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The non-existent average individual

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Bibliography

- aan het Rot, M., Hogenelst, K., & Schoevers, R. A. (2012). Mood disorders in everyday life: A systematic review of experience sampling and ecological momentary assessment studies. *Clinical Psychology Review, 32*(6), 510–523. doi:10.1016/j.cpr.2012.05.007
- Aarts, S., Winkens, B., & van Den Akker, M. (2012). The insignificance of statistical significance. *European Journal of General Practice, 18*(1), 50–52. doi:10.3109/13814788.2011.618222
- Abadi, M., Agarwal, A., Barham, P., Brevdo, E., Chen, Z., Citro, C., ... Zheng, X. (2016). *TensorFlow: Large-Scale Machine Learning on Heterogeneous Distributed Systems* (Tech. Rep. No. arXiv:1603.04467 [cs.DC]).
- Abbot, E. A. (1884). *Flatland: A Romance of Many Dimensions*. London: Seeley & Co.
- Abdel-Khalek, A. M. (2006). Measuring happiness with a single-item scale. *Social Behavior and Personality: an international journal, 34*(2), 139–150. doi:10.2224/sbp.2006.34.2.139
- Allport, G. W. (1937). *Personality: a psychological interpretation*. Oxford: Henry Holt and Company.
- Almalki, M., Gray, K., & Sanchez, F. M. (2015). The use of self-quantification systems for personal health information: big data management activities and prospects. *Health Information Science and Systems, 3*(Suppl. 1), S1. doi:10.1186/2047-2501-3-S1-S1

- Amazon.com Inc. (2014). *Boto 3 Documentation*. Retrieved 2018-01-10, from <http://boto3.readthedocs.io/>
- American Psychiatric Association. (2013). *The Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). American Psychiatric Pub.
- Amminger, G. P., Mechelli, A., Rice, S., Kim, S.-W., Klier, C. M., McNamara, R. K., ... Schäfer, M. R. (2015). Predictors of treatment response in young people at ultra-high risk for psychosis who received long-chain omega-3 fatty acids. *Translational Psychiatry*, 5(1), e495. doi:10.1038/tp.2014.134
- Andreescu, C., Mulsant, B. H., Houck, P. R., Whyte, E. M., Mazumdar, S., Dombrowski, A. Y., ... Reynolds, C. F. (2008). Empirically Derived Decision Trees for the Treatment of Late-Life Depression. *American Journal of Psychiatry*, 165(7), 855–862. doi:10.1176/appi.ajp.2008.07081340
- Andreu-Perez, J., Leff, D. R., Ip, H. M. D., & Yang, G.-Z. (2015). From Wearable Sensors to Smart Implants – Toward Pervasive and Personalized Healthcare. *IEEE Transactions on Biomedical Engineering*, 62(12), 2750–2762. doi:10.1109/TBME.2015.2422751
- Areà, P. A., Hoa Ly, K., & Andersson, G. (2016). Mobile technology for mental health assessment. *Dialogues in clinical neuroscience*, 18(2), 163–169.
- Arrindell, W. A., & Ettema, J. H. M. (1986). *SCL-90. Handleiding bij een multidimensionale psychopathologie indicator*. Lisse: Swets & Zeitlinger.
- Askland, K. D., Garnaat, S., Sibrava, N. J., Boisseau, C. L., Strong, D., Mancebo, M., ... Eisen, J. (2015). Prediction of remission in obsessive compulsive disorder using a novel machine learning strategy. *International Journal of Methods in Psychiatric Research*, 24(2), 156–169. doi:10.1002/mpr.1463
- Augspurger, T., Bartak, C., Cloud, P., Hayden, A., Hoyer, S., McKinney, W., ... Pandas developers (2018). *Python Data Analysis Library*. Retrieved 2018-01-10, from <http://pandas.pydata.org/>
- Austen, K. (2015). What could derail the wearables revolution? *Nature*, 525(7567), 22–24. doi:10.1038/525022a

- Baca-García, E., Perez-Rodriguez, M. M., Basurte-Villamor, I., Saiz-Ruiz, J., Leiva-Murillo, J. M., de Prado-Cumplido, M., ... de Leon, J. (2006). Using data mining to explore complex clinical decisions: A study of hospitalization after a suicide attempt. *The Journal of clinical psychiatry*, 67(7), 1124–1132.
- Baca-García, E., Perez-Rodriguez, M. M., Saiz-Gonzalez, D., Basurte-Villamor, I., Saiz-Ruiz, J., Leiva-Murillo, J. M., ... de Leon, J. (2007). Variables associated with familial suicide attempts in a sample of suicide attempters. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 31(6), 1312–1316. doi:10.1016/j.pnpbp.2007.05.019
- Backhouse, S. H., Ekkekakis, P., Biddle, S. J., Foskett, A., & Williams, C. (2007). Exercise Makes People Feel Better but People are Inactive: Paradox or Artifact? *Journal of Sport and Exercise Psychology*, 29(4), 498–517. doi:10.1123/jsep.29.4.498
- Barlow, D. H., & Nock, M. K. (2009). Why Can't We Be More Idiographic in Our Research? *Perspectives on Psychological Science*, 4(1), 19–21. doi:10.1111/j.1745-6924.2009.01088.x
- Baron-Cohen, S., & Wheelwright, S. (2004). The Empathy Quotient: An Investigation of Adults with Asperger Syndrome or High Functioning Autism, and Normal Sex Differences. *Journal of Autism and Developmental Disorders*, 34(2), 163–175. doi:10.1023/B:JADD.0000022607.19833.00
- Bauer, S., de Niet, J., Timman, R., & Kordy, H. (2010). Enhancement of care through self-monitoring and tailored feedback via text messaging and their use in the treatment of childhood overweight. *Patient Education and Counseling*, 79(3), 315–319. doi:10.1016/j.pec.2010.03.014
- Bellanger, M. (1984). *Digital Processing of Signals: Theory and Practice* (3rd ed.). New York, NY: Wiley.
- Bellman, R. (1961). *Adaptive control processes: A guided tour*. London: Princeton University Press.
- Ben-David, A. (2007). A lot of randomness is hiding in accuracy. *Engineering Applications of Artificial Intelligence*, 20(7), 875–885. doi:10.1016/j.engappai.2007.01.001

- Benkeser, D., Ju, C., Lendle, S. D., & van der Laan, M. J. (2016). *Online Cross-Validation-Based Ensemble Learning* (Tech. Rep. No. 355). Berkeley: Division of Biostatistics, University of California, Berkeley.
- Bergstra, J., & Bengio, Y. (2012). Random Search for Hyper-Parameter Optimization. *Journal of Machine Learning Research*, 13(Feb), 281–305. doi:10.1162/153244303322533223
- Bevelander, K. E., Kaipainen, K., Swain, R., Dohle, S., Bongard, J. C., Hines, P. D. H., & Wansink, B. (2014). Crowdsourcing Novel Childhood Predictors of Adult Obesity. *PLoS One*, 9(2), e87756. doi:10.1371/journal.pone.0087756
- Bijl, R. V., Ravelli, A., & van Zessen, G. (1998). Prevalence of psychiatric disorder in the general population: results of the Netherlands Mental Health Survey and Incidence Study (NEMESIS). *Social Psychiatry and Psychiatric Epidemiology*, 33(12), 587–595. doi:10.1007/s001270050098
- Blaauw, F. J., Schenk, H. M., Jeronimus, B. F., van der Krieke, L., de Jonge, P., Aiello, M., & Emerencia, A. C. (2016). Let's get Physiquial – An intuitive and generic method to combine sensor technology with ecological momentary assessments. *Journal of Biomedical Informatics*, 63, 141–149. doi:10.1016/j.jbi.2016.08.001
- Blaauw, F. J., van der Krieke, L., Bos, E. H., Emerencia, A. C., Jeronimus, B. F., Schenk, M., ... de Jonge, P. (2014). HowNutsAreTheDutch: Personalized feedback on a national scale. In *Aaai fall symposium on expanding the boundaries of health informatics using ai (hiai'14): Making personalized and participatory medicine a reality* (pp. 6–10). doi:10.13140/2.1.4203.1683
- Blaauw, F. J., van der Krieke, L., de Jonge, P., & Aiello, M. (2014). Leefplezier: Personalized well-being. *IEEE Intelligent Informatics Bulletin*, 15(1), 28–29.
- Blaauw, F. J., van der Krieke, L., Emerencia, A. C., Aiello, M., & de Jonge, P. (2017a). *Personalized advice for enhancing well-being using automated impulse response analysis — AIRA* (Tech. Rep.). Groningen: University of Groningen.
- Blaauw, F. J., van der Krieke, L., Emerencia, A. C., Aiello, M., & de Jonge, P. (2017b). Personalized advice for enhancing well-being using automated impulse response analysis – AIRA. *Submitted for publication*.

- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary Methods: Capturing Life as it is Lived. *Annual Review of Psychology*, *54*(1), 579–616. doi:10.1146/annurev.psych.54.101601.145030
- Booij, S. H., Bos, E. H., Bouwmans, M. E. J., van Faassen, M., Kema, I. P., Oldehinkel, A. J., & de Jonge, P. (2015). Cortisol and α -Amylase Secretion Patterns between and within Depressed and Non-Depressed Individuals. *PLoS One*, *10*(7), e0131002. doi:10.1371/journal.pone.0131002
- Borsboom, D., Cramer, A. O. J., Schmittmann, V. D., Epskamp, S., & Waldorp, L. J. (2011). The Small World of Psychopathology. *PLoS One*, *6*(11), e27407. doi:10.1371/journal.pone.0027407
- Borsboom, D., Rhemtulla, M., Cramer, A. O. J., van der Maas, H. L. J., Scheffer, M., & Dolan, C. V. (2016). Kinds versus continua: a review of psychometric approaches to uncover the structure of psychiatric constructs. *Psychological Medicine*, *46*(8), 1567–1579. doi:10.1017/S0033291715001944
- Bos, F. M., Blaauw, F. J., Snippe, E., Van der Krieke, L., de Jonge, P., & Wichers, M. C. (2017). Exploring the emotional dynamics of subclinically depressed individuals with and without anhedonia: an experience sampling study. *Journal of Affective Disorders*, *228*(2018), 186–193. doi:10.1016/j.jad.2017.12.017
- Bottou, L., Curtis, F. E., & Nocedal, J. (2016). *Optimization Methods for Large-Scale Machine Learning* (Tech. Rep. No. arXiv:1606.04838 [stat.ML]).
- Bottou, L., & Le Cun, Y. (2005). On-line learning for very large data sets. *Applied Stochastic Models in Business and Industry*, *21*(2), 137–151. doi:10.1002/asmb.538
- Bouguettaya, A., Medjahed, B., Ouzzani, M., Casati, F., Liu, X., Wang, H., ... Bena-tallah, B. (2017). A service computing manifesto. *Communications of the ACM*, *60*(4), 64–72. doi:10.1145/2983528
- Bousman, C. A., Forbes, M., Jayaram, M., Eyre, H., Reynolds, C. F., Berk, M., ... Ng, C. (2017). Antidepressant prescribing in the precision medicine era: a prescriber's primer on pharmacogenetic tools. *BMC Psychiatry*, *17*(1), 1–7. doi:10.1186/s12888-017-1230-5

- Bouwman, M. E. J., Bos, E. H., Booij, S. H., van Faassen, M., Oldehinkel, A. J., & de Jonge, P. (2015). Intra- and inter-individual variability of longitudinal daytime melatonin secretion patterns in depressed and non-depressed individuals. *Chronobiology International*, 32(3), 441–446. doi:10.3109/07420528.2014.973114
- Box, G., & Jenkins, G. M. (1976). *Time Series Analysis - Forecasting and Control* (2nd ed.). Oakland, CA: Holden-Day.
- Brabham, D. C. (2008). Crowdsourcing as a Model for Problem Solving: An Introduction and Cases. *Convergence: The International Journal of Research into New Media Technologies*, 14(1), 75–90. doi:10.1177/1354856507084420
- Bradley, M. M., & Lang, P. J. (2007). Motivation and emotion. In J. T. Cacioppo, L. G. Tassinary, & G. Berntson (Eds.), *Handbook of psychophysiology* (1st ed., pp. 581–607). Cambridge: Cambridge University Press.
- Brandt, P., & Williams, J. (2007). *Multiple Time Series Models* (148th ed.) (No. 148). Thousand Oaks, CA: SAGE Publications, Inc. doi:10.4135/9781412985215
- Bringmann, L. F., Vissers, N., Wichers, M. C., Geschwind, N., Kuppens, P., Peeters, F., ... Tuerlinckx, F. (2013). A Network Approach to Psychopathology: New Insights into Clinical Longitudinal Data. *PLoS One*, 8(4), e60188. doi:10.1371/journal.pone.0060188
- Bromet, E. J., Andrade, L. H., Hwang, I., Sampson, N. A., Alonso, J., de Girolamo, G., ... Kessler, R. C. (2011). Cross-national epidemiology of DSM-IV major depressive episode. *BMC Medicine*, 9(1), 90. doi:10.1186/1741-7015-9-90
- Brooks, D. (2013, May 23). Heroes of Uncertainty. *The New York Times*, A19.
- Brose, A., Voelke, M. C., Lövdén, M., Lindenberger, U., & Schmiedek, F. (2015). Differences in the Between-Person and Within-Person Structures of Affect Are a Matter of Degree. *European Journal of Personality*, 29(1), 55–71. doi:10.1002/per.1961
- Brouwer, W., Oenema, A., Raat, H., Crutzen, R., de Nooijer, J., de Vries, N. K., & Brug, J. (2010). Characteristics of visitors and revisitors to an Internet-delivered computer-tailored lifestyle intervention implemented for use by the general public. *Health Education Research*, 25(4), 585–595. doi:10.1093/her/

