

## DAFTAR PUSTAKA

- Aarts, H.; Verplanken, B. and Knippenberg, A. 1998. Predicting Behavior From Actions in the Past: Repeated Decision Making or a Matter of Habit? *Journal of Applied Social Psychology* 28(15): 1355–1374, <https://doi.org/10.1111/j.1559-1816.1998.tb01681.x>.
- Abdrabou, A.; Liang, B. and Zhuang, W. 2010. Delay analysis for a reliable message delivery in sparse vehicular ad hoc networks. In *IEEE Globecom 2010*, pp. 1–5. IEEE.
- Abou-Zeid, M. and Ben-Akiva, M. 2012. Travel mode switching: Comparison of findings from two public transportation experiments. *Transport Policy* 24: 48–59, <https://doi.org/10.1016/j.tranpol.2012.07.013>.
- Abou-Zeid, M.; Witter, R.; Bierlaire, M.; Kaufmann, V. and Ben-Akiva, M. 2012. Happiness and travel mode switching: Findings from a Swiss public transportation experiment. *Transport Policy* 19(1): 93–104, <https://doi.org/10.1016/j.tranpol.2011.09.009>.
- Adebisi, O. 1986. A mathematical model for headway variance of fixed-route buses. *Transportation Research Part B: Methodological* 20(1): 59–70, [https://doi.org/10.1016/0191-2615\(86\)90036-6](https://doi.org/10.1016/0191-2615(86)90036-6).
- Adiyasa, Y. 2012. Penggunaan Model Simulasi untuk Evaluasi Waktu Tunggu Penumpang dan Kapasitas Halte Trans Jogja. Universitas Gadjah Mada.
- Adler, D. and Murdoch, D. 2014. Rgl: 3D visualization device system (OpenGL)CRAN.R-project.org, 2014, <http://CRAN.R-project.org/package=rgl>.
- Ahrens, J. and Dieter, U. 1982. Computer Generation of Poisson Deviates from Modified Normal Distributions. *ACM Trans. Math. Softw.* 8(2): 163–179, <https://doi.org/10.1145/355993.355997>.
- Anda, C.; Erath, A. and Fourie, P.J. 2017. Transport modelling in the age of big data. *International Journal of Urban Sciences* 21(sup1): 19–42, <https://doi.org/10.1080/12265934.2017.1281150>.
- Anderson, P.-Å.; Hermansson, Å.; Tenguald, E. and Scalia-Tomba, G.-P. 1979. Analysis and Simulation of An Urban Bus Route. *Transportation Research Part A: Policy and Practice* 13A(6), <https://trid.trb.org/view.aspx?id=160348>
- Angelina, S. 2013. Penggunaan Software EMME/3 Untuk Pengembangan Trayek Angkutan Umum Bus Trans Jogja. Universitas Gadjah Mada.
- Anscombe, F.J. 1973. Graphs in Statistical Analysis. *The American Statistician* 27(1): 17–21.

