/opinion/profile/sandra-gonzalez-bailon.html), 6 April.

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#### Work Submitted or in Progress

- González-Bailón, S., D’Andrea, V., and De Domenico, M. (2021). “Asymmetries in the Spread of News During Massive Political Protests”.
- Mukerjee, S., Yang, T., Stadler, G., and González-Bailón, S. (2018). “What Counts as a Weak Tie? A Comparison of Filtering Techniques to Analyze Co-Exposure Networks”.
- González-Bailón, S., and Xenos, M. (2019). “Surveys Underestimate Online News Exposure: A Comparison of Self-Reported and Observational Data in Nine Countries”.
- Langrock, I., and González-Bailón, S. (2019). “The Gender Divide in Wikipedia: A computational approach to assessing the impact of two feminist interventions”.
- Majo-Vazquez, S., Yang, T., Mukerjee, S., Nielsen, R., and González-Bailón, S., (2020). “Digital News and Reach Inequality: A Comparison of 23 Countries”.

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## Fellowships

- 2020-21 Penn Fellows Program, University of Pennsylvania.
- 2019-20 Lenore Annenberg and Wallis Annenberg Fellowship in Communication, Center for Advanced Study in the Behavioral Sciences, Stanford University, Stanford, CA.
- summer 2019 Weizenbaum Institute for the Networked Society, Berlin, Germany.

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## Grants and Funding

- 2020-2023 PI, NSF Grant (“Behavioral Effects of Exposure to Political Content in Social Media”, \$250,000).
- 2017-2020 PI, NSF Grant (“Digital News and the Consumption of Information Online”, co-PI: Rasmus K. Nielsen, \$130,000).
- 2014 Penn Social Science and Policy Forum course development grant (“The Theory of Networks: How Digital Technologies Shape Collective Behavior and Why it Matters”, with Victor Preciado, \$4,000).
- 2012-2013 John Fell OUP Research Fund Grant (“Public Opinion Indicators in Online Communication”, \$12,300\*).
- 2012-2013 JISC Grant (“Big Data: Demonstrating the Value of the UK Web Domain Dataset for Social Science Research”, with Helen Margetts, Eric Meyer, Scott Hale, and Tom Nicholls, \$130,000\*).
- 2012 Google Research Grant (“Leaders and Followers in Online Activism”, with Helen Margetts and Ning Wang, \$100,000\*).
- 2011 John Fell OUP Research Fund Grant (“Student Protest and Digital Media: The Campaign Against Tuition Fees”, with Michael Biggs, \$11,500\*).
- 2010 John Fell OUP Research Fund Grant (“Social Feedback and the Emergence of Norms in the Production of Online Public Goods”, \$7,700\*).
- 2007-2008 ESRC Postdoctoral Fellowship (“Mapping Civil Society on the Web”, \$111,000\*).

*\*converted from GBP*

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## Teaching

- 2014-2021 *Graduate level:* Introduction to Networks; Media and Social Movements; Data Visualization for Research; Decoding the Social World; Digital News and the Consumption of Information Online; Social Media and Political Information.
- Undergraduate level:* Social Media and Social Life; Big Data and Social Networks Research; Understanding Social Networks; Communication in the Networked Age.
- 2008-13 *Graduate level:* Online Social Networks; Digital Era Government and Politics; Social Research Methods and the Internet.
- Undergraduate level:* Internet Politics.

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## Invited Talks and Keynotes\*