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- Cairney, J., Veldhuizen, S., Vigod, S., Streiner, D. L., Wade, T. J., & Kurdyak, P. (2014). Exploring the social determinants of mental health service use using intersectionality theory and CART analysis. *Journal of Epidemiology and Community Health*, *68*(2), 145–150. doi:10.1136/jech-2013-203120
- Canfora, G., & Di Penta, M. (2009). Service-Oriented Architectures Testing: A Survey. In A. de Lucia & F. Ferrucci (Eds.), *Software engineering* (1st ed., pp. 78–105). Springer Berlin Heidelberg. doi:10.1007/978-3-540-95888-8_4
- Carrer-Neto, W., Hernández-Alcaraz, M. L., Valencia-García, R., & García-Sánchez, F. (2012). Social knowledge-based recommender system. Application to the movies domain. *Expert Systems with Applications*, *39*(12), 10990–11000. doi:10.1016/j.eswa.2012.03.025
- Case, M. A., Burwick, H. A., Volpp, K. G., & Patel, M. S. (2015). Accuracy of Smartphone Applications and Wearable Devices for Tracking Physical Activity Data. *JAMA*, *313*(6), 625. doi:10.1001/jama.2014.17841
- Catmull, E., & Rom, R. (1974). A Class of Local Interpolating Splines. In R. E. Barnhill & R. F. Riesenfeld (Eds.), *Computer aided geometric design* (1st ed., pp. 317–326). New York, NY: Academic Press, Inc. doi:10.1016/B978-0-12-079050-0.50020-5
- Centraal Bureau voor de Statistiek. (2014). *Langer leven, maar meer jaren met lichte lichamelijke beperkingen*. Retrieved 2015-05-01, from <http://www.cbs.nl/nl-NL/menu/themas/gezondheid-welzijn/publicaties/artikelen/archief/2014/2014-4135-wm.htm>
- Centraal Bureau voor de Statistiek. (2015). *9 in 10 people access the internet every day*. Retrieved 2017-06-11, from <https://www.cbs.nl/en-gb/news/2015/11/9-in-10-people-access-the-internet-every-day>
- Centraal Bureau voor de Statistiek. (2017). *Bevolkingsteller*. Retrieved 2017-07-20, from <https://www.cbs.nl/nl-nl/visualisaties/bevolkingsteller>
- Chambaz, A., & Desagulier, G. (2015). Predicting Is Not Explaining: Targeted

- Learning of the Dative Alternation. *Journal of Causal Inference*, 4(1), 1–30. doi:10.1515/jci-2014-0037
- Chambaz, A., Drouet, I., & Thalabard, J.-C. (2014). Causality, a Trialogue. *Journal of Causal Inference*, 2(2), 41. doi:10.1515/jci-2013-0024
- Chandrashekar, G., & Sahin, F. (2014). A survey on feature selection methods. *Computers & Electrical Engineering*, 40(1), 16–28. doi:10.1016/j.compeleceng.2013.11.024
- Chang, R. M., Kauffman, R. J., & Kwon, Y. (2014). Understanding the paradigm shift to computational social science in the presence of big data. *Decision Support Systems*, 63(1), 67–80. doi:10.1016/j.dss.2013.08.008
- Chatfield, C. (1996). *The Analysis of Time Series: An Introduction* (5th ed.). London: Chapman and Hall/CRC. doi:1147733
- Chawla, N. V., Bowyer, K. W., Hall, L. O., & Kegelmeyer, W. P. (2011). SMOTE: Synthetic Minority Over-sampling Technique. *Journal Of Artificial Intelligence Research*, 16, 321–357. doi:10.1613/jair.953
- Check Hayden, E. (2014). Technology: The \$1,000 genome. *Nature*, 507(7492), 294–295. doi:10.1038/507294a
- Chekroud, A. M., Zotti, R. J., Shehzad, Z., Gueorguieva, R., Johnson, M. K., Trivedi, M. H., ... Corlett, P. R. (2016). Cross-trial prediction of treatment outcome in depression: a machine learning approach. *The Lancet Psychiatry*, 3(3), 243–250. doi:10.1016/S2215-0366(15)00471-X
- Chen, P.-W., Wang, J.-Y., & Hahn-Ming Lee. (2004). Model selection of SVMs using GA approach. In *2004 IEEE International Joint Conference on Neural Networks* (Vol. 3, pp. 2035–2040). Budapest, Hungary: IEEE. doi:10.1109/IJCNN.2004.1380929
- Chen, T., & Guestrin, C. (2016). *XGBoost: Reliable Large-scale Tree Boosting System* (Tech. Rep. No. arXiv:1603.02754 [cs.LG]). doi:10.1145/2939672.2939785
- Christensen, H., Griffiths, K., & Evans, K. (2002). *e-Mental Health in Australia: Implications of the Internet and Related Technologies for Policy*. ISC Discussion Paper No 3. (Tech. Rep.). Canberra: Commonwealth Department of Health and Ageing.

doi:10.1037/e677122010-001

- Clark, L. A., & Watson, D. (1991). *Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications*. (Vol. 100) (No. 3). US: American Psychological Association. doi:10.1037/0021-843X.100.3.316
- Clark, L. A., Watson, D., & Reynolds, S. (1995). Diagnosis and Classification of Psychopathology: Challenges to the Current System and Future Directions. *Annual Review of Psychology*, 46(1), 121–153. doi:10.1146/annurev.ps.46.020195.001005
- Clarke, P. J., Marshall, V. W., Ryff, C. D., & Wheaton, B. (2001). Measuring Psychological Well-Being in the Canadian Study of Health and Aging. *International Psychogeriatrics*, 13(Suppl. 1), 79–90. doi:10.1017/S1041610202008013
- Cleophas, T. J., & Zwinderman, A. H. (2014). *Machine Learning in Medicine* (Vol. 49). Cham: Springer International Publishing. doi:10.1007/978-3-319-07413-9
- Cohen, J. (1960). A Coefficient of Agreement for Nominal Scales. *Educational and Psychological Measurement*, 20(1), 37–46. doi:10.1177/001316446002000104
- Condon, D. M., & Revelle, W. (2014). The international cognitive ability resource: Development and initial validation of a public-domain measure. *Intelligence*, 43(1), 52–64. doi:10.1016/j.intell.2014.01.004
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor-Inventory (NEO-FFI) professional manual* (Vol. 4). Odesa, FL: Psychological Assessment Center.
- Cox, D. R. (1958). Some Problems Connected with Statistical Inference. *The Annals of Mathematical Statistics*, 29(2), 357–372. doi:10.1214/aoms/1177706618
- Cramer, A. O. J., Waldorp, L. J., van der Maas, H. L. J., & Borsboom, D. (2010). Comorbidity: A network perspective. *Behavioral and Brain Sciences*, 33(2-3), 137–150. doi:10.1017/S0140525X09991567
- Crisafulli, C., Fabbri, C., Porcelli, S., Drago, A., Spina, E., De Ronchi, D., & Serretti, A. (2011). Pharmacogenetics of Antidepressants. *Frontiers in Pharmacology*, 2(February), 1–21. doi:10.3389/fphar.2011.00006

- Csikszentmihalyi, M., & Larson, R. (1987). Validity and reliability of the Experience-Sampling Method. *The Journal of nervous and mental disease*, 175(9), 526–36.
- Damen, N. L., Versteeg, H., Boersma, E., Serruys, P. W., van Geuns, R.-J. M., Denollet, J., ... Pedersen, S. S. (2013). Depression is independently associated with 7-year mortality in patients treated with percutaneous coronary intervention: Results from the RESEARCH registry. *International Journal of Cardiology*, 167(6), 2496–2501. doi:10.1016/j.ijcard.2012.04.028
- Danziger, K. (1990). *Constructing the Subject: Historical Origins of Psychological Research* (1st ed.). Cambridge: Cambridge University Press.
- Darwin, C. (1859). *On the origin of species*. London: CRW Publishing Limited. doi:10.5962/bhl.title.28875
- Dean, J., & Ghemawat, S. (2008). MapReduce. *Communications of the ACM*, 51(1), 107. doi:10.1145/1327452.1327492
- Dean, K., Stevens, H., Mortensen, P. B., Murray, R. M., Walsh, E., & Pedersen, C. B. (2010). Full Spectrum of Psychiatric Outcomes Among Offspring With Parental History of Mental Disorder. *Archives of General Psychiatry*, 67(8), 822. doi:10.1001/archgenpsychiatry.2010.86
- de Beurs, E., van Dyck, R., Marquenie, L. A., Lange, A., & Blonk, R. W. B. (2001). De DASS; een vragenlijst voor het meten van depressie, angst en stress. *Gedrags-therapie*, 34, 35–53.
- de Fruyt, F., & Hoekstra, H. (2014). *NEO-PI-3 persoonlijkheidsvragenlijst*. Amsterdam: Hogrefe.
- de Graaf, R., ten Have, M., & van Dorsselaer, S. (2010). The Netherlands Mental Health Survey and Incidence Study-2 (NEMESIS-2): design and methods. *International Journal of Methods in Psychiatric Research*, 19(3), 125–141. doi:10.1002/mpr.317
- Dehue, T. (2014). *Betere mensen - over gezondheid als keuze en koopwaar*. Amsterdam: Uitgeverij Augustus.
- de Klerk, M., van Yperen, N. W., Postma, S., & Kamsma, P. J. (2003). Doen, voelen en

- denken: Drie gedragsstijlen toegepast in de organisatieadviespraktijk. *Gedrag en Organisatie*, 3, 169 – 178.
- Dietterich, T. G. (2000). Ensemble Methods in Machine Learning. In *Mcs '00 proceedings of the first international workshop on multiple classifier systems* (pp. 1–15).
- Diezma-Iglesias, B., Ruiz-Altisent, M., & Barreiro, P. (2004). Detection of Internal Quality in Seedless Watermelon by Acoustic Impulse Response. *Biosystems Engineering*, 88(2), 221–230. doi:10.1016/j.biosystemseng.2004.03.007
- Diggle, P., Heagerty, P., Liang, K.-Y., & Zeger, S. (2013). *Analysis of longitudinal data* (2nd ed.). Oxford: Oxford University Press.
- Dodd, S., Berk, M., Kelin, K., Zhang, Q., Eriksson, E., Deberdt, W., & Craig Nelson, J. (2014). Application of the Gradient Boosted method in randomised clinical trials: Participant variables that contribute to depression treatment efficacy of duloxetine, SSRIs or placebo. *Journal of Affective Disorders*, 168, 284–293. doi:10.1016/j.jad.2014.05.014
- Donker, T., Petrie, K., Proudfoot, J., Clarke, J., Birch, M.-R., & Christensen, H. (2013). Smartphones for Smarter Delivery of Mental Health Programs: A Systematic Review. *Journal of Medical Internet Research*, 15(11), e247. doi:10.2196/jmir.2791
- Doré, B., Ort, L., Braverman, O., & Ochsner, K. N. (2015). Sadness Shifts to Anxiety Over Time and Distance From the National Tragedy in Newtown, Connecticut. *Psychological Science*, 26(4), 363–373. doi:10.1177/0956797614562218
- Dorffner, G. (1996). Neural Networks for Time Series Processing. *Neural Network World*, 6(4), 447–468. doi:10.1007/s13398-014-0173-7.2
- Downing, G. J., Boyle, S. N., Brinner, K. M., & Osheroff, J. A. (2009). Information management to enable personalized medicine: stakeholder roles in building clinical decision support. *BMC Medical Informatics and Decision Making*, 9(1), 44. doi:10.1186/1472-6947-9-44
- Doyle-Lindrud, S. (2015). Watson Will See You Now: A Supercomputer to Help Clinicians Make Informed Treatment Decisions. *Clinical Journal of Oncology Nursing*, 19(1), 31–32. doi:10.1188/15.CJON.31-32