- Anwar, A.H.M.M. and Yang, J. 2017. Examining the Effects of Transport Policy on Modal Shift from Private Car to Public Bus. *Procedia Engineering* 180: 1413–1422, <https://doi.org/10.1016/j.proeng.2017.04.304>.
- Arnott, D. 1998. A taxonomy of decision biases. *Monash University, School of Information Management and Systems, Caulfield*, <http://www.sims.monash.edu.au/staff/darnott/biastax.pdf>
- Badan Standardisasi Nasional. 2004. *Geometri Jalan Perkotaan*. Standar Nasional Indonesia RSNI T-14.
- Bai, Y.; Sun, Q.; Du, L.; Yu, M. and Bai, J. 2015. Calibration of GPS based high accuracy speed meter for vehicles. In *Ninth International Symposium on Precision Engineering Measurement and Instrumentation*, pp. 944600-9446–10, <http://dx.doi.org/10.1117/12.2178005>.
- Balakrishnan, N. 1991. *Handbook of the logistic distribution*. CRC Press.
- Balbo, F. and Pinson, S. 2007. A transportation decision support system in agent-based environment. *Intelligent Decision Technologies* 1(3): 97–115.
- Balmer, M.; Axhausen, K. and Nagel, K. 2005. An Agent Based Demand Modeling Framework for Large Scale Micro-Simulations. *Transportation Research Board, TRB* 3.
- Bamberg, S.; Ajzen, I. and Schmidt, P. 2003. Choice of Travel Mode in the Theory of Planned Behavior: The Roles of Past Behavior, Habit, and Reasoned Action. *Basic and Applied Social Psychology* 25(3): 175–187, [https://doi.org/10.1207/S15324834BASP2503\\_01](https://doi.org/10.1207/S15324834BASP2503_01).
- Banister, D. 1978. The influence of habit formation on modal choice? a Heuristic model. *Transportation* 7(1): 5–33, <https://doi.org/10.1007/BF00148368>.
- Barthelemy, J. and Suesse, T. 2016. Multidimensional Iterative Proportional Fitting and Alternative Models CRAN.R-project.org, 1 December 2016, <https://github.com/jojo-/mipfp>.
- Bazzan, A. and Klügl, F. 2014. A review on agent-based technology for traffic and transportation. *The Knowledge Engineering Review* 29(03): 375–403, <https://doi.org/10.1017/S0269888913000118>.
- Bierlaire, M.; Chen, J. and Newman, J. 2013. A probabilistic map matching method for smartphone GPS data. *Transportation Research Part C: Emerging Technologies* 26: 78–98, <https://doi.org/10.1016/j.trc.2012.08.001>.
- Bordagaray, M.; dell’Olio, L.; Ibeas, A. and Cecín, P. 2014. Modelling user perception of bus transit quality considering user and service heterogeneity. *Transportmetrica A: Transport Science* 10(8): 705–721, <https://doi.org/10.1080/23249935.2013.823579>.
- Bowman, C. and Miller, J. 2016. Modeling traffic flow using simulation and Big Data analytics. In *Winter Simulation Conference (WSC), 2016*, pp. 1206–1217. IEEE.

- BPS (Ed). 2014. *Daerah Istimewa Yogyakarta Dalam Angka 2014*. BPS Provinsi D.I. Yogyakarta.
- Cats, O. 2011. *Dynamic Modelling of Transit Operations and Passenger Decisions*. KTH Royal Institute of Technology, Stockholm.
- Choupani, A.-A. and Mamdoohi, A.R. 2016. Population Synthesis Using Iterative Proportional Fitting (IPF): A Review and Future Research. *Transportation Research Procedia* 17: 223–233, <https://doi.org/10.1016/j.trpro.2016.11.078>.
- Clark, J. 2015. *Location gathering: An evaluation of smartphone-based geographic mobile field data collection hardware and applications*. San José State University.
- Clarke, M. and Holm, E. 1987. Microsimulation Methods in Spatial Analysis and Planning. *Geografiska Annaler. Series B, Human Geography* 69(2): 145, <https://doi.org/10.2307/490448>.
- Cortés, C.; Gibson, J.; Gschwender, A.; Munizaga, M. and Zúñiga, M. 2011. Commercial bus speed diagnosis based on GPS-monitored data. *Transportation Research Part C: Emerging Technologies* 19(4): 695–707, <https://doi.org/10.1016/j.trc.2010.12.008>.
- Davidov, E.; Schmidt, P. and Bamberg, S. 2003. Time and Money: An Empirical Explanation of Behaviour in the Context of Travel-Mode Choice with the German Microcensus. *European Sociological Review* 19(3): 267–280, <https://doi.org/10.1093/esr/19.3.267>.
- Delignette-Muller, M.L. and Dutang, C. 2015. fitdistrplus: An R package for fitting distributions. *Journal of Statistical Software* 64(4): 1–34.
- Deming, E. and Stephan, F. 1940. On a least squares adjustment of a sampled frequency table when the expected marginal totals are known. *The Annals of Mathematical Statistics* 11(4): 427–444.
- Departemen Perhubungan. 1996. *Pedoman Teknis Perekayasaan Tempat Perhentian Kendaraan Penumpang Umum*. Departemen Perhubungan, Direktorat Jenderal Perhubungan Darat, 1996.
- Departemen Perhubungan. 2002. *Pedoman Teknis Penyelenggaraan Angkutan Penumpang Umum di Wilayah Perkotaan Dalam Trayek Tetap dan Teratur*. Departemen Perhubungan RI, Direktorat Jenderal Perhubungan Darat, 2002.
- Dewi, L. 2013. *Comparison of Customer Satisfaction of Ticketing System In Public Transportation (Case Study: Karlstadbuss In Karlstad, Sweden And Trans Jogja In Jogjakarta, Indonesia)*. Universitas Gadjah Mada, Indonesia.
- Dijkstra, J.; Timmermans, H. and Jessurun, J. 2014. Modeling Planned and Unplanned Store Visits within a Framework for Pedestrian Movement Simulation. *Transportation Research Procedia* 2: 559–566,

<https://doi.org/10.1016/j.trpro.2014.09.096>.