83. Public Policy and Applied Social Science Seminar, Public Policy Department, UCLA, Los Angeles, CA, April 22, 2021 (invitation accepted)
82. Tech + Democracy seminar series, Birkbeck's Centre for Cognition, Computation, & Modelling, University of London, London, UK, April 20, 2021 (invitation accepted).
81. VII Festival de Ciencia Puerto de Ideas, Antofagasta, Chile, April 16, 2021 (invitation accepted)
80. Connected Politics Lab Seminar, University College Dublin, Dublin, Ireland, March 24, 2021 (invitation accepted).
79. Data Science/Computational Social Science Seminar, School of Information, University of Michigan, Ann Arbor, MI, March 4, 2021 (invitation accepted).
78. Women in Network Science (WiNS) Seminar, University of Washington, Seattle, WA, February 24 (invitation accepted).
77. Women in Data Science Conference, Philadelphia, PA, February 11, 2021.
76. Cátedra Theodor Heuss, Friedrich Naumann Foundation for Freedom and Mexico Autonomous Institute of Technology (ITAM), Mexico City, Mexico, January 27, 2021.
75. Institute for Analytical Sociology, Linköping University, Linköping, Sweden, December 17, 2020.
74. Colloquium Series, Department of Communication, University of Bern, Bern, Switzerland, November 25, 2020.
73. Seminar Series, Department of Social Sciences, Universidad de San Andrés, Buenos Aires, Argentina, November 20, 2020.
72. Center for Social Data Analytics, Pennsylvania State University, State College, PA, November 13, 2020.
71. X Festival Puerto de Ideas, Valparaíso, Chile, November 7, 2020.
70. Center for Social Media and Politics Seminar Series, NYU, New York, NY, October 23, 2020.
69. Advancing Science Communication Standing Committee, The National Academies of Sciences, Engineering, and Medicine, October 5, 2020.
68. Colloquium Series, Department of Sociology, Colby College, Waterville, ME, October 1, 2020.
67. Seminar Series, Political Science Department, Simon Fraser University, Vancouver, Canada, April 20, 2020.
66. Center for Social Media and Politics, New York University, New York, NY, April 2, 2020.
65. Fracturing Democracy Conference, University of Wisconsin-Madison, Madison, WI, February 28, 2020.
64. Sawyer Seminar, University of Pittsburgh, December 6, 2019.
63. Computational Social Science Group, Facebook, Menlo Park, CA, November 14, 2019.
62. \* Politics and Computational Social Science, Washington, DC, August 28, 2019.
61. \* Summer School on Computational Social Science, Berlin, Germany, July 25, 2019.
60. Weizenbaum Institute for the Networked Society, Berlin, Germany, July 11, 2019.
59. \* The 11th International ACM Web Science Conference, Boston, MA, June 30, 2019.

58. Big Data in Social Sciences and Public Policy Conference, Mexico City, Mexico, May 16, 2019.
57. Penn Club of Fairfield County, Fairfield, CT, May 2, 2019.
56. Workshop on Politics and YouTube: The Next Big Social Network, Princeton, NJ, April 12, 2019.
55. Computational Social Science Working Group, Columbia University, New York City, NY, March 9, 2019.
54. Workshop on the Future of Media Studies, Tel Aviv University, Tel Aviv, Israel, December 15, 2018.
53. European Symposium on Societal Challenges in Computational Social Science, GESIS Institute for the Social Sciences, Cologne, Germany, December 6, 2018.
52. Alex Trebek Forum, University of Ottawa, Ottawa, Ontario, Canada, November 14, 2018 (invitation accepted).
51. The Duke Network Analysis Center, Duke University, Durham, NC, November 12, 2018.
50. Workshop on Viral Deception, Polarization, and Networks, The Warren Center for Network and Data Science, University of Pennsylvania, Philadelphia, PA, November 3, 2018.
49. CSES Symposium on the Future of the Social Sciences, Cornell Club, New York, NY, October 26, 2018.
48. Information Science Colloquium, Cornell University, Ithaca, NY, October 24, 2018.
47. Master en Ciencias de la Comunicación, Universidad de Santiago de Chile, Chile, July 30, 2018.
46. Escuela de Invierno en Métodos, Universidad Católica del Uruguay, Montevideo, Uruguay, July 23, 2018.
45. Centro de Estudios sobre Medios y Sociedad, Universidad de San Andrés, Buenos Aires, Argentina, July 19, 2018.
44. Beyond Online Data Workshop, International Conference on Web and Social Media (ICWSM), Stanford, CA, June 25, 2018.
43. \* IX Encuentro sobre Complejidad, Universidad Distrital, Bogotá, Colombia, May 8, 2018.
42. MORS/Kellogg Seminar Series, Northwestern University, Evanston, IL, April 26, 2018.
41. Social Media and Citizenship Symposium, University of Michigan, Ann Arbor, MI, March 16, 2018.
40. Computational Social Science Presidential Panel, Eastern Sociological Society Annual Meeting, Baltimore, MD, February 22, 2018.
39. Computational Methods in Communication Science Workshop, Hanover, Germany, February 16, 2018.
38. Department of Sociology and Network Science Institute, Northeastern University, Boston, MA, January 10, 2018.
37. Institute of Mass Communication and Media Research, University of Zurich, Switzerland, December 11, 2017.
36. Media Exposure & Opinion Formation Workshop, USC, Los Angeles, CA, November 11, 2017.
35. Social Media and Political Participation Global Conference, Political Science Department, New York University, New York, NY, November 4, 2017.