- Duchon, C., & Hale, R. (2012). *Time Series Analysis in Meteorology and Climatology*. Chichester, UK: John Wiley & Sons, Ltd. doi:10.1002/9781119953104
- Dumont, F. (2010). *A History of Personality Psychology*. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511676093
- Duncan, O. D. (1975). *Introduction to Structural Equation Models*. New York, NY: Academic Press.
- Durbin, C. E., & Hicks, B. M. (2014). Personality and psychopathology: A stagnant field in need of development. *European Journal of Personality, 28*(4), 362–386. doi:10.1002/per.1962
- Ebner-Priemer, U. W., & Trull, T. J. (2009). Ecological momentary assessment of mood disorders and mood dysregulation. *Psychological Assessment, 21*(4), 463–475. doi:10.1037/a0017075
- Egnew, T. R. (2009). Suffering, Meaning, and Healing: Challenges of Contemporary Medicine. *The Annals of Family Medicine, 7*(2), 170–175. doi:10.1370/afm.943
- El Emam, K., & Dankar, F. K. (2008). Protecting Privacy Using k-Anonymity. *Journal of the American Medical Informatics Association, 15*(5), 627–637. doi:10.1197/jamia.M2716
- Emerencia, A. C. (2014). *Computing a Second Opinion: Automated Reasoning and Statistical Inference applied to Medical Data* (Unpublished doctoral dissertation). University of Groningen, Groningen, The Netherlands.
- Emerencia, A. C. (2016). *AutovarCore: Automated Vector Autoregression Models and Networks*. Retrieved 2016-04-26, from <https://github.com/roqua/autovarCore>
- Emerencia, A. C., van der Krieke, L., Bos, E. H., de Jonge, P., Petkov, N., & Aiello, M. (2016). Automating Vector Autoregression on Electronic Patient Diary Data. *IEEE Journal of Biomedical and Health Informatics, 20*(2), 631–643. doi:10.1109/JBHI.2015.2402280
- Enea, M., Meiri, R., & Kalimi, T. (2017). Package 'speedglm'. Retrieved 2017-10-21, from <https://cran.r-project.org/web/packages/speedglm/>

index.html

- Engle, R. F. (1982). Autoregressive Conditional Heteroscedasticity with Estimates of the Variance of United Kingdom Inflation. *Econometrica*, 50(4), 987. doi:10.2307/1912773
- Epskamp, S., Cramer, A. O. J., Waldorp, L. J., Schmittmann, V. D., & Borsboom, D. (2012). qgraph: Network Visualizations of Relationships in Psychometric Data. *Journal of Statistical Software*, 48(4). doi:10.18637/jss.v048.i04
- Etkin, A., Patenaude, B., Song, Y. J. C., Usherwood, T., Rekshan, W., Schatzberg, A. F., ... Williams, L. M. (2015). A Cognitive–Emotional Biomarker for Predicting Remission with Antidepressant Medications: A Report from the iSPOT-D Trial. *Neuropsychopharmacology*, 40(6), 1332–1342. doi:10.1038/npp.2014.333
- Fan, L., Buchanan, W., Thummler, C., Lo, O., Khedim, A., Uthmani, O., ... Bell, D. (2011). DACAR Platform for eHealth Services Cloud. In *2011 IEEE 4th International Conference on Cloud Computing* (pp. 219–226). IEEE. doi:10.1109/CLOUD.2011.31
- Fan, L., Buchanan, W. J., Lo, O., Thummler, C., Lawson, A., Uthmani, O., ... Khedim, A. S. (2012). SPoC: Protecting Patient Privacy for e-Health Services in the Cloud. *The International Conference on eHealth, Telemedicine, and Social Medicine, eTELEMED*(4), 98–104.
- Fawcett, T. (2006). An introduction to ROC analysis. *Pattern Recognition Letters*, 27(8), 861–874. doi:10.1016/j.patrec.2005.10.010
- Ferguson, T., Rowlands, A. V., Olds, T., & Maher, C. (2015). The validity of consumer-level, activity monitors in healthy adults worn in free-living conditions: a cross-sectional study. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 42. doi:10.1186/s12966-015-0201-9
- Ferrucci, D. A. (2012). Introduction to “This is Watson”. *IBM Journal of Research and Development*, 56(3.4), 1:1–1:15. doi:10.1147/JRD.2012.2184356
- Fiordelli, M., Diviani, N., & Schulz, P. J. (2013). Mapping mHealth Research: A Decade of Evolution. *Journal of Medical Internet Research*, 15(5), e95. doi:10.2196/jmir.2430

- Fordyce, M. W. (1988). A review of research on the happiness measures: A sixty second index of happiness and mental health. *Social Indicators Research*, 20(4), 355–381. doi:10.1007/BF00302333
- Forrest, S. (1993). Genetic algorithms: principles of natural selection applied to computation. *Science*, 261(5123), 872–878. doi:10.1126/science.8346439
- Fournier, J. C., DeRubeis, R. J., Hollon, S. D., Dimidjian, S., Amsterdam, J. D., Shelton, R. C., & Fawcett, J. (2010). Antidepressant Drug Effects and Depression Severity. *JAMA*, 303(1), 47. doi:10.1001/jama.2009.1943
- Frances, A. (2014). *Saving Normal: An Insider's Revolt against Out-of-Control Psychiatric Diagnosis, DSM-5, Big Pharma, and the Medicalization of Ordinary Life*. New York, NY: William Morrow Paperbacks.
- Fried, E. I. (2015). Problematic assumptions have slowed down depression research: why symptoms, not syndromes are the way forward. *Frontiers in Psychology*, 6(MAR), 1–11. doi:10.3389/fpsyg.2015.00309
- Fried, E. I., & Nesse, R. M. (2015). Depression is not a consistent syndrome: An investigation of unique symptom patterns in the STAR*D study. *Journal of Affective Disorders*, 172, 96–102. doi:10.1016/j.jad.2014.10.010
- Friedman, J. H. (1991). Multivariate Adaptive Regression Splines. *The Annals of Statistics*, 19(1), 1–67. doi:10.1214/aos/1176347963
- Gaggioli, A., Cipresso, P., Serino, S., Pioggia, G., Tartarisco, G., Baldus, G., ... Riva, G. (2012). An open source mobile platform for psychophysiological self tracking. *Studies in health technology and informatics*, 173, 136–138. doi:10.3233/978-1-61499-022-2-136
- Galatzer-Levy, I. R., Karstoft, K.-I., Statnikov, A., & Shalev, A. Y. (2014). Quantitative forecasting of PTSD from early trauma responses: A Machine Learning application. *Journal of Psychiatric Research*, 59, 68–76. doi:10.1016/j.jpsychires.2014.08.017
- Galfalvy, H. C., Oquendo, M. A., & Mann, J. J. (2008). Evaluation of clinical prognostic models for suicide attempts after a major depressive episode. *Acta Psychiatrica Scandinavica*, 117(4), 244–252. doi:10.1111/j.1600-0447.2008.01162.x

- Gashler, M., Giraud-Carrier, C., & Martinez, T. (2008). Decision Tree Ensemble: Small Heterogeneous Is Better Than Large Homogeneous. In *2008 seventh international conference on machine learning and applications* (pp. 900–905). IEEE. doi:10.1109/ICMLA.2008.154
- Gautier, L., & Rpy2 contributors. (2018). *Documentation for rpy2*. Retrieved 2018-01-10, from <https://rpy2.readthedocs.io/>
- George, J., & Jones, G. (2008). *Understanding and managing organizational behavior* (3rd ed.). Prentice Hall.
- Gill, R. D., & Robins, J. M. (2001). *Causal inference for complex longitudinal data: The continuous case* (Vol. 29) (No. 6). doi:10.1214/aos/1015345962
- Glaesmer, H., Rief, W., Martin, A., Mewes, R., Brähler, E., Zenger, M., & Hinz, A. (2012). Psychometric properties and population-based norms of the Life Orientation Test Revised (LOT-R). *British Journal of Health Psychology*, *17*(2), 432–445. doi:10.1111/j.2044-8287.2011.02046.x
- Golbeck, J., Robles, C., & Turner, K. (2011). Predicting personality with social media. In *Proceedings of the 2011 annual conference extended abstracts on human factors in computing systems - chi ea '11* (p. 253). New York, NY: ACM Press. doi:10.1145/1979742.1979614
- Google Inc. (2017). *Machine Learning – Explore – Google Trends*. Retrieved 2017-06-19, from <https://trends.google.com/trends/explore?q=Machin%5Clearning>
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should We Trust Web-Based Studies? A Comparative Analysis of Six Preconceptions About Internet Questionnaires. *American Psychologist*, *59*(2), 93–104. doi:10.1037/0003-066X.59.2.93
- Granger, C. W. J. (1969). Investigating Causal Relations by Econometric Models and Cross-spectral Methods. *Econometrica*, *37*(3), 424. doi:10.2307/1912791
- Granger, C. W. J., Newbold, P., & Shell, K. (1986). *Forecasting Economic Time Series* (2nd ed.). San Diego, CA: Academic Press.

- Griffiths, K. M., & Christensen, H. (2006). Review of randomised controlled trials of Internet interventions for mental disorders and related conditions. *Clinical Psychologist*, 10(1), 16–29. doi:10.1080/13284200500378696
- Gruber, S., & van der Laan, M. J. (2009). *Targeted Maximum Likelihood Estimation: A Gentle Introduction* (Tech. Rep. No. 252). Berkeley: Division of Biostatistics, University of California, Berkeley.
- Gutiérrez, F., Navinés, R., Navarro, P., García-Esteve, L., Subirá, S., Torrens, M., & Martín-Santos, R. (2008). What do all personality disorders have in common? Ineffectiveness and uncooperativeness. *Comprehensive Psychiatry*, 49(6), 570–578. doi:10.1016/j.comppsy.2008.04.007
- Guyon, I., & Elisseeff, A. (2003). An Introduction to Variable and Feature Selection. *Journal of Machine Learning Research (JMLR)*, 3(Mar), 1157–1182.
- Hacking, I. (1980). From the Emergence of Probability to the Erosion of Determinism. In *Probabilistic thinking, thermodynamics and the interaction of the history and philosophy of science* (Vol. 8, pp. 105–123). Dordrecht: Springer Netherlands. doi:10.1007/978-94-017-2766-2_5
- Hagan, M. T., & Behr, S. M. (1987). The Time Series Approach to Short Term Load Forecasting. *IEEE Transactions on Power Systems*, 2(3), 785–791. doi:10.1109/TPWRS.1987.4335210
- Hall, M., Frank, E., Holmes, G., Pfahringer, B., Reutemann, P., & Witten, I. H. (2009). The WEKA data mining software. *ACM SIGKDD Explorations Newsletter*, 11(1), 10. doi:10.1145/1656274.1656278
- Hamaker, E. L. (2012). Why researchers should think ‘within-person’: A paradigmatic rationale. In *Handbook of research methods for studying daily life* (pp. 43–61). New York, NY: Guilford Publications.
- Hamaker, E. L., Nesselroade, J. R., & Molenaar, P. C. M. (2007). The integrated trait-state model. *Journal of Research in Personality*, 41(2), 295–315. doi:10.1016/j.jrp.2006.04.003
- Hamburg, M. A., & Collins, F. S. (2010). The Path to Personalized Medicine. *New England Journal of Medicine*, 363(4), 301–304. doi:10.1056/NEJMp1006304

- Hand, E. (2010). Volunteer army catches interstellar dust grains. *Nature*, 466(August), 685–687. doi:10.1038/news.2010.106
- Hareva, D. H., Okada, H., Kitawaki, T., & Oka, H. (2009). Supportive intervention using a mobile phone in behavior modification. *Acta medica Okayama*, 63(2), 113–120. doi:10.18926/AMO/31830
- Harkness, K. L., & Luther, J. (2001). Clinical risk factors for the generation of life events in major depression. *Journal of Abnormal Psychology*, 110(4), 564–572. doi:10.1037/0021-843X.110.4.564
- Harmon-Jones, E., Gable, P. A., & Price, T. F. (2013). Does Negative Affect Always Narrow and Positive Affect Always Broaden the Mind? Considering the Influence of Motivational Intensity on Cognitive Scope. *Current Directions in Psychological Science*, 22(4), 301–307. doi:10.1177/0963721413481353
- Harris, D. M., & Harris, S. L. (2012). *Digital design and computer architecture* (2nd ed.). Waltham, MA: Morgan Kaufmann. doi:10.3109/10601338909020559
- Hastie, T., Tibshirani, R., & Friedman, J. (2009). *The Elements of Statistical Learning* (2nd ed.). New York, NY: Springer New York. doi:10.1007/978-0-387-84858-7
- Hespanha, J. (2009). *Linear Systems Theory* (1st ed.). Princeton, NJ: Princeton University Press. doi:10.1007/978-1-4612-2046-6
- Hetrick, S. E., Simmons, M., Thompson, A., & Parker, A. G. (2011). What are Specialist Mental Health Clinician Attitudes to Guideline Recommendations for the Treatment of Depression in Young People? *Australian & New Zealand Journal of Psychiatry*, 45(11), 993–1001. doi:10.3109/00048674.2011.619161
- Hinshaw, S. P., & Stier, A. (2008). Stigma as Related to Mental Disorders. *Annual Review of Clinical Psychology*, 4(1), 367–393. doi:10.1146/annurev.clinpsy.4.022007.141245
- Hoenders, R., Bos, E. H., de Jong, J., & de Jonge, P. (2011). Unraveling the temporal dynamics between symptom and treatment variables in a lifestyle-oriented approach to anxiety disorder. A time-series analysis. *GGzet Wetenschappelijk*, 15(2), 11–30.

- Hof, R. D. (2013). *Deep learning*. Retrieved 2017-06-29, from <https://www.technologyreview.com/s/513696>
- Holmes, O. W. (1858). *The Autocrat of the Breakfast-Table*. Boston, MA: Houghton Mifflin & Co.
- Honaker, J., & King, G. (2010). What to Do about Missing Values in Time-Series Cross-Section Data. *American Journal of Political Science*, 54(2), 561–581. doi:10.1111/j.1540-5907.2010.00447.x
- Honaker, J., King, G., & Blackwell, M. (2011). Amelia II: A Program for Missing Data. *Journal of Statistical Software*, 45(7), 1–54. doi:10.18637/jss.v045.i07
- Horan, W. P., Brown, S. A., & Blanchard, J. J. (2007). Social anhedonia and schizotypy: The contribution of individual differences in affective traits, stress, and coping. *Psychiatry Research*, 149(1-3), 147–156. doi:10.1016/j.psychres.2006.06.002
- Horwitz, A. V., & Wakefield, J. C. (2007). *The Loss of Sadness: How Psychiatry Transformed Normal Sorrow Into Depressive Disorder*. New York, NY: Oxford University Press. doi:10.1891/1559-4343.11.1.63
- Howe, J. (2006). *Crowdsourcing: A definition*. Retrieved 2017-07-18, from http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.html
- Huber, M., Knottnerus, J. A., Green, L., van der Horst, H., Jadad, A. R., Kromhout, D., ... Smid, H. (2011). How should we define health? *BMJ*, 343, d4163–d4163. doi:10.1136/bmj.d4163
- Hughes, M., & Church, J. (Eds.). (2010). *Social Trends* (No. 40). Newport: Palgrave MacMillan.
- Hunter, J., Dale, D., Firing, E., Droettboom, M., & Matplotlib development team. (2017). *Matplotlib: Python plotting*. Retrieved 2018-01-10, from <https://matplotlib.org/>
- Hurlburt, R. T., & Knapp, T. J. (2006). Münsterberg in 1898, Not Allport in 1937, Introduced the Terms 'Idiographic' and 'Nomothetic' to American Psychology.