- Direktorat Bina Sistem Transportasi Perkotaan. 2010. Pilot Project Pengembangan Sistem Transit Melalui Bantuan Teknis Departemen Perhubungan Direktorat Bina Sistem Transportasi Perkotaan, DirJend Perhubungan Darat, Departemen Perhubungan, 2010.
- Direktorat Jenderal Perhubungan Darat. 2002. *Panduan Pengumpulan Data Angkutan Umum Perkotaan*. Jakarta.
- Direktur Jenderal Perhubungan Darat. 1996. Pedoman Teknis - Pengaturan Lalu Lintas Dipersimpangan Berdiri Sendiri Dengan Alat Pemberi Isyarat Lalu Lintas Departemen Perhubungan, 1996.
- Dishubkominfo, K. 2012. Keputusan Kepala Dinas Perhubungan Komunikasi dan Informatika Provinsi DIY, Nomor 188/1646Dinas Perhubungan Komunikasi dan Informatika Provinsi DIY, 6 July 2012.
- Dueker, K.; Kimpel, T.; Strathman, J. and Callas, S. 2004. Determinants of bus dwell time. *Journal of Public Transportation* 7(1): 2.
- Eboli, L. and Mazzulla, G. 2014. Investigating the heterogeneity of bus users' preferences through discrete choice modelling. *Transportation Planning and Technology* 37(8): 695–710, <https://doi.org/10.1080/03081060.2014.959353>.
- Elka, V.A. 2010. Evaluasi Kinerja Bus Trans Jogja. Universitas Atma Jaya Yogyakarta, Indonesia.
- Epstein, J. 2008. Why model? *Journal of Artificial Societies and Social Simulation* 11(4): 12.
- Estimayasti, E. 2013. Analisis Evaluasi Kinerja dan Strategi Pengembangan Trans Jogja. UPN “Veteran” Yogyakarta, Indonesia.
- Fahmi, K. 2014. Deskripsi Pola Pengoperasian dan Penggunaan Angkutan Umum Informal di Kota Pasir Pengaraian. *Jurnal APTEK* 4(1): 15–22.
- Faile, R.; Cartwright, J. and Parker, H. 2016. *Getting Started with LibreOffice Calc*. Lulu. com.
- Fauzie, R.F. 2013. Comparative Analysis of Performance Between Trans Jogja & Qbuzz. Universitas Gadjah Mada, Indonesia.
- Feng, T. and Timmermans, H. 2013. Transportation mode recognition using GPS and accelerometer data. *Transportation Research Part C: Emerging Technologies* 37: 118–130, <https://doi.org/10.1016/j.trc.2013.09.014>.
- Fernández, R. 2003. Study of Bus Operations on Arterial Roads by Simulation. *ITE Journal* 73(4): 77–81.
- Figueiredo Filho, D.B.; Paranhos, R.; Rocha, E.C. da; Batista, M.; Silva Jr., J.A. da; Santos, M.L.W.D. and Marino, J.G. 2013. When is statistical significance not significant? *Brazilian Political Science Review* 7(1): 31–55, <https://doi.org/10.1590/S1981-38212013000100002>.