34. Major Transitions Workshop, Centre for Interdisciplinary Research, Paris, France, June 29, 2017.
33. Summer Institute in Computational Social Science, Princeton University, Princeton, NJ, June 23, 2017.
32. Re-Computing Social Sciences Workshop, University of California, Davis, CA, May 19, 2017.
31. Computational Social Science Panel, Microsoft Research, New York, NY, May 10, 2017.
30. Network Science Distinguished Lecture Series, Network Science Institute, Northeastern University, Boston, MA, March 29, 2017.
29. Social Media and Political Participation Global Conference, NYU Abu Dhabi, UAE, February 11, 2017.
28. Mastering the Challenges of Our Digital Society Workshop, ETH Zurich, Zurich, Switzerland, November 4, 2016.
27. Sociology Department, Columbia University, New York, NY, October 25, 2016.
26. \* International Conference on Computational Social Science (IC2S2), Northwestern University, Evanston, IL, June 23, 2016.
25. International Workshop on Social Media and Political Participation (SMaPP Global), Florence, Italy, May 23, 2016.
24. Symposium on New Directions in Computational Social Science and Data Science, Simons Institute, UC Berkeley, CA, April 25-26, 2016.
23. \* International Workshop on Research in Computational Social Sciences, GESIS Institute for the Social Sciences, Cologne, Germany, February 23, 2016.
22. \* Big Data and Political Science Conference, Mannheim Centre for European Social Research (MZES), University of Mannheim, Germany, October 23, 2015.
21. Social Media and Political Participation Workshop, Political Science Department, New York University, New York, NY, October 2, 2015.
20. NetSci International Conference, World Trade Centre, Zaragoza, Spain, June 4, 2015.
19. Computational Social Science at the Crossroads: Lessons and Challenges, NetSci International Satellite, World Trade Centre, Zaragoza, Spain, June 2, 2015.
18. \* Computational Social Science Summit, Northwestern University, Evanston, IL, May 16, 2015.
17. School of Communication, Hong Kong Baptist University, Hong Kong, May 8, 2015.
16. Mathematical Institute, University of Oxford, Oxford, UK, April 21, 2014.
15. Interdisciplinary Committee on Organizational Studies, University of Michigan, Ann Arbor, MI, September 19, 2014.
14. School of Journalism and Communication, Renmin University, Beijing, China, July 14, 2014.
13. Amsterdam School of Communication Research, University of Amsterdam, Amsterdam, The Netherlands, June 10, 2014.
12. School of Communication, Northwestern University, Evanston, IL, December 5, 2013.
11. Center for Information Technology Policy, Princeton University, NJ, October 17, 2013.
10. Universitat Oberta de Catalunya, Barcelona, Spain, September 17, 2013.
9. La Pietra Dialogues, New York University Florence, Italy, May 10, 2013.