- Theory & Psychology*, 16(2), 287–293. doi:10.1177/0959354306062541
- Hyde, C. L., Nagle, M. W., Tian, C., Chen, X., Paciga, S. A., Wendland, J. R., ... Winslow, A. R. (2016). Identification of 15 genetic loci associated with risk of major depression in individuals of European descent. *Nature Genetics*, 48(9), 1031–1036. doi:10.1038/ng.3623
- Hyman, S. E. (2007). Can neuroscience be integrated into the DSM-V? *Nature Reviews Neuroscience*, 8(9), 725–732. doi:10.1038/nrn2218
- Illumivu. (2015). *Mobile EMA*. Retrieved 2016-02-21, from <https://illumivu.com/solutions/ecological-momentary-assessment-app>
- Insel, T. (2013). *Transforming Diagnosis*. Retrieved 2017-09-10, from <http://www.nimh.nih.gov/about/director/2013/transforming-diagnosis.shtml>
- Insel, T. R. (2008). Assessing the Economic Costs of Serious Mental Illness. *American Journal of Psychiatry*, 165(6), 663–665. doi:10.1176/appi.ajp.2008.08030366
- International Data Corporation. (2017). *Worldwide Quarterly Wearable Device Tracker*. Retrieved 2017-07-20, from <http://www.idc.com/getdoc.jsp?containerId=prUS42342317>
- Intille, S. S. (2007). Technological innovations enabling automatic, context-sensitive ecological momentary assessment. In S. Shiffman, A. A. Stone, A. A. Atienza, & L. Nebeling (Eds.), *The science of real-time data capture* (pp. 308–337). New York, NY: Oxford University Press.
- Jahng, S., Wood, P. K., & Trull, T. J. (2008). Analysis of affective instability in ecological momentary assessment: Indices using successive difference and group comparison via multilevel modeling. *Psychological Methods*, 13(4), 354–375. doi:10.1037/a0014173
- Jain, F. A., Hunter, A. M., Brooks, J. O., & Leuchter, A. F. (2013). Predictive socioeconomic and clinical profiles of antidepressant response and remission. *Depression and anxiety*, 30(7), 624–630. doi:10.1002/da.22045
- Jameson, J. L., & Longo, D. L. (2015). Precision Medicine — Personalized, Prob-

- lematic, and Promising. *New England Journal of Medicine*, 372(23), 2229–2234. doi:10.1056/NEJMs1503104
- Jebb, A. T., Tay, L., Wang, W., & Huang, Q. (2015). Time series analysis for psychological research: examining and forecasting change. *Frontiers in Psychology*, 6(JUN), 1–24. doi:10.3389/fpsyg.2015.00727
- Jeni, L. A., Cohn, J. F., & De La Torre, F. (2013). Facing Imbalanced Data – Recommendations for the Use of Performance Metrics. In *2013 humane association conference on affective computing and intelligent interaction* (pp. 245–251). IEEE. doi:10.1109/ACII.2013.47
- Jeronimus, B. F., Ormel, J., Aleman, A., Penninx, B. W. J. H., & Riese, H. (2013). Negative and positive life events are associated with small but lasting change in neuroticism. *Psychological Medicine*, 43(11), 2403–2415. doi:10.1017/S0033291713000159
- Jeronimus, B. F., Van der Krieke, L., Blaauw, F. J., Emerencia, A. C., Slaets, J., & De Jonge, P. (2017). Subjective Well-being Across the Lifespan and the Role of Personality and Capabilities: In Search of Wisdom Among the Elderly. *Submitted for publication*.
- Jimenez Garcia, J., Romero, N. A., Boerema, S. T., Keyson, D., & Havinga, P. (2013). ESTHER: a Portable Sensor Toolkit to Collect and Monitor Total Hip Replacement Patient Data. In *Proceedings of the 3rd acm mobihoc workshop on pervasive wireless healthcare - mobilehealth '13* (p. 7). New York, NY: ACM Press. doi:10.1145/2491148.2491151
- Jones, N. (2014). The learning machines. *Nature*, 505(7482), 146–148. doi:10.1038/505146a
- Jordan, M. I., & Mitchell, T. M. (2015). Machine learning: Trends, perspectives, and prospects. *Science*, 349(6245), 255–260. doi:10.1126/science.aaa8415
- Kaggle Inc. (2016). *Your Home for Data Science*. Retrieved 2017-07-13, from <https://www.kaggle.com/>
- Kalia, M. (2015). Biomarkers for personalized oncology: recent advances and future challenges. *Metabolism*, 64(3), S16–S21. doi:10.1016/j.metabol.2014.10.027

- Kapur, S., Phillips, A. G., & Insel, T. R. (2012). Why has it taken so long for biological psychiatry to develop clinical tests and what to do about it? *Molecular Psychiatry*, 17(12), 1174–1179. doi:10.1038/mp.2012.105
- Karpathy, A. (2017). *A Peek at Trends in Machine Learning*. Retrieved 2017-06-26, from <https://medium.com/@karpathy/a-peek-at-trends-in-machine-learning-ab8a1085a106>
- Karpathy, A., & Fei-Fei, L. (2015). Deep visual-semantic alignments for generating image descriptions. In *2015 IEEE conference on computer vision and pattern recognition (cvpr)* (pp. 3128–3137). Boston, MA: IEEE. doi:10.1109/CVPR.2015.7298932
- Katsanis, S. H., Javitt, G., & Hudson, K. (2008). A Case Study of Personalized Medicine. *Science*, 320(5872), 53–54. doi:10.1126/science.1156604
- Kazi, R., & Deters, R. (2013a). A dissemination-based mobile web application framework for juvenile idiopathic arthritis patients. In *Proceedings of the 2013 IEEE/ACM international conference on advances in social networks analysis and mining -ASONAM '13* (pp. 990–997). New York, NY: ACM Press. doi:10.1145/2492517.2500278
- Kazi, R., & Deters, R. (2013b). RESTful dissemination of healthcare data in mobile digital ecosystem. In *2013 7th IEEE international conference on digital ecosystems and technologies (DEST)* (pp. 78–83). IEEE. doi:10.1109/DEST.2013.6611333
- Kendell, R., & Jablensky, A. (2003). Distinguishing Between the Validity and Utility of Psychiatric Diagnoses. *American Journal of Psychiatry*, 160(1), 4–12. doi:10.1176/appi.ajp.160.1.4
- Kendler, K. S. (1996). Major depression and generalised anxiety disorder. Same genes, (partly)different environments—revisited. *The British journal of psychiatry. Supplement*, 168(30), 68–75.
- Kendler, K. S. (2012). The dappled nature of causes of psychiatric illness: replacing the organic–functional/hardware–software dichotomy with empirically based pluralism. *Molecular Psychiatry*, 17(4), 377–388. doi:10.1038/mp.2011.182
- Kendler, K. S., & First, M. B. (2010). Alternative futures for the DSM revision process:

- iteration v. paradigm shift. *The British Journal of Psychiatry*, 197(4), 263–265. doi:10.1192/bjp.bp.109.076794
- Kendler, K. S., & Parnas, J. (Eds.). (2014). *Philosophical issues in psychiatry III: The Nature and Sources of Historical Change*. Oxford University Press. doi:10.1093/med/9780198725978.001.0001
- Kendler, K. S., & Parnas, J. (Eds.). (2015). *Philosophical Issues in Psychiatry III* (Vol. 1). New York, NY: Oxford University Press. doi:10.1093/med/9780198725978.001.0001
- Kendler, K. S., Zachar, P., & Craver, C. (2011). What kinds of things are psychiatric disorders? *Psychological Medicine*, 41(06), 1143–1150. doi:10.1017/S0033291710001844
- Kenwright, M., Liness, S., & Marks, I. (2001). Reducing demands on clinicians by offering computer-aided self-help for phobia/panic. Feasibility study. *British Journal of Psychiatry*, 179(NOV.), 456–459. doi:10.1192/bjp.179.5.456
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime Prevalence and Age-of-Onset Distributions of Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(June), 593–602. doi:10.1001/archpsyc.62.6.593
- Kessler, R. C., Merikangas, K. R., & Wang, P. S. (2007). Prevalence, Comorbidity, and Service Utilization for Mood Disorders in the United States at the Beginning of the Twenty-first Century. *Annual Review of Clinical Psychology*, 3(1), 137–158. doi:10.1146/annurev.clinpsy.3.022806.091444
- Kessler, R. C., Ormel, J., Petukhova, M., McLaughlin, K. A., Green, J. G., Russo, L. J., ... "Ustün, T. B. (2011). Development of Lifetime Comorbidity in the World Health Organization World Mental Health Surveys. *Archives of General Psychiatry*, 68(1), 90. doi:10.1001/archgenpsychiatry.2010.180
- Kessler, R. C., Warner, C. H., Ivany, C., Petukhova, M. V., Rose, S., Bromet, E. J., ... Ursano, R. J. (2015). Predicting Suicides After Psychiatric Hospitalization in US Army Soldiers. *JAMA Psychiatry*, 72(1), 49. doi:10.1001/jamapsychiatry.2014.1754

- Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *American Psychologist*, 62(2), 95–108. doi:10.1037/0003-066X.62.2.95
- Klimstra, T. A., Sijtsma, J. J., Henrichs, J., & Cima, M. (2014). The Dark Triad of personality in adolescence: Psychometric properties of a concise measure and associations with adolescent adjustment from a multi-informant perspective. *Journal of Research in Personality*, 53, 84–92. doi:10.1016/j.jrp.2014.09.001
- Knight, W. (2015). *IBM Pushes Deep Learning with a Watson Upgrade*. Retrieved 2017-06-29, from http://www.technologyreview.com/news/539226/ibm-pushes-deep-learning-with-a-watson-upgrade/?utm_campaign=newsletters&utm_source=newsletter-daily-all&utm_medium=email&utm_content=20150710
- Konings, M., Bak, M., Hanssen, M., van Os, J., & Krabbendam, L. (2006). Validity and reliability of the CAPE: a self-report instrument for the measurement of psychotic experiences in the general population. *Acta Psychiatrica Scandinavica*, 114(1), 55–61. doi:10.1111/j.1600-0447.2005.00741.x
- Kononenko, I. (2001). Machine learning for medical diagnosis: history, state of the art and perspective. *Artificial Intelligence in Medicine*, 23(1), 89–109. doi:10.1016/S0933-3657(01)00077-X
- Kooiman, T. J. M., Dontje, M. L., Sprenger, S. R., Krijnen, W. P., van der Schans, C. P., & de Groot, M. (2015). Reliability and validity of ten consumer activity trackers. *BMC Sports Science, Medicine and Rehabilitation*, 7(1), 24. doi:10.1186/s13102-015-0018-5
- Koot, M. R. (2012). *Measuring and Predicting Anonymity* (Unpublished doctoral dissertation). University of Amsterdam.
- Kramer, I., Simons, C. J. P., Hartmann, J. A., Menne-Lothmann, C., Viechtbauer, W., Peeters, F., ... Wichers, M. C. (2014). A therapeutic application of the experience sampling method in the treatment of depression: a randomized controlled trial. *World Psychiatry*, 13(1), 68–77. doi:10.1002/wps.20090
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2002). The PHQ-15: Validity of a New Measure for Evaluating the Severity of Somatic Symptoms. *Psychosomatic*

- Medicine*, 64(2), 258–266. doi:10.1097/00006842-200203000-00008
- Krueger, R. F. (1999). The Structure of Common Mental Disorders. *Archives of General Psychiatry*, 56(10), 921–926. doi:10.1001/archpsyc.56.10.921
- Krueger, R. F., & Markon, K. E. (2006). Reinterpreting Comorbidity: A Model-Based Approach to Understanding and Classifying Psychopathology. *Annual Review of Clinical Psychology*, 2(1), 111–133. doi:10.1146/annurev.clinpsy.2.022305.095213
- Kuehner, C., & Huffziger, S. (2012). Response styles to depressed mood affect the long-term course of psychosocial functioning in depressed patients. *Journal of Affective Disorders*, 136(3), 627–633. doi:10.1016/j.jad.2011.10.019
- Kuhn, M. (2008). Building Predictive Models in R Using the caret Package. *Journal of Statistical Software*, 28(5), 1–26. doi:10.18637/jss.v028.i05
- Kuhn, M., & Johnson, K. (2013). *Applied Predictive Modeling*. New York, NY: Springer New York. doi:10.1007/978-1-4614-6849-3
- Kuiper, S., McLean, L., Fritz, K., Lampe, L., & Malhi, G. S. (2013). Getting depression clinical practice guidelines right: time for change? *Acta Psychiatrica Scandinavica*, 128(Suppl. 444), 24–30. doi:10.1111/acps.12176
- Kumar, S., Nilsen, W. J., Abernethy, A., Atienza, A., Patrick, K., Pavel, M., . . . Swendeman, D. (2013). Mobile Health Technology Evaluation. *American Journal of Preventive Medicine*, 45(2), 228–236. doi:10.1016/j.amepre.2013.03.017
- Kupfer, D. J., First, M. B., & Regier, D. A. (Eds.). (2002). *A Research Agenda for DSM-V*. Washington, D.C.: American Psychiatric Association. doi:10.1176/appi.ps.54.6.916
- Lal, S., & Adair, C. E. (2014). E-Mental Health: A Rapid Review of the Literature. *Psychiatric Services*, 65(1), 24–32. doi:10.1176/appi.ps.201300009
- Lamers, F., van Oppen, P., Comijs, H. C., Smit, J. H., Spinhoven, P., van Balkom, A. J. L. M., . . . Penninx, B. W. J. H. (2011). Comorbidity Patterns of Anxiety and Depressive Disorders in a Large Cohort Study. *The Journal of Clinical Psychiatry*, 72(03), 341–348. doi:10.4088/JCP.10m06176blu