- Fox, J. 2005. The R Commander: A Basic Statistics Graphical User Interface to R. *Journal of Statistical Software* 14(9): 1–42.
- Fox, J. and Weisberg, S. 2011. *An R Companion to Applied Regression*. Second. Thousand Oaks CA: Sage, <http://socserv.socsci.mcmaster.ca/jfox/Books/Companion>.
- Fricker, J. 2011. Bus dwell time analysis using on-board video. In *Transportation Research Board 90th Annual Meeting CD-ROM*, Washington, D.C: Transportation Research Board of the National Academies, [https://engineering.purdue.edu/~ce560/HW/Bus\\_Dwell\\_Time\\_jdf.pdf](https://engineering.purdue.edu/~ce560/HW/Bus_Dwell_Time_jdf.pdf) (accessed 28 May 2017)
- Friedlander, D. 1961. A Technique for Estimating a Contingency Table, Given the Marginal Totals and Some Supplementary Data. *Journal of the Royal Statistical Society. Series A (General)* 124(3): 412, <https://doi.org/10.2307/2343244>.
- Gao, W.; Balmer, M. and Miller, E. 2010. Comparison of MATSim and EMME/2 on Greater Toronto and Hamilton Area Network, Canada. *Transportation Research Record: Journal of the Transportation Research Board* 2197: 118–128, <https://doi.org/10.3141/2197-14>.
- Garmin. 2014. Oregon® 600 Series Owner's Manual Garmin, April 2014.
- Gerbing, D. 2014. *R Data Analysis without Programming*. New York: Routledge.
- Gerbing, D. 2017. Less Code, More Results CRAN.R-project.org, 6 August 2017.
- Gilbert, N. 2008. *Agent-based models*. 153. Sage.
- Godavarthi, G.R.; Chalumuri, R.S. and Velmurugan, S. 2013. Micro Simulation based Performance Evaluation of Delhi Bus Rapid Transit Corridor. *Procedia - Social and Behavioral Sciences* 104: 825–834, <https://doi.org/10.1016/j.sbspro.2013.11.177>.
- Gong, L.; Sato, H.; Yamamoto, T.; Miwa, T. and Morikawa, T. 2015. Identification of activity stop locations in GPS trajectories by density-based clustering method combined with support vector machines. *Journal of Modern Transportation* 23(3): 202–213, <https://doi.org/10.1007/s40534-015-0079-x>.
- Goodwin, P.B. 1977. Habit and Hysteresis in Mode Choice. *Urban Studies* 14(1): 95–98, <https://doi.org/10.1080/00420987720080101>.
- Greene, W. and Hensher, D. 2010. Does scale heterogeneity across individuals matter? An empirical assessment of alternative logit models. *Transportation* 37(3): 413–428, <https://doi.org/10.1007/s11116-010-9259-z>.
- Grimm, V.; Berger, U.; DeAngelis, D.; Polhill, G.; Giske, J. and Railsback, S. 2010. The ODD protocol: A review and first update. *Ecological Modelling* 221(23): 2760–2768, <https://doi.org/10.1016/j.ecolmodel.2010.08.019>.

- Gross, J. and Ligges, U. 2015. Nortest: Tests for NormalityCRAN.R-project.org, 2015, <http://CRAN.R-project.org/package=nortest>.
- Gu, Z.; Gu, L.; Eils, R.; Schlesner, M. and Brors, B. 2014. Circulize Implements and Enhances Circular Visualization in R. *Bioinformatics* 30(19): 2811–2812, <https://doi.org/10.1093/bioinformatics/btu393>.
- Hadid, M.; Widyastuti, H. and Herijanto, W. 2016. A Suggested Model To Simulate Storage Lane For Vehicle Queue On Urban Road U-Turn. *ARPN Journal of Engineering and Applied Sciences* 11(24).
- Hager, K.; Rauh, J. and Rid, W. 2015. Agent-based Modeling of Traffic Behavior in Growing Metropolitan Areas. *Transportation Research Procedia* 10: 306–315, <https://doi.org/10.1016/j.trpro.2015.09.080>.
- Hartgen, D. 2013. Hubris or humility? Accuracy issues for the next 50 years of travel demand modeling. *Transportation* 40(6): 1133–1157, <https://doi.org/10.1007/s11116-013-9497-y>.
- Hasrul. 2011. Lokasi Halte Trans Jogja Ditinjau Dari Perspektif Aksesibilitas Pengguna Dalam Menjangkaunya. Universitas Gadjah Mada, Indonesia.
- Hensher, D. and Button, K. (Eds). 2008. *Handbook of Transport Modelling*. Emerald.
- Hensher, D. and Greene, W. 2011. Valuation of travel time savings in WTP and preference space in the presence of taste and scale heterogeneity. *Journal of Transport Economics and Policy (JTEP)* 45(3): 505–525.
- Hossain, M. and Hasan, M.Z. 2000. Simulation of bus operation under mixed traffic conditions. *Proceedings of ICTTS* 453, [http://ascelibrary.org/doi/abs/10.1061/40503\(277\)69](http://ascelibrary.org/doi/abs/10.1061/40503(277)69)
- Indrawati, N.A. 2013. Pengaruh Kualitas Pelayanan Dalam Memulihkan Citra Bus Trans Jogja (Survei Pada Anggota Bismania Community Jogja). Universitas Islam Indonesia, Indonesia.
- Innocenti, A.; Lattarulo, P. and Pazienza, M. 2009. Heuristics and biases in travel mode choice. *University of Siena Experimental Economics Laboratory Working Paper* (27), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1522168](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1522168)
- Innocenti, A.; Lattarulo, P. and Pazienza, M.G. 2013. Car stickiness: Heuristics and biases in travel choice. *Transport Policy* 25: 158–168, <https://doi.org/10.1016/j.tranpol.2012.11.004>.
- Jaiswal, S.; Bunker, J. and Ferreira, L. 2008. Relating bus dwell time and platform crowding at a busway station, <http://eprints.qut.edu.au/15023>
- Jenks, C.; Jencks, C.; Schwager, D.; Oser, J. and Delaney, E. 2013. *Transit Capacity and Quality of Service Manual - Third Edition, Chapter 06, Bus Transit Capacity*. Washington, D.C.: Transportation Research Board, <http://www.TRB.org>.