8. Computing Research Institute, Qatar Foundation, Qatar, February 18, 2013.
7. University of Düsseldorf, Germany, December 13, 2012.
6. The Annenberg School for Communication, University of Pennsylvania, Philadelphia, PA, November 9, 2012.
5. Association of Southern European Economic Theorists, FUE Session, Limassol, Cyprus, November 2, 2012.
4. Higher School of Economics, St. Petersburg, Russia, September 27, 2012.
3. Centre for New Media and Society, New Economic School, Moscow, Russia, March 12, 2012.
2. University of Wolverhampton, Wolverhampton, UK, March 25, 2009.
1. Pompeu Fabra University, Barcelona, Spain, May 14, 2008.

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## Conference Presentations

- 2020 “Surveys Underestimate Online News Exposure: A Comparison of Self-Reported and Observational Data in Nine Countries”, with M. Xenos, *70<sup>th</sup> Annual Conference of the International Communication Association*, Virtual Conference, 21-25 May.
- 2020 “Bot Activity and News Visibility during Contentious Political Events”, with M. De Domenico, *70<sup>th</sup> Annual Conference of the International Communication Association*, Virtual Conference, 21-25 May.
- 2020 “Bridging the Gender Divide in Wikipedia: A Computational Approach to Assessing the Impact of Two Feminist Interventions”, with I. Langrock, *70<sup>th</sup> Annual Conference of the International Communication Association*, Virtual Conference, 21-25 May.
- 2019 “Niche News and Peripheral Fragmentation”, with T. Yang, S. Mukerjee, and S. Majó-Vázquez, *69<sup>th</sup> Annual Conference of the International Communication Association*, Washington, DC, 24-28 May.
- 2019 “Revisiting Ideological Segregation on the Web”, with Alvin Zhou, *69<sup>th</sup> Annual Conference of the International Communication Association*, Washington, DC, 24-28 May.
- 2018 “The Backbone Structure of Audience Networks: a New Approach to Comparing Online News Consumption across Countries”, with S. Majó-Vázquez and R. K. Nielsen, *4<sup>th</sup> International Conference on Computational Social Science (IC2S2)*, Evanston, IL, USA, 12-15 July.
- 2018 “Networks of Audience Overlap in the Consumption of Digital News”, with S. Mukerjee and S. Majó-Vázquez, *4<sup>th</sup> International Conference on Computational Social Science (IC2S2)*, Evanston, IL, USA, 12-15 July.
- 2018 “The Structure of Audience Overlap Networks across Media Environments”, with S. Mukerjee, *XI Political Networks Conference*, Arlington, VA, USA, 6-9 June.
- 2018 “The Consumption of Political News across Media Environments: a Comparison of Patterns in the US, UK, and Spain”, with S. Majó-Vázquez and R. K. Nielsen, *68<sup>th</sup> Annual Conference of the International Communication Association*, Prague, Czech Republic 24-28 May.