- Lamiell, J. T. (1981). Toward an idiographic psychology of personality. *American Psychologist*, 36(3), 276–289. doi:10.1037//0003-066X.36.3.276
- Lamiell, J. T. (1998). 'Nomothetic' and 'Idiographic'. *Theory & Psychology*, 8(1), 23–38. doi:10.1177/0959354398081002
- Lara, M. E., Leader, J., & Klein, D. N. (1997). The association between social support and course of depression: Is it confounded with personality? *Journal of Abnormal Psychology*, 106(3), 478–482. doi:10.1037/0021-843X.106.3.478
- Laskey, K. B., & Laskey, K. (2009). Service oriented architecture. *Wiley Interdisciplinary Reviews: Computational Statistics*, 1(1), 101–105. doi:10.1002/wics.8
- Lauderdale, D. S., Knutson, K. L., Yan, L. L., Liu, K., & Rathouz, P. J. (2008). Self-Reported and Measured Sleep Duration. *Epidemiology*, 19(6), 838–845. doi:10.1097/EDE.0b013e318187a7b0
- LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. *Nature*, 521(7553), 436–444. doi:10.1038/nature14539
- Lee Duckworth, A., Steen, T. A., & Seligman, M. E. (2005). Positive Psychology in Clinical Practice. *Annual Review of Clinical Psychology*, 1(1), 629–651. doi:10.1146/annurev.clinpsy.1.102803.144154
- Lemaitre, G., Nogueira, F., & Aridas, C. K. (2016). Imbalanced-learn: A Python Toolbox to Tackle the Curse of Imbalanced Datasets in Machine Learning. *Journal of Machine Learning Research*, 18(17), 1–5. doi:http://www.jmlr.org/papers/volume18/16-365/16-365.pdf
- Lemke, C., Budka, M., & Gabrys, B. (2015). Metalearning: a survey of trends and technologies. *Artificial Intelligence Review*, 44(1), 117–130. doi:10.1007/s10462-013-9406-y
- Lesko, L. J. (2007). Personalized Medicine: Elusive Dream or Imminent Reality? *Clinical Pharmacology & Therapeutics*, 81(6), 807–816. doi:10.1038/sj.clpt.6100204
- Louca, S. (2012). Personalized medicine – a tailored health care system: challenges and opportunities. *Croatian Medical Journal*, 53(3), 211–213. doi:10.3325/cmj

.2012.53.211

- Lovibond, P., & Lovibond, S. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343. doi:10.1016/0005-7967(94)00075-U
- Lumley, T. (2004). Analysis of Complex Survey Samples. *Journal of Statistical Software*, 9(8), 1–19. doi:10.18637/jss.v009.i08
- Lütkepohl, H. (2005). *New Introduction to Multiple Time Series Analysis* (1st ed.). Berlin: Springer Berlin Heidelberg. doi:10.1007/978-3-540-27752-1
- Lütkepohl, H. (2006). Structural Vector Autoregressive Analysis for Cointegrated Variables. In *Modern econometric analysis* (pp. 73–86). Berlin, Heidelberg: Springer Berlin Heidelberg. doi:10.1007/3-540-32693-6_6
- Mancinelli, L., Cronin, M., & Sadée, W. (2000). Pharmacogenomics: The promise of personalized medicine. *AAPS PharmSci*, 2(1), 29–41. doi:10.1208/ps020104
- Markoff, J. (2011). *Computer Wins on 'Jeopardy!': Trivial, It's Not*. Retrieved 2017-08-15, from <http://www.nytimes.com/2011/02/17/science/17jeopardy-watson.html>
- Markowetz, A., Błaszczewicz, K., Montag, C., Switala, C., & Schlaepfer, T. E. (2014). Psycho-Informatics: Big Data shaping modern psychometrics. *Medical Hypotheses*, 82(4), 405–411. doi:10.1016/j.mehy.2013.11.030
- Marks, I. M., Cavanagh, K., & Gega, L. (2007). Computer-aided psychotherapy: revolution or bubble? *The British Journal of Psychiatry*, 191(6), 471–473. doi:10.1192/bjp.bp.107.041152
- Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of Research in Personality*, 37(1), 48–75. doi:10.1016/S0092-6566(02)00534-2
- Mata, J., Thompson, R. J., Jaeggi, S. M., Buschkuhl, M., Jonides, J., & Gotlib, I. H. (2012). Walk on the bright side: Physical activity and affect in major depres-

- sive disorder. *Journal of Abnormal Psychology*, 121(2), 297–308. doi:10.1037/a0023533
- Mehta, R., Jain, R. K., & Badve, S. (2011). Personalized Medicine: The Road Ahead. *Clinical Breast Cancer*, 11(1), 20–26. doi:10.3816/CBC.2011.n.004
- Meier, C. A., Fitzgerald, M. C., & Smith, J. M. (2013). eHealth: Extending, Enhancing, and Evolving Health Care. *Annual Review of Biomedical Engineering*, 15(1), 359–382. doi:10.1146/annurev-bioeng-071812-152350
- Michalski, R. S., Carbonell, J. G., & Mitchell, T. M. (Eds.). (1983). *Machine Learning*. Berlin, Heidelberg: Springer Berlin Heidelberg. doi:10.1007/978-3-662-12405-5
- Mineka, S., Watson, D., & Clark, L. A. (1998). Comorbidity of Anxiety and Unipolar Mood Disorders. *Annual Review of Psychology*, 49(1), 377–412. doi:10.1146/annurev.psych.49.1.377
- Molenaar, P. C. M. (2004). A Manifesto on Psychology as Idiographic Science: Bringing the Person Back Into Scientific Psychology, This Time Forever. *Measurement: Interdisciplinary Research & Perspective*, 2(4), 201–218. doi:10.1207/s15366359mea0204_1
- Molenaar, P. C. M., & Campbell, C. G. (2009). The New Person-Specific Paradigm in Psychology. *Current Directions in Psychological Science*, 18(2), 112–117. doi:10.1111/j.1467-8721.2009.01619.x
- Moos, R. H., & Cronkite, R. C. (1999). Symptom-Based Predictors of a 10-Year Chronic Course of Treated Depression. *The Journal of Nervous & Mental Disease*, 187(6), 360–368. doi:10.1097/00005053-199906000-00005
- Mottron, L. (2011). Changing perceptions: The power of autism. *Nature*, 479(7371), 33–35. doi:10.1038/479033a
- Movisens GmbH. (2017). *Movisens*. Retrieved 2016-07-16, from <https://movisens.com>
- Mroziewicz, M., & Tyndale, R. F. (2010). Pharmacogenetics: a tool for identifying genetic factors in drug dependence and response to treatment. *Addiction science*

& *clinical practice*, 5(2), 17–29.

- Munoz, I. D., & van der Laan, M. J. (2011). *Super Learner Based Conditional Density Estimation with Application to Marginal Structural Models* (Tech. Rep. No. 282). Berkeley: Division of Biostatistics, University of California, Berkeley.
- Muñoz, R. F., Bunge, E. L., Chen, K., Schueller, S. M., Bravin, J. I., Shaughnessy, E. a., & Pérez-Stable, E. J. (2016). Massive Open Online Interventions. *Clinical Psychological Science*, 4(2), 194–205. doi:10.1177/2167702615583840
- Munsterberg, H. (1899). Psychology and history. *Psychological Review*, 6(1), 1–31. doi:10.1037/h0071306
- Murdoch, T. B., & Detsky, A. S. (2013). The Inevitable Application of Big Data to Health Care. *JAMA*, 309(13), 1351. doi:10.1001/jama.2013.393
- Myin-Germeys, I., Peeters, F., Havermans, R., Nicolson, N. A., DeVries, M. W., Delespaul, P., & van Os, J. (2003). Emotional reactivity to daily life stress in psychosis and affective disorder: an experience sampling study. *Acta Psychiatrica Scandinavica*, 107(2), 124–131. doi:10.1034/j.1600-0447.2003.02025.x
- Myrtek, M. (2004). *Heart and emotion: Ambulatory monitoring studies in everyday life*. (1st ed.). Seattle, WA: Hogrefe & Huber.
- National Institute of Mental Health. (2015). *Prevalence of Any Mental Illness among U.S. Adults*. Retrieved 2017-07-18, from <http://www.nimh.nih.gov/health/statistics/prevalence/any-mental-illness-ami-among-adults.shtml>
- National Research Council (Ed.). (2011). *Toward Precision Medicine*. Washington, D.C.: National Academies Press. doi:10.17226/13284
- Nelson, J., Zhang, Q., Deberdt, W., Marangell, L., Karamustafalioglu, O., & Lipkovich, I. (2012). Predictors of remission with placebo using an integrated study database from patients with major depressive disorder. *Current Medical Research and Opinion*, 28(3), 325–334. doi:10.1185/03007995.2011.654010
- Neugebauer, R., Fireman, B., Roy, J. A., Raebel, M. A., Nichols, G. A., & O'Connor, P. J. (2013). Super learning to hedge against incorrect inference from arbitrary

- parametric assumptions in marginal structural modeling. *Journal of Clinical Epidemiology*, 66(8), S99–S109. doi:10.1016/j.jclinepi.2013.01.016
- Newman, M. (2010). *Networks* (1st ed.). New York, NY: Oxford University Press. doi:10.1093/acprof:oso/9780199206650.001.0001
- Nieboer, A., Lindenberg, S., Boomsma, A., & Brugger, A. C. V. (2005). Dimensions Of Well-Being And Their Measurement: The Spf-II Scale. *Social Indicators Research*, 73(3), 313–353. doi:10.1007/s11205-004-0988-2
- Nilsson, N. J. (2009). *The Quest for Artificial Intelligence*. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511819346
- NumPy developers. (2017). *NumPy*. Retrieved 2018-01-10, from <http://www.numpy.org/>
- O'Dushlaine, C., Rossin, L., Lee, P. H., Duncan, L., Parikshak, N. N., Newhouse, S., ... Breen, G. (2015). Psychiatric genome-wide association study analyses implicate neuronal, immune and histone pathways. *Nature Neuroscience*, 18(2), 199–209. doi:10.1038/nn.3922
- Oh, H., Rizo, C., Enkin, M., & Jadad, A. (2005). What is eHealth?: a systematic review of published definitions. *World hospitals and health services : the official journal of the International Hospital Federation*, 41(1), 32–40. doi:10.2196/jmir.7.1.e1
- Olfson, M., & Marcus, S. C. (2009). National Patterns in Antidepressant Medication Treatment. *Archives of General Psychiatry*, 66(8), 848–856. doi:10.1001/archgenpsychiatry.2009.81
- Ooms, J. (2014). *The OpenCPU System: Towards a Universal Interface for Scientific Computing through Separation of Concerns* (Tech. Rep. No. 2000).
- Opsahl, T., Agneessens, F., & Skvoretz, J. (2010). Node centrality in weighted networks: Generalizing degree and shortest paths. *Social Networks*, 32(3), 245–251. doi:10.1016/j.socnet.2010.03.006
- Ormel, J., Jeronimus, B. F., Kotov, R., Riese, H., Bos, E. H., Hankin, B., ... Oldehinkel, A. J. (2013). Neuroticism and common mental disorders: Meaning and utility

- of a complex relationship. *Clinical Psychology Review*, 33(5), 686–697. doi:10.1016/j.cpr.2013.04.003
- Ozomaro, U., Nemeroff, C. B., & Wahlestedt, C. (2013). *Personalized Medicine and Psychiatry: Dream or Reality?* (No. 2010). Retrieved 2017-06-23, from <http://www.psychiatrytimes.com/cme/personalized-medicine-and-psychiatry-dream-or-reality>
- Ozomaro, U., Wahlestedt, C., & Nemeroff, C. B. (2013). Personalized medicine in psychiatry: problems and promises. *BMC Medicine*, 11(1), 132. doi:10.1186/1741-7015-11-132
- Pagliari, C., Sloan, D., Gregor, P., Sullivan, F., Detmer, D. E., Kahan, J. P., ... MacGillivray, S. (2005). What Is eHealth (4): A Scoping Exercise to Map the Field. *Journal of Medical Internet Research*, 7(1), e9. doi:10.2196/jmir.7.1.e9
- Panahiazar, M., Taslimitehrani, V., Jadhav, A., & Pathak, J. (2014). Empowering personalized medicine with big data and semantic web technology: Promises, challenges, and use cases. In *2014 IEEE International Conference on Big Data (Big Data)* (pp. 790–795). IEEE. doi:10.1109/BigData.2014.7004307
- Panksepp, J., & Biven, L. (2012). *The Archaeology of Mind: Neuroevolutionary Origins of Human Emotions (Norton Series on Interpersonal Neurobiology)*. New York, NY: W. W. Norton & Company, Inc.
- Papakostas, G. I. (2009). Managing Partial Response or Nonresponse. *The Journal of Clinical Psychiatry*, 70(suppl 6), 16–25. doi:10.4088/JCP.8133su1c.03
- Park, J.-H., Jang, D., Park, J., & Youm, S. (2015). Wearable Sensing of In-Ear Pressure for Heart Rate Monitoring with a Piezoelectric Sensor. *Sensors*, 15(9), 23402–23417. doi:10.3390/s150923402
- Patil, S., & Lee, A. J. (2013). LocasaESM : A Tool for Experience Sampling via Smartphones. In *Workshop on measuring networked privacy, CSCW 2013: The 2013 ACM conference on computer supported cooperative work*. San Antonio, TX.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36(6), 556–563. doi:10.1016/S0092-6566(02)00505-6