- Ji, Y.; Mishalani, R. and McCord, M. 2014. Estimating transit route OD flow matrices from APC data on multiple bus trips using the IPF method with an iteratively improved base: method and empirical evaluation. *Journal of Transportation Engineering* 140(5): 04014008.
- Jiménez-Meza, A.R.; Arámburo-Lizárraga, J. and de la Fuente, E. 2013. Framework for Estimating Travel Time, Distance, Speed, and Street Segment Level of Service (LOS), based on GPS Data. *Procedia Technology* 7: 61–70, <https://doi.org/10.1016/j.protcy.2013.04.008>.
- Jordan, W. and Turnquist, M.A. 1979. Zone scheduling of bus routes to improve service reliability. *Transportation science* 13(3): 242–268.
- Juniardi. 2006. Analisis Arus Lalu Lintas di Simpang Tak Bersinyal (Studi Kasus Simpang Timoho dan Simpang Tunjung di Kota Yogyakarta). Universitas Diponegoro.
- Karian, Z. and Dudewicz, E. 2011. *Handbook of fitting statistical distributions with R*. Boca Raton, FL: CRC Press.
- Kartikasari, U. 2008. Trans Jogja Sebagai Transportasi Penunjang Pariwisata Yogyakarta. Universitas Sebelas Maret, Indonesia.
- Karya Sejati, CV. 2015. Studi Evaluasi Kinerja Ruas Jalan dan Simpang Perkotaan Dinas Perhubungan, Komunikasi dan Informatika, Daerah Istimewa Yogyakarta, 2015.
- Kaye, D. and Freedman, D. 2011. *Reference Manual on Scientific Evidence, 3d ed.* Washington DC: National Academy Press.
- Kementerian Perhubungan. 2012. Standar Pelayanan Minimal Angkutan Massal Berbasis Jalan Kementerian Perhubungan Republik Indonesia, 2012.
- Kharisma, W. 2015. BBM Naik, DIY Belum Naikkan Tarif Angkutan. *Pikiran Rakyat Online*. <http://www.pikiran-rakyat.com/nasional/2015/03/31/321872/bbm-naik-diy-belum-naikkan-tarif-angkutan> (accessed 19 May 2015)
- Kieu, L.-M.; Bhaskar, A. and Chung, E. 2014. Public Transport Travel-Time Variability Definitions and Monitoring. *Journal of Transportation Engineering* 141(1), [http://ascelibrary.org/doi/abs/10.1061/\(ASCE\)TE.1943-5436.0000724](http://ascelibrary.org/doi/abs/10.1061/(ASCE)TE.1943-5436.0000724)
- Kikuchi, S.; Rhee, J. and Teodorovic, D. 2002. Applicability of an agent-based modeling concept to modeling of transportation phenomena. *Yugoslav Journal of Operations Research ISSN: 0354-0243 EISSN: 2334-6043* 12(2), <http://www.yujor.fon.bg.ac.rs/index.php/journal/article/download/539/282>
- Kim, H. and Park, D. 2017. Empirical comparison of tour- and trip-based truck travel demand models. *KSCE Journal of Civil Engineering* 21(7): 2868–2878, <https://doi.org/10.1007/s12205-017-0868-3>.
- Kresnanto, N.C. 2014. Kajian Karakteristik dan Pola Perjalanan Penumpang

- Angkutan Umum Perkotaan. *Jurnal Teknik: Teknik Sipil, Teknik Mesin, Teknik Informatika* 3(2): 11.
- Krzywinski, M.; Schein, J.; Birol