- 2018 “What Counts as a Weak Tie? A Comparison of Thresholding Techniques to Analyze Weighted Networks”, with S. Mukerjee, *68<sup>th</sup> Annual Conference of the International Communication Association*, Prague, Czech Republic 24-28 May.
- 2017 “The Contagion Effects of Repeated Activation in Social Networks”, with P. Piedrahita, J. Borge-Holthoefer and Y. Moreno, *67<sup>th</sup> Annual Conference of the International Communication Association*, San Diego, CA, USA, 25-29 May.
- 2017 “Network Methods for the Analysis of Online Data”, *67<sup>th</sup> Annual Conference of the International Communication Association*, San Diego, CA, USA, 25-29 May.
- 2017 “Are Audiences Fragmented in How they Consume News?”, with S. Mukerjee and S. Majó-Vázquez, *67<sup>th</sup> Annual Conference of the International Communication Association*, San Diego, CA, USA, 25-29 May.
- 2016 “Online Media Networks and Audience Flow: Fragmentation in the Production and Consumption of News on the Web”, with S. Majó-Vázquez and A.S. Cardenal, *66<sup>th</sup> Annual Conference of the International Communication Association*, Fukuoka, Japan, 9-13 June.
- 2016 “Scale, Time, and Activity Patterns: Advanced Methods for the Analysis of Online Networks”, with J. Borge-Holthoefer, *66<sup>th</sup> Annual Conference of the International Communication Association*, Fukuoka, Japan, 9-13 June.
- 2016 “The Critical Periphery in the Growth of Social Protests”, with P. Barberá, N. Wang, R. Bonneau, J. Jost, J. Nagler, J. Tucker, *66<sup>th</sup> Annual Conference of the International Communication Association*, Fukuoka, Japan, 9-13 June.
- 2015 “The Critical Periphery in the Growth of Social Protests”, with P. Barberá, N. Wang, R. Bonneau, J. Jost, J. Nagler, J. Tucker, *8<sup>th</sup> Annual Political Networks Conference*, Portland, OR, 17-20 June.
- 2015 “Network Effects in the Academic Market: Mechanisms for Hiring and Placing Ph.D.s in Communication (2007-2014)”, with B. Mai and J. Liu, *65<sup>th</sup> Annual Conference of the International Communication Association*, San Juan, Puerto Rico, 21-25 May.
- 2014 “The Emergence of Roles in Large-Scale Networks of Communication”, with N. Wang and J. Borge-Holthoefer, *7<sup>th</sup> Annual Political Networks Conference*, Montreal, Canada, 28-31 May; *110<sup>th</sup> APSA Annual Meeting*, Washington, DC, 26-31 August.
- 2014 “The Bridges and Brokers of Protest Campaigns using Social Media”, with N. Wang, *64<sup>th</sup> Annual Conference of the International Communication Association*, Seattle, USA, 22-25 May.
- 2014 “Cable News Coverage and Online News Stories: A Large-Scale Comparison of Media Bias”, with G. De Francisci Morales, M. Mendoza, N. Khan, and C. Castillo, *International Communication Association Conference*, Seattle, USA, 22-25 May.
- 2014 “The Self-Organization of Mass Political Protests in the Absence of Media Freedom”, with P. Barberá, *Sunbelt XXXIV*, St.Pete Beach, Florida, USA, 18-23 February.
- 2013 “The Bridges and Brokers of Global Campaigns in the Context of Social Media”, with N. Wang, *Sunbelt XXXIII*, Hamburg, Germany, 21-26 May; *International Network of Analytical Sociologists Conference*, Stockholm, Sweden, 7-8 June; *6<sup>th</sup> Annual Political Networks Conference*, Bloomington, Indiana, 25-29 June.