- Pearl, J. (2009). *Causality: Models, Reasoning, and Inference* (2nd ed.). New York, NY: Cambridge University Press.
- Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., ... Duchesnay, E. (2012). Scikit-learn: Machine Learning in Python. *The Journal of Machine Learning Research*, 12, 2825–2830.
- Peeters, F. P. M. L., Ponds, R. W. H. M., & Vermeeren, M. T. G. (1996). Affectiviteit En Zelfbeoordeling Van Depressie En Angst. *Tijdschrift voor Psychiatrie*, 38(3), 240–250.
- Pelizza, L., & Ferrari, A. (2009). Anhedonia in schizophrenia and major depression: state or trait? *Annals of General Psychiatry*, 8(1), 22. doi:10.1186/1744-859X-8-22
- Penninx, B. W. J. H., Beekman, A. T. F., Smit, J. H., Zitman, F. G., Nolen, W. A., Spinhoven, P., ... van Dyck, R. (2008). The Netherlands Study of Depression and Anxiety (NESDA): Rationale, objectives and methods. *International Journal of Methods in Psychiatric Research*, 17(3), 121–140. doi:10.1002/mpr.256
- Perkins, R. (2001). What constitutes success?: The relative priority of service users' and clinicians' views of mental health services. *The British Journal of Psychiatry*, 179(1), 9–10. doi:10.1192/bjp.179.1.9
- Perlis, R. H. (2013). A Clinical Risk Stratification Tool for Predicting Treatment Resistance in Major Depressive Disorder. *Biological Psychiatry*, 74(1), 7–14. doi:10.1016/j.biopsych.2012.12.007
- Perlis, R. H. (2014). Pharmacogenomic Testing and Personalized Treatment of Depression. *Clinical Chemistry*, 60(1), 53–59. doi:10.1373/clinchem.2013.204446
- Personalized Medicine Coalition. (2014). *The Case For Personalized Medicine* (Tech. Rep. No. 4). Personalized Medicine Coalition.
- Pesaran, H., & Shin, Y. (1998). Generalized impulse response analysis in linear multivariate models. *Economics Letters*, 58(1), 17–29. doi:10.1016/S0165-1765(97)00214-0
- Petersen, M. L., & van der Laan, M. J. (2014). Causal Models and Learning from

- Data. *Epidemiology*, 25(3), 418–426. doi:10.1097/EDE.0000000000000078
- Pfaff, B. (2008). VAR, SVAR and SVEC Models: Implementation Within R Package vars. *Journal of Statistical Software*, 27(4), 1–32. doi:10.18637/jss.v027.i04
- Piantadosi, S., Byar, D. P., & Green, S. B. (1988). The ecological fallacy. *American journal of epidemiology*, 127(5), 893–904. doi:10.1093/oxfordjournals.aje.a114892
- Pizzagalli, D. A. (2014). Depression, Stress, and Anhedonia: Toward a Synthesis and Integrated Model. *Annual Review of Clinical Psychology*, 10(1), 393–423. doi:10.1146/annurev-clinpsy-050212-185606
- Plaisier, I., Beekman, A. T. F., de Graaf, R., Smit, J., van Dyck, R., & Penninx, B. (2010). Work functioning in persons with depressive and anxiety disorders: The role of specific psychopathological characteristics. *Journal of Affective Disorders*, 125(1-3), 198–206. doi:10.1016/j.jad.2010.01.072
- Polley, E. C., Rose, S., & van der Laan, M. J. (2011). Super Learning. In *Targeted learning: Causal inference for observational and experimental data* (pp. 43–66). New York, NY: Springer New York. doi:10.1007/978-1-4419-9782-1_3
- Power, R. A., Steinberg, S., Bjornsdottir, G., Rietveld, C. A., Abdellaoui, A., Nivard, M. M., ... Stefansson, K. (2015). Polygenic risk scores for schizophrenia and bipolar disorder predict creativity. *Nature Neuroscience*, 18(7), 953–955. doi:10.1038/nn.4040
- Price, W. N. (2015). Black-Box Medicine. *Harvard Journal of Law and Technology*, 28(2), 419–467.
- Priebe, S., Huxley, P., Knight, S., & Evans, S. (1999). Application and Results of the Manchester Short Assessment of Quality of Life (Mansa). *International Journal of Social Psychiatry*, 45(1), 7–12. doi:10.1177/002076409904500102
- Priebe, S., Reininghaus, U., McCabe, R., Burns, T., Eklund, M., Hansson, L., ... Wang, D. (2010). Factors influencing subjective quality of life in patients with schizophrenia and other mental disorders: A pooled analysis. *Schizophrenia Research*, 121(1-3), 251–258. doi:10.1016/j.schres.2009.12.020
- Proudfoot, J. (2004). Clinical efficacy of computerised cognitive-behavioural therapy

- for anxiety and depression in primary care: randomised controlled trial. *The British Journal of Psychiatry*, 185(1), 46–54. doi:10.1192/bjp.185.1.46
- Provost, F., & Fawcett, T. (2013). Data Science and its Relationship to Big Data and Data-Driven Decision Making. *Big Data*, 1(1), 51–59. doi:10.1089/big.2013.1508
- Python Software Foundation. (2018). *Python*. Retrieved 2018-01-10, from <https://www.python.org>
- Quercia, D., Kosinski, M., Stillwell, D., & Crowcroft, J. (2011). Our Twitter Profiles, Our Selves: Predicting Personality with Twitter. In *2011 IEEE Third Int'l Conference on Privacy, Security, Risk and Trust and 2011 IEEE Third Int'l Conference on Social Computing* (pp. 180–185). IEEE. doi:10.1109/PASSAT/SocialCom.2011.26
- R Development Core Team. (2008). *R: A Language and Environment for Statistical Computing* [Computer software manual]. Vienna, Austria.
- R Development Core Team, Bivand, R., Carey, V. J., DebRoy, S., Eglen, S., Guha, R., ... Free Software Foundation Inc. (2017). *foreign: Read Data Stored by 'Minitab', 'S', 'SAS', 'SPSS', 'Stata', 'Systat', 'Weka', 'dBase', ...*. Retrieved 2018-01-10, from <https://cran.r-project.org/package=foreign>
- Raes, F., Daems, K., Feldman, G. C., Johnson, S. L., & Van Gucht, D. (2010). A Psychometric Evaluation of the Dutch Version of the Responses to Positive Affect Questionnaire. *Psychologica Belgica*, 49(4), 293–310. doi:10.5334/pb-49-4-293
- Ramanathan, N. (2012). Ohmage: An open Mobile System for Activity and Experience Sampling. In *International conference on pervasive computing technologies for healthcare (pervasivehealth)* (pp. 203–204).
- Reis, H. T. (1994). Domains of experience: Investigating relationship processes from three perspectives. In *Theoretical frameworks for personal relationships* (pp. 87–110).
- Reis, H. T. (2012). Why researchers should think 'real-world': A conceptual rationale. In M. R. Mehl & T. S. Conner (Eds.), *Handbook of research methods for studying daily life* (pp. 3–21). New York, NY: Guilford Press.

- Revelle, W., Wilt, J., & Rosenthal, A. (2010). Individual Differences in Cognition: New Methods for Examining the Personality-Cognition Link. In *Handbook of individual differences in cognition* (pp. 27–49). Springer New York. doi:10.1007/978-1-4419-1210-7_2
- Riedel, M., Möller, H.-J., Obermeier, M., Adli, M., Bauer, M., Kronmüller, K., ... Seemüller, F. (2011). Clinical predictors of response and remission in inpatients with depressive syndromes. *Journal of Affective Disorders*, 133(1-2), 137–149. doi:10.1016/j.jad.2011.04.007
- Rijksinstituut voor Volksgezondheid en Milieu. (2015). *Bevolking - Regionaal en Internationaal - Bevolkingsomvang - Volksgezondheidszorg.info*. Retrieved 2017-09-24, from <https://www.volksgezondheidszorg.info/onderwerp/bevolking/regionaal-internationaal/bevolkingsomvang#!node-bevolkingsdichtheid-gemeente>
- Riper, H., Andersson, G., Christensen, H., Cuijpers, P., Lange, A., & Eysenbach, G. (2010). Theme Issue on E-Mental Health: A Growing Field in Internet Research. *Journal of Medical Internet Research*, 12(5), e74. doi:10.2196/jmir.1713
- Roest, A. M., de Jonge, P., Williams, C. D., de Vries, Y. A., Schoevers, R. A., & Turner, E. H. (2015). Reporting Bias in Clinical Trials Investigating the Efficacy of Second-Generation Antidepressants in the Treatment of Anxiety Disorders. *JAMA Psychiatry*, 72(5), 500. doi:10.1001/jamapsychiatry.2015.15
- Rosmalen, J. G. M., Wenting, A. M. G., Roest, A. M., de Jonge, P., & Bos, E. H. (2012). Revealing Causal Heterogeneity Using Time Series Analysis of Ambulatory Assessments. *Psychosomatic Medicine*, 74(4), 377–386. doi:10.1097/PSY.0b013e3182545d47
- Rothwell, P. (1995). Can overall results of clinical trials be applied to all patients? *The Lancet*, 345(8965), 1616–1619. doi:10.1016/S0140-6736(95)90120-5
- Rubin, D. B. (1974). Estimating causal effects of treatments in randomized and nonrandomized studies. *Journal of Educational Psychology*, 66(5), 688–701. doi:10.1037/h0037350
- Rush, A., Trivedi, M. H., Ibrahim, H. M., Carmody, T. J., Arnow, B., Klein, D. N., ... Keller, M. B. (2003). The 16-Item quick inventory of depressive symptomatology

- ogy (QIDS), clinician rating (QIDS-C), and self-report (QIDS-SR): a psychometric evaluation in patients with chronic major depression. *Biological Psychiatry*, 54(5), 573–583. doi:10.1016/S0006-3223(02)01866-8
- Rush, A. J., Bernstein, I. H., Trivedi, M. H., Carmody, T. J., Wisniewski, S., Mundt, J. C., . . . Fava, M. (2006). An Evaluation of the Quick Inventory of Depressive Symptomatology and the Hamilton Rating Scale for Depression: A Sequenced Treatment Alternatives to Relieve Depression Trial Report. *Biological Psychiatry*, 59(6), 493–501. doi:10.1016/j.biopsych.2005.08.022
- Rush, A. J., Carmody, T. J., & Reimitz, P.-E. (2000). The Inventory of Depressive Symptomatology (IDS): Clinician (IDS-C) and Self-Report (IDS-SR) ratings of depressive symptoms. *International Journal of Methods in Psychiatric Research*, 9(2), 45–59. doi:10.1002/mpr.79
- Rush, A. J., Gullion, C. M., Basco, M. R., Jarrett, R. B., & Trivedi, M. H. (1996). The Inventory of Depressive Symptomatology (IDS): psychometric properties. *Psychological Medicine*, 26(03), 477–486. doi:10.1017/S0033291700035558
- Safran, C., Bloomrosen, M., Hammond, W. E., Labkoff, S., Markel-Fox, S., Tang, P. C., & Detmer, D. E. (2007). Toward a National Framework for the Secondary Use of Health Data: An American Medical Informatics Association White Paper. *Journal of the American Medical Informatics Association*, 14(1), 1–9. doi:10.1197/jamia.M2273
- Sargent, T. J. (1979). Estimating vector autoregressions using methods not based on explicit economic theories. *Quarterly Review*, 33(2), 102–106.
- Schenk, H. M., Bos, E. H., Slaets, J. P. J., de Jonge, P., & Rosmalen, J. G. M. (2017). Differential association between affect and somatic symptoms at the between- and within-individual level. *British Journal of Health Psychology*, 22(2), 270–280. doi:10.1111/bjhp.12229
- Schenk, M. (2017). *Affect and physical health: Studies on the link between affect and physiological processes* (Unpublished doctoral dissertation). University of Groningen, Groningen, The Netherlands.
- Schiza, E. C., Neokleous, K. C., Petkov, N., & Schizas, C. N. (2015). A patient centered electronic health: eHealth system development. *Technology and Health*