- 2012 “Broadcasters and Hidden Influentials in Online Protest Diffusion”, with J. Borge-Holthoefer and Y. Moreno, *International Network of Analytical Sociologists Conference*, NYC, U.S. 8-9 June; *5<sup>th</sup> Annual Political Networks Conference*, Boulder, CO, U.S., 13-16 June.
- 2011 “Network Mechanisms and the Collapse of an Online Community” with G. Paltoglou, *4<sup>th</sup> Conference on Analytical Sociology and Social Mechanisms*, Paris, France, 9-10 June; *4<sup>th</sup> Annual Political Networks Conference*, Ann Arbor, MI, U.S., 14-18 June.
- 2010 “Opinion Environments and the Dynamics of Political Discussion: Mechanisms Driving Participation in Ideologically Aligned Debates” with M. Rolfe, *3<sup>rd</sup> Conference on Analytical Sociology and Social Mechanisms*, Barcelona, Spain, 7-8 June.
- 2010 “The Online Response to Offline Disengagement: The Growth of Internet-Enabled Political Discussion Networks (1999-2005)”, *3<sup>rd</sup> Annual Political Networks Conference*, Durham, NC, U.S., 20-21 May.
- 2009 “When the Problem of Collective Action Is Solved: Social Influence, Network Effects, and Participation in an Online Discussion Forum”, *5<sup>th</sup> General ECPR Conference*, Potsdam, Germany, 10-12 September.
- 2009 “The Private Gains of Public Office? Corporate Rewards of former High Public Officials in Britain” with W. Jennings and M. Lodge, *5<sup>th</sup> UK Social Networks Conference*, London, UK, 3-5 July.
- 2009 “Political Discussion Networks and the Structure of Deliberation”, *Harvard Political Networks Conference*, Cambridge, MA, U.S., 11-13 June.
- 2009 “Communities on the Web: Mechanisms Underlying the Emergence of Online Discussion Networks” with A. Kaltenbrunner and R. E. Banchs, *WebSci'09: Society On-Line*, Athens, Greece, 19-21 March.
- 2008 “The Mechanisms of Decentralised Politics. The Structure and Evolution of Online Political Discussion Networks”, *QMSS-2 2008 Workshop on Communication Networks on the Web*, Amsterdam, Netherlands 18-19 December.
- 2008 “When Smaller Families Look Contagious: a Spatial Look at the French Fertility Decline using an Agent-Based Simulation Model” with T. E. Murphy, *The 38<sup>th</sup> World Congress of the International Institute of Sociology*, Budapest, Hungary, 26-30 June; *The 5<sup>th</sup> Conference of the European Social Simulation Association*, Brescia, Italy, 1-5 September.
- 2008 “Labour Market Behaviour, Unconditional Benefits, and Social Mechanisms: An Agent-Based Model” with J. A. Noguera, *The 38<sup>th</sup> World Congress of the International Institute of Sociology*, Budapest, Hungary, 26-30 June.
- 2008 “The Importance of Gaining an Audience: Visibility and Reach on the Web 2.0 Age”, *Politics Web 2.0: an International Conference*, Royal Holloway, London, UK, 17-18 April.
- 2008 “The Inner Digital Divide: How the Web Contributes (or not) to Political Equality”, *Sunbelt XXVIII International Social Network Conference*, St Pete Beach, Florida, U.S., 22-27 January; *General Online Research Conference*, Hamburg, Germany, 10-12 March.
- 2007 “The Structure of the Political Domain: Hierarchy and Prestige on the Web”, *Sunbelt XXVII International Social Network Conference*, Corfu, Greece, 1-6 May.

2006 “Asymmetries on the Web: Hierarchy and Prestige in the Political Domain”, *3<sup>rd</sup> Conference on Applications of Social Network Analysis*, Zurich, Switzerland, 5-6 October.

2005 “On the Mechanisms Underlying Social Capital Networks: a Simulation Experiment” with Josep M. Pujol, *European Social Simulation Association Conference*, Koblenz, Germany, 6-9 September.

2005 “Social Capital and the Analysis of Civil Societies: an Account of Theoretical, Methodological and Empirical Flaws”, *The 37th World Congress of the International Institute of Sociology*, Stockholm, Sweden, 5-9 July.

2005 “The Role of Dynamic Networks in Social Capital: a Simulation Experiment”, *The 37th World Congress of the International Institute of Sociology*, Stockholm, Sweden, 5-9 July.

2004 “Social Capital and the role of Dynamic Networks: a Conceptual Clarification in the Field of Political Participation”, *Social Capital ECSR Summer School*, Trento, Italy, 22-27 August.

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## Graduate Student Advising

- Committee chair:
  - Isabelle Langrock (Penn, ASC), current.
  - Alvin Zhou (Penn, ASC), current.
  - Tian Yang (Penn, ASC), current.
  - Subhayan Mukerjee (Penn, ASC), 2015-2020. (Now: Assistant Professor at the National University of Singapore).
  - Yilang Peng (Penn, ASC), 2014-2019. (Now: Assistant Professor at the University of Georgia).
- Committee member:
  - Ryan Gallagher, Northeastern University, Network Science Institute, current.
  - Katarzyna Elliott-Maksymowicz, Drexel University, Communication, current.
  - Sean Fischer, Penn, ASC, current.
  - Kristin Shumaker, Penn, ASC, current.
  - Soojong Kim, Penn, ASC, 2015-2020. (Now: Postdoctoral Fellow, Program on Democracy and the Internet & Digital Civil Society Lab, Stanford University.)
  - Vincent Hopkins, Simon Fraser University, Political Science, 2016-2020. (Now: Senior Behavioral Scientist, Government of British Columbia.)
  - Viviana Wu, Penn, School of Social Policy and Practice, 2016-2020. (Now: Assistant Professor at the University of Massachusetts, Amherst.)
  - Ashley Gorham, Penn, Political Science, 2014-2019. (Now: Postdoctoral Researcher at Princeton University.)
  - Danny Kim, Penn, ASC, 2015-2019. (Now: Data Scientist, Whip Media Group.)
  - Seongho An, Penn, School of Social Policy and Practice, 2014-2019. (Now: Assistant Professor at the University of Central Florida.)
  - Kecheng Fang, Penn, ASC, 2014-2019. (Now: Assistant Professor at the Chinese University of Hong Kong.)

- Sijia Young, Penn, ASC, 2014-2019. (Now: Assistant Professor at University of Wisconsin-Madison.)
- Dror Walter, Penn, ASC, 2014-2018. (Now: Assistant Professor at Georgia State University.)
- Joshua Becker, Penn, ASC, 2014-2018. (Now: Postdoctoral Researcher at Northwestern University.)
- Sílvia Majó-Vázquez, UOC, IN3, 2014-2017. (Now: Research Fellow at the University of Oxford.)
- Thesis examiner:
  - Lucio Wasserman, Universidad de San Andrés, Argentina, 2020 (MPhil).
  - Felix Muench, Queensland University of Technology, Australia, 2018 (PhD).
  - Sanne Kruike-meier, University of Amsterdam, Netherlands, 2014 (PhD).

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## Undergraduate Student Advising

- Communications Major Honors Thesis:
  - Shelley Shim (Penn, ASC), 2017-2018
  - Donna Lee (Penn, ASC), 2015-2016
  - Minji Kwak (Penn, ASC), 2015-2016

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## Service

### *Advisory Roles*

- 2020-today Executive Board, Facebook Election 2020 Project.
- 2019-today Scientific Advisory Board, GESIS – Leibniz-Institute for the Social Sciences, Germany.
- 2018-today Disinformation and Election Integrity Committee, Social Science One.
- 2016-today Steering Committee, International Conference on Computational Social Science (IC2S2).

### *Promotion and Tenure Reviews*

- 2019 Cornell University.
- 2018 University of Oxford.

### *Peer Review and Editorial Work*

- 2020-today Board of Reviewing Editors, *Science*.
- 2020-today Editorial Board, *Journal of Quantitative Description: Digital Media*.
- 2018-today Associate Editor, *The International Journal of Press/Politics*.
- 2018-today Editorial Board, *Computational Communication Research*.
- 2017-today Associate Editor, *EPJ Data Science*.
- 2015-today Associate Editor, *Social Networks*.

- 2007-today Occasional reviewer for the *British Journal of Political Science*, *British Journal of Sociology*, *Communication Research*, *EPJ Data Science*, *Human Communication Research*, *International Journal of Communication*, *Journal of Computer-Mediated Communication*, *Journal of Communication*, *Journal of Information Technology & Politics*, *Journal of Public Policy*, *Journalism*, *New Media and Society*, *Oxford University Press*, *Physica A*, *Physical Review E*, *PNAS*, *Political Communication*, *PlosOne*, *Public Administration*, *Scientific Reports*, *Social Networks*.
- 2018-19 Social Sciences Committee, State Research Agency, Spanish Ministry of Science.
- 2013-18 Associate Editor, *Revista Internacional de Sociología*.
- 2009-14 Editor, *Policy & Internet*, Wiley-Blackwell.
- 2005-09 Book Review Editor, *Basic Income Studies. An international journal of basic income research*.