- Care*, 23(4), 509–522. doi:10.3233/THC-150919
- Schizas, C. N. (2015). Privacy and Data Protection in Healthcare: eHealth for All - Keynote Address. *Studies in health technology and informatics*, 213, 7. doi:10.3233/978-1-61499-538-8-7
- Schmidt, U., & Wykes, T. (2012). E-mental health – a land of unlimited possibilities. *Journal of Mental Health*, 21(4), 327–331. doi:10.3109/09638237.2012.705930
- Scholtens, S., Smidt, N., Swertz, M. A., Bakker, S. J., Dotinga, A., Vonk, J. M., ... Stolk, R. P. (2015). Cohort Profile: LifeLines, a three-generation cohort study and biobank. *International Journal of Epidemiology*, 44(4), 1172–1180. doi:10.1093/ije/dyu229
- Schork, N. J. (2015). Personalized medicine: Time for one-person trials. *Nature*, 520(7549), 609–611. doi:10.1038/520609a
- SciPy developers. (2018). *SciPy.org*. Retrieved 2018-01-10, from <https://scipy.org/>
- Seemüller, F., Riedel, M., Obermeier, M., Bauer, M., Adli, M., Mundt, C., ... Möller, H.-J. (2009). The controversial link between antidepressants and suicidality risks in adults: data from a naturalistic study on a large sample of in-patients with a major depressive episode. *The International Journal of Neuropsychopharmacology*, 12(02), 181–189. doi:10.1017/S1461145708009139
- Shahid, A., Wilkinson, K., Marcu, S., & Shapiro, C. M. (2011). Mood Disorder Questionnaire (MDQ). In *Stop, that and one hundred other sleep scales* (pp. 229–230). New York, NY: Springer New York. doi:10.1007/978-1-4419-9893-4_53
- Sheldon, K. M., Kashdan, T. B., & Steger, M. F. (2011). *Designing Positive Psychology*. New York, NY: Oxford University Press. doi:10.1093/acprof:oso/9780195373585.001.0001
- Shi, Y., Nguyen, M., Blitz, P., & French, B. (2010). Personalized stress detection from physiological measurements. In *International symposium on quality of life technology*. Las Vegas, NV.
- Shiffman, S., & Stone, A. A. (1998). Ecological momentary assessment: A new tool

- for behavioral medicine research. In D. S. Krantz & A. Baum (Eds.), *Technology and methods in behavioral medicine* (1st ed., pp. 117–131). Mahwah, NJ: Lawrence Erlbaum Associates.
- Shmueli, G. (2010). To Explain or to Predict? *Statistical Science*, *25*(3), 289–310. doi:10.1214/10-STS330
- Silverman, B. W. (1986). *Density Estimation for Statistics and Data Analysis* (1st ed., Vol. 26). Boston, MA: Springer US. doi:10.1007/978-1-4899-3324-9
- Sims, C. A. (1980). Macroeconomics and Reality. *Econometrica*, *48*(1), 1–48. doi:10.2307/1912017
- Sims, C. A., & Zha, T. (1999). Error Bands for Impulse Responses. *Econometrica*, *67*(5), 1113–1155. doi:10.1111/1468-0262.00071
- Sinisi, S. E., & van der Laan, M. J. (2004). Deletion/Substitution/Addition Algorithm in Learning with Applications in Genomics. *Statistical Applications in Genetics and Molecular Biology*, *3*(1), 1–38. doi:10.2202/1544-6115.1069
- Sittig, D. F., Krall, M. A., Dykstra, R. H., Russell, A., & Chin, H. L. (2006). A survey of factors affecting clinician acceptance of clinical decision support. *BMC Medical Informatics and Decision Making*, *6*(1), 6. doi:10.1186/1472-6947-6-6
- Skitka, L. J., & Sargis, E. G. (2006). The Internet as Psychological Laboratory. *Annual Review of Psychology*, *57*(1), 529–555. doi:10.1146/annurev.psych.57.102904.190048
- Slade, M. (2010). Mental illness and well-being: the central importance of positive psychology and recovery approaches. *BMC Health Services Research*, *10*(1), 26. doi:10.1186/1472-6963-10-26
- Snippe, E., Bos, E. H., van der Ploeg, K. M., Sanderman, R., Fleer, J., & Schroevers, M. J. (2015). Time-Series Analysis of Daily Changes in Mindfulness, Repetitive Thinking, and Depressive Symptoms During Mindfulness-Based Treatment. *Mindfulness*, *6*(5), 1053–1062. doi:10.1007/s12671-014-0354-7
- Snippe, E., Simons, C. J. P., Hartmann, J. A., Menne-Lothmann, C., Kramer, I., Booi, S. H., ... Wichers, M. C. (2016). Change in daily life behaviors and depression:

- Within-person and between-person associations. *Health Psychology*, 35(5), 433–441. doi:10.1037/hea0000312
- Sofrygin, O., & van der Laan, M. J. (2017). Semi-Parametric Estimation and Inference for the Mean Outcome of the Single Time-Point Intervention in a Causally Connected Population. *Journal of Causal Inference*, 5(1). doi:10.1515/jci-2016-0003
- Solhan, M. B., Trull, T. J., Jahng, S., & Wood, P. K. (2009). Clinical assessment of affective instability: Comparing EMA indices, questionnaire reports, and retrospective recall. *Psychological Assessment*, 21(3), 425–436. doi:10.1037/a0016869
- Solomon, A. (2012). *Far From the Tree: Parents, Children and the Search for Identity* (1st ed.). New York, NY: Scribner.
- Spear, B. B., Heath-Chiozzi, M., & Huff, J. (2001). Clinical application of pharmacogenetics. *Trends in Molecular Medicine*, 7(5), 201–204. doi:10.1016/S1471-4914(01)01986-4
- Speckens, A. E., Spinhoven, P., Sloekers, P. P., Bolk, J. H., & van Hemert, A. M. (1996). A validation study of the Whitely Index, the Illness Attitude Scales, and the Somatosensory Amplification Scale in general medical and general practice patients. *Journal of Psychosomatic Research*, 40(1), 95–104. doi:10.1016/0022-3999(95)00561-7
- Spencer Trask and Co. (2014). *Mobile devices surpass world population*. Retrieved 2015-12-01, from <http://spencertraskco.com/news/mobiledevicessurpassworldpop/>
- Spielberger, C., Gorsuch, R., Lushene, R., & Vagg, P. (1983). *State-Trait Anxiety Inventory (STAI)*. Palo Alto, CA: Consulting Psychologists Press.
- StataCorp. (2009). *Stata Statistical Software: Release 11*. College Station, TX: StataCorp LLC.
- Statista. (2016). *Market share of smart wristwear shipments worldwide by operating system in 2015 and 2019*. Retrieved 2016-02-21, from <http://www.statista.com/statistics/466563/share-of-smart-wristwear-shipments-by-operating-system-worldwide/>

- Stavrakakis, N., Booij, S. H., Roest, A. M., de Jonge, P., Oldehinkel, A. J., & Bos, E. H. (2015). Temporal dynamics of physical activity and affect in depressed and nondepressed individuals. *Health Psychology, 34*(Suppl.), 1268–1277. doi:10.1037/hea0000303
- Stavrakakis, N., Roest, A., Verhulst, F., Ormel, J., de Jonge, P., & Oldehinkel, A. (2013). Physical activity and onset of depression in adolescents: A prospective study in the general population cohort TRAILS. *Journal of Psychiatric Research, 47*(10), 1304–1308. doi:10.1016/j.jpsychires.2013.06.005
- Steadman, I. (2013). *IBM's Watson is better at diagnosing cancer than human doctors*. Retrieved 2017-06-29, from <http://www.wired.co.uk/article/ibm-watson-medical-doctor>
- Stevens, D., Wilcox, H. C., MacKinnon, D. F., Mondimore, F. M., Schweizer, B., Jancic, D., ... Potash, J. B. (2013). Posttraumatic stress disorder increases risk for suicide attempt in adults with recurrent major depression. *Depression and Anxiety, 30*(10), 940–946. doi:10.1002/da.22160
- Stone, A. A., Broderick, J. E., Schwartz, J. E., Shiffman, S., Litcher-Kelly, L., & Calvanese, P. (2003). Intensive momentary reporting of pain with an electronic diary: reactivity, compliance, and patient satisfaction. *Pain, 104*(1), 343–351. doi:10.1016/S0304-3959(03)00040-X
- Stossel, S. (2014). *My Age of Anxiety: Fear, Hope, Dread, and the Search for Peace of Mind* (1st ed.). New York, NY: Borzoi Books.
- Swan, M. (2009). Emerging patient-driven health care models: an examination of health social networks, consumer personalized medicine and quantified self-tracking. *International journal of environmental research and public health, 6*(2), 492–525.
- Swan, M. (2012a). Health 2050: the realization of personalized medicine through crowdsourcing, the Quantified Self, and the participatory biocitizen. *Journal of Personalized Medicine, 2*(3), 93–118.
- Swan, M. (2012b). Sensor Mania! The Internet of Things, Wearable Computing, Objective Metrics, and the Quantified Self 2.0. *Journal of Sensor and Actuator Networks, 1*(3), 217–253. doi:10.3390/jsan1030217

- Tableau Software. (2018). *Business Intelligence and Analytics, Tableau Software*. Retrieved 2018-01-10, from <https://www.tableau.com/>
- Taigman, Y., Yang, M., Ranzato, M., & Wolf, L. (2015). Web-scale training for face identification. In *2015 IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* (pp. 2746–2754). IEEE. doi:10.1109/CVPR.2015.7298891
- Tansey, K. E., Guipponi, M., Hu, X., Domenici, E., Lewis, G., Malafosse, A., . . . Uher, R. (2013). Contribution of Common Genetic Variants to Antidepressant Response. *Biological Psychiatry*, *73*(7), 679–682. doi:10.1016/j.biopsych.2012.10.030
- Tehrani, E., Krussel, J., Borg, L., & Munk-Jorgensen, P. (1996). Dropping out of psychiatric treatment: a prospective study of a first-admission cohort. *Acta Psychiatrica Scandinavica*, *94*(4), 266–271. doi:10.1111/j.1600-0447.1996.tb09859.x
- Terluin, B. (1996). De Vierdimensionale Klachtenlijst (4DKL) - Een vragenlijst voor het meten van distress, depressie, angst en somatisatie. *Huisarts en Wetenschap*, *39*(12), 538–547.
- The Apache Software Foundation. (2016). *Apache Mahout: Scalable machine learning and data mining*. Retrieved 2017-08-10, from <https://mahout.apache.org/>
- The Lancet. (2009). What is health? The ability to adapt. *The Lancet*, *373*(9666), 781. doi:10.1016/S0140-6736(09)60456-6
- The Theano Development Team. (2016). *Theano: A Python framework for fast computation of mathematical expressions* (Tech. Rep. No. arXiv:1605.02688 [cs.SC]).
- Thombs, B. D., Bernstein, D. P., Lobbestael, J., & Arntz, A. (2009). A validation study of the Dutch Childhood Trauma Questionnaire-Short Form: Factor structure, reliability, and known-groups validity. *Child Abuse & Neglect*, *33*(8), 518–523. doi:10.1016/j.chiabu.2009.03.001
- Toshniwal, A., Donham, J., Bhagat, N., Mittal, S., Ryaboy, D., Taneja, S., . . . Fu, M. (2014). Storm@twitter. In *Proceedings of the 2014 ACM SIGMOD International Conference on Management of Data - SIGMOD '14* (pp. 147–156). New York, NY:

ACM Press. doi:10.1145/2588555.2595641

- Trull, T. J., & Ebner-Priemer, U. W. (2009). Using experience sampling methods/ecological momentary assessment (ESM/EMA) in clinical assessment and clinical research: Introduction to the special section. *Psychological Assessment, 21*(4), 457–462. doi:10.1037/a0017653
- Valverde-Albacete, F. J., & Peláez-Moreno, C. (2014). 10% Classification Accuracy Considered Harmful: The Normalized Information Transfer Factor Explains the Accuracy Paradox. *PLoS One, 9*(1), e84217. doi:10.1371/journal.pone.0084217
- van 't Riet, J., Crutzen, R., & de Vries, H. (2010). Investigating Predictors of Visiting, Using, and Revisiting an Online Health-Communication Program: A Longitudinal Study. *Journal of Medical Internet Research, 12*(3), e37. doi:10.2196/jmir.1345
- van Borkulo, C., Boschloo, L., Borsboom, D., Penninx, B. W. J. H., Waldorp, L. J., & Schoevers, R. A. (2015). Association of Symptom Network Structure With the Course of Depression. *JAMA Psychiatry, 72*(12), 1219–1226. doi:10.1001/jamapsychiatry.2015.2079
- van der Krieke, L. (2014). *Patients in the driver's seat - A role for e-mental health?* (Unpublished doctoral dissertation). University of Groningen.
- van der Krieke, L., Blaauw, F. J., Emerencia, A. C., Schenk, H. M., Slaets, J. P. J., Bos, E. H., ... Jeronimus, B. F. (2016). Temporal Dynamics of Health and Well-Being. *Psychosomatic Medicine, 79*(2), 1. doi:10.1097/PSY.0000000000000378
- van der Krieke, L., Emerencia, A. C., Bos, E. H., Rosmalen, J. G. M., Riese, H., Aiello, M., ... de Jonge, P. (2015). Ecological Momentary Assessments and Automated Time Series Analysis to Promote Tailored Health Care: A Proof-of-Principle Study. *JMIR Research Protocols, 4*(3), e100. doi:10.2196/resprot.4000
- van der Krieke, L., Jeronimus, B. F., Blaauw, F. J., Wanders, R. B. K., Emerencia, A. C., Schenk, H. M., ... de Jonge, P. (2016). HowNutsAreTheDutch (HoeGekIsNL): A crowdsourcing study of mental symptoms and strengths. *International Journal of Methods in Psychiatric Research, 25*(2), 123–144. doi:10.1002/mpr.1495