### *Conference Organization*

- 2020 Organizing Committee, The Annual Politics and Computational Social Science Conference (PaCSS), Virtual Conference, 10-14 August.
- 2019 General Chair, *5<sup>th</sup> International Conference on Computational Social Science*, Amsterdam, The Netherlands, 17-20 July.
- 2019 Program Committee, Web and Society track, *The Web Conference*, San Francisco, CA, 13-17 May.
- 2018 Senior Program Committee, *12<sup>th</sup> International AAAI Conference on Web and Social Media*, Stanford, CA, 25-28 June.
- 2018 Senior Program Committee, *International Conference on Network Science*, Paris, France, 11-15 June.
- 2017 Program Committee, *European Symposium on Societal Challenges in Computational Social Science*, London, UK, 15-17 November.
- 2017 Program Co-Chair, *3<sup>rd</sup> International Conference on Computational Social Science*, Cologne, Germany, 10-13 July.
- 2017 Program Co-Chair, *11<sup>th</sup> International AAAI Conference on Web and Social Media*, Montreal, Canada, 15-18 May.
- 2016 Senior Program Committee, *10<sup>th</sup> International AAAI Conference on Web and Social Media*, Cologne, Germany, 18-20 May.
- 2015 Co-Organizer, *Scholars Symposium on Digital Culture*, Annenberg School for Communication, University of Pennsylvania, Philadelphia, 4 December.
- 2015 Senior Program Committee, *9<sup>th</sup> International AAAI Conference on Web and Social Media*, Oxford, UK, 26-29 May.
- 2015 Program Committee, *24<sup>th</sup> International World Wide Web Conference (WWW15)*, Crowdsourcing Systems and Social Media Track, Florence, Italy, 18-22 May.

- 2014 Program Committee, *6<sup>th</sup> International Conference on Social Informatics (SocInfo)*, Barcelona, Spain, 10-13 November.
- 2014 Organizing Committee, *Computational Social Science: Contagion, Collective Behavior, and Networks*, ECCS'14, Luca, Italy, 24-25 September.
- 2014 Organizing Committee, *Internet, Politics, Policy: Crowdsourcing for Politics and Policy*, Oxford University, UK, 25-26 September.
- 2014 Program Committee, *Social Media and Social Movements*, Higher School of Economics, St. Petersburg, Russia, 17-19 September.
- 2014 Organizing Committee, *Web Science Conference*, Indiana University, US, 23-26 June.
- 2013 Organizing Committee, *6<sup>th</sup> Annual Political Networks Conference*, Indiana University, US, 25-29 June.
- 2012 Organizing Committee, *Internet, Politics, Policy: Big Data, Big Challenges?*, Oxford University, UK, 20-21 September.
- 2010 Organizing Committee, *Internet, Politics, Policy: an Impact Assessment*, Oxford University, UK, 16-17 September.
- 2009 Program Committee, *ACM Web Science Conference*, Athens, Greece, 19-21 March.
- 2008-2013 Co-convener, OII-Nuffield Networks Seminar Series.

#### *Fellowship and Award Committees*

- 2020-21 Center for Advanced Study in the Behavioral Sciences (CASBS) fellowship selection committee.
- 2015-16 Best Graduate Student Conference Paper Committee member, Political Networks Section of the American Political Science Association.
- 2014 Award Committee for Best Paper at the *European Social Networks Conference*, Barcelona, Spain, July 1-4.
- 2013-15 Best Conference Paper Committee Chair, Political Networks Section of the American Political Science Association.

#### *University Committees*

- 2020-21 ASC, Executive Committee.
- 2020-21 ASC, Graduate Studies and Admissions Committee.
- 2018-19 ASC, Third Year Review Committee.
- 2017-19 Penn, Graduate Council of the Faculties.
- 2018-19 ASC, Diversity Committee.
- 2014-19 ASC, Undergraduate Advisory Committee.
- 2014-18 ASC, Graduate Studies and Admissions Committee.
- 2016-17 Penn, Provost Office's Council on Research.
- 2015-16 ASC, Gerbner Post Doc Selection Committee.
- 2014-15 Penn, Program on Democracy, Citizenship, and Constitutionalism Planning Committee.



2013-14      ASC, Academic Freedom Committee.  
2013-14      ASC, IT Committee.

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