- van der Krieke, L., Wunderink, L., Emerencia, A. C., de Jonge, P., & Sytema, S. (2014). E-Mental Health Self-Management for Psychotic Disorders: State of the Art and Future Perspectives. *Psychiatric Services, 65*(1), 33–49. doi:10.1176/appi.ps.201300050
- van der Laan, M. J. (2010). Targeted Maximum Likelihood Based Causal Inference: Part I. *The International Journal of Biostatistics, 6*(2), Article 3. doi:10.2202/1557-4679.1211
- van der Laan, M. J. (2015). *Statistics as a Science, Not an Art: The Way to Survive in Data Science*. Retrieved 2017-01-01, from http://magazine.amstat.org/blog/2015/02/01/statscience_feb2015/
- van der Laan, M. J., & Dudoit, S. (2003). *Unified cross-validation methodology for selection among estimators and a general cross-validated adaptive epsilon-net estimator: Finite sample oracle inequalities and examples* (Tech. Rep. No. 130). Berkeley: Division of Biostatistics, University of California, Berkeley.
- van der Laan, M. J., Polley, E. C., & Hubbard, A. E. (2007). Super Learner. *Statistical Applications in Genetics and Molecular Biology, 6*(1), Article 25. doi:10.2202/1544-6115.1309
- van der Laan, M. J., & Rose, S. (2011). *Targeted Learning* (Vol. 20). New York, NY: Springer-Verlag New York. doi:10.1007/978-1-4419-9782-1
- van der Laan, M. J., & Rose, S. (2017). *Targeted Learning in Data Science* (1st ed.). New York, NY: Springer International Publishing. doi:10.1007/978-3-319-65304-4
- van der Neut, D. (2014). Meten is Weten. *Psychologie Magazine, 33*.
- van de Ven, P., O'Brien, H., Henriques, R., Klein, M., Msetfi, R., Nelson, J., . . . Riper, H. (2017). ULTEMAT: A mobile framework for smart ecological momentary assessments and interventions. *Internet Interventions, 9*, 74–81. doi:10.1016/j.invent.2017.07.001
- van Dierendonck, D. (2004). The construct validity of Ryff's Scales of Psychological Well-being and its extension with spiritual well-being. *Personality and Individual Differences, 36*(3), 629–643. doi:10.1016/S0191-8869(03)00122-3

- van Gils, A., Burton, C., Bos, E. H., Janssens, K. A., Schoevers, R. A., & Rosmalen, J. G. (2014). Individual variation in temporal relationships between stress and functional somatic symptoms. *Journal of Psychosomatic Research*, *77*(1), 34–39. doi:10.1016/j.jpsychores.2014.04.006
- van Loo, H. M., Romeijn, J. W., de Jonge, P., & Schoevers, R. A. (2013). Psychiatric comorbidity and causal disease models. *Preventive Medicine*, *57*(6), 748–752. doi:10.1016/j.ypmed.2012.10.018
- van Ockenburg, S. L., Booij, S. H., Riese, H., Rosmalen, J. G., & Janssens, K. A. (2015). How to assess stress biomarkers for idiographic research? *Psychoneuroendocrinology*, *62*, 189–199. doi:10.1016/j.psyneuen.2015.08.002
- van Roekel, E., Masselink, M., Vrijen, C., Heininga, V. E., Bak, T., Nederhof, E., & Oldehinkel, A. J. (2016). Study protocol for a randomized controlled trial to explore the effects of personalized lifestyle advices and tandem skydives on pleasure in anhedonic young adults. *BMC Psychiatry*, *16*(1), 182. doi:10.1186/s12888-016-0880-z
- van Winkel, M., Peeters, F., van Winkel, R., Kenis, G., Collip, D., Geschwind, N., ... Wichers, M. C. (2014). Impact of variation in the BDNF gene on social stress sensitivity and the buffering impact of positive emotions: Replication and extension of a gene–environment interaction. *European Neuropsychopharmacology*, *24*(6), 930–938. doi:10.1016/j.euroneuro.2014.02.005
- Veenhoven, R. (1994). Is happiness a trait? *Social Indicators Research*, *32*(2), 101–160. doi:10.1007/BF01078732
- Viceconti, M., Hunter, P., & Hose, R. (2015). Big Data, Big Knowledge: Big Data for Personalized Healthcare. *IEEE Journal of Biomedical and Health Informatics*, *19*(4), 1209–1215. doi:10.1109/JBHI.2015.2406883
- Victor, C. R., Scambler, S. J., Bowling, A., & Bond, J. (2005). The prevalence of, and risk factors for, loneliness in later life: a survey of older people in Great Britain. *Ageing and Society*, *25*(6), 357–375. doi:10.1017/S0144686X04003332
- Vio, R., Kristensen, N. R., Madsen, H., & Wamsteker, W. (2004). Time series analysis in Astronomy: limits and potentialities. *Astronomy & Astrophysics*, *435*(2), 773–780. doi:10.1051/0004-6361:20042154

- Vrieze, E., & Claes, S. (2009). Anhedonia and Increased Stress Sensitivity: Two Promising Endophenotypes for Major Depression. *Current Psychiatry Reviews*, 5(3), 143–152. doi:10.2174/157340009788971083
- Vrieze, E., Demyttenaere, K., Bruffaerts, R., Hermans, D., Pizzagalli, D. A., Sienaert, P., ... Claes, S. (2014). Dimensions in major depressive disorder and their relevance for treatment outcome. *Journal of Affective Disorders*, 155(1), 35–41. doi:10.1016/j.jad.2013.10.020
- Wagner, J., Andre, E., & Jung, F. (2009). Smart sensor integration: A framework for multimodal emotion recognition in real-time. In *2009 3rd international conference on affective computing and intelligent interaction and workshops* (pp. 1–8). Amsterdam: IEEE. doi:10.1109/ACII.2009.5349571
- Wakefield, J. C. (1992). The concept of mental disorder: On the boundary between biological facts and social values. *American Psychologist*, 47(3), 373–388. doi:10.1037/0003-066X.47.3.373
- Wall, D. P., Dally, R., Luyster, R., Jung, J.-Y., & DeLuca, T. F. (2012). Use of Artificial Intelligence to Shorten the Behavioral Diagnosis of Autism. *PLoS One*, 7(8), e43855. doi:10.1371/journal.pone.0043855
- Wall, D. P., Kosmicki, J., DeLuca, T. F., Harstad, E., & Fusaro, V. A. (2012). Use of machine learning to shorten observation-based screening and diagnosis of autism. *Translational Psychiatry*, 2(4), e100. doi:10.1038/tp.2012.10
- Wardenaar, K. J., Conradi, H. J., Bos, E. H., & de Jonge, P. (2014). Personality Modulates the Efficacy of Treatment in Patients With Major Depressive Disorder. *The Journal of Clinical Psychiatry*, 75(09), e916–e923. doi:10.4088/JCP.13m08855
- Wardenaar, K. J., & de Jonge, P. (2013). Diagnostic heterogeneity in psychiatry: towards an empirical solution. *BMC Medicine*, 11(1), 201. doi:10.1186/1741-7015-11-201
- Wardenaar, K. J., Giltay, E. J., van Veen, T., Zitman, F. G., & Penninx, B. W. (2012). Symptom dimensions as predictors of the two-year course of depressive and anxiety disorders. *Journal of Affective Disorders*, 136(3), 1198–1203. doi:10.1016/j.jad.2011.11.037

- Wardenaar, K. J., van Loo, H. M., Cai, T., Fava, M., Gruber, M. J., Li, J., . . . Kessler, R. C. (2014). The effects of co-morbidity in defining major depression subtypes associated with long-term course and severity. *Psychological Medicine, 44*(15), 3289–3302. doi:10.1017/S0033291714000993
- Wardenaar, K. J., van Veen, T., Giltay, E. J., de Beurs, E., Penninx, B. W., & Zitman, F. G. (2010). Development and validation of a 30-item short adaptation of the Mood and Anxiety Symptoms Questionnaire (MASQ). *Psychiatry Research, 179*(1), 101–106. doi:10.1016/j.psychres.2009.03.005
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales. *Journal of Personality and Social Psychology, 54*(6), 1063–1070. doi:10.1037/0022-3514.54.6.1063
- Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin, 98*(2), 219–235. doi:10.1037/0033-2909.98.2.219
- White, R. W., Tatonetti, N. P., Shah, N. H., Altman, R. B., & Horvitz, E. (2013). Web-scale pharmacovigilance: listening to signals from the crowd. *Journal of the American Medical Informatics Association, 20*(3), 404–408. doi:10.1136/amiajnl-2012-001482
- Whitney, C. R. (1997, August 5). Jeanne Calment, World's Elder, Dies at 122. *The New York Times*.
- Whooley, O. (2014). Nosological Reflections. *Society and Mental Health, 4*(2), 92–110. doi:10.1177/2156869313519114
- Wichers, M. C. (2014). The dynamic nature of depression: a new micro-level perspective of mental disorder that meets current challenges. *Psychological Medicine, 44*(07), 1349–1360. doi:10.1017/S0033291713001979
- Wichers, M. C., Barge-Schaapveld, D. Q. C. M., Nicolson, N. A., Peeters, F., de Vries, M., Mengelers, R., & van Os, J. (2009). Reduced Stress-Sensitivity or Increased Reward Experience: The Psychological Mechanism of Response to Antidepressant Medication. *Neuropsychopharmacology, 34*(4), 923–931. doi:10.1038/npp.2008.66

- Wichers, M. C., Geschwind, N., Jacobs, N., Kenis, G., Peeters, F., Derom, C., ... van Os, J. (2009). Transition from stress sensitivity to a depressive state: longitudinal twin study. *The British Journal of Psychiatry*, *195*(6), 498–503. doi:10.1192/bjp.bp.108.056853
- Wichers, M. C., Myin-Germeys, I., Jacobs, N., Peeters, F., Kenis, G., Derom, C., ... van Os, J. (2007). Evidence that moment-to-moment variation in positive emotions buffer genetic risk for depression: a momentary assessment twin study. *Acta Psychiatrica Scandinavica*, *115*(6), 451–457. doi:10.1111/j.1600-0447.2006.00924.x
- Wichers, M. C., Peeters, F., Rutten, B. P. F., Jacobs, N., Derom, C., Thiery, E., ... van Os, J. (2012). A time-lagged momentary assessment study on daily life physical activity and affect. *Health Psychology*, *31*(2), 135–144. doi:10.1037/a0025688
- Wichers, M. C., Wigman, J. T. W., & Myin-Germeys, I. (2015). Micro-Level Affect Dynamics in Psychopathology Viewed From Complex Dynamical System Theory. *Emotion Review*, *7*(4), 362–367. doi:10.1177/1754073915590623
- Widiger, T. A., & Samuel, D. B. (2005). Diagnostic categories or dimensions? A question for the Diagnostic and statistical manual of mental disorders—fifth edition. *Journal of Abnormal Psychology*, *114*(4), 494–504. doi:10.1037/0021-843X.114.4.494
- Widiger, T. A., & Sankis, L. M. (2000). Adult Psychopathology: Issues and Controversies. *Annual Review of Psychology*, *51*(1), 377–404. doi:10.1146/annurev.psych.51.1.377
- Wilson, D. L. (1972). Asymptotic Properties of Nearest Neighbor Rules Using Edited Data. *IEEE Transactions on Systems, Man, and Cybernetics*, *SMC-2*(3), 408–421. doi:10.1109/TSMC.1972.4309137
- Windelband, W. (1980). Rectorial Address, Strasbourg, 1894. *History and Theory*, *19*(2), 169–185. doi:10.2307/2504798
- Wolf, G., Carmichael, A., & Kelly, K. (2010). *The Quantified Self*. Retrieved 2015-01-03, from http://www.ted.com/talks/gary_wolf_the_quantified_self.html

- Wolpert, D. H. (1996). The Lack of A Priori Distinctions Between Learning Algorithms. *Neural Computation*, 8(7), 1341–1390. doi:10.1162/neco.1996.8.7.1341
- Woodcock, J. (2007). The Prospects for “Personalized Medicine” in Drug Development and Drug Therapy. *Clinical Pharmacology & Therapeutics*, 81(2), 164–169. doi:10.1038/sj.clpt.6100063
- World Health Organization. (2014). *Basic Documents* (48th ed.). Geneva: WHO Press.
- World Health Organization, & Others. (1993). *Composite international diagnostic interview (CIDI), version 1.1* (1st ed.). American Psychiatric Press.
- Yee, A., Chin, S. C., bt Hashim, A. H., Harbajan Singh, M. K. A., Loh, H. S., Sulaiman, A. H., & Ng, C. G. (2015). Anhedonia in depressed patients on treatment with selective serotonin reuptake inhibitor anti-depressant—A two-centered study in Malaysia. *International Journal of Psychiatry in Clinical Practice*, 19(3), 1–6. doi:10.3109/13651501.2015.1031139
- Zaharia, M., Franklin, M. J., Ghodsi, A., Gonzalez, J., Shenker, S., Stoica, I., ... Venkataraman, S. (2016). Apache Spark. *Communications of the ACM*, 59(11), 56–65. doi:10.1145/2934664
- Zhang, G., Eddy Patuwo, B., & Hu, M. Y. (1998). Forecasting with artificial neural networks. *International Journal of Forecasting*, 14(1), 35–62. doi:10.1016/S0169-2070(97)00044-7
- Zivot, E., & Wang, J. (2006). *Modeling Financial Time Series with S-PLUS®* (2nd ed.). New York, NY: Springer New York. doi:10.1007/978-0-387-32348-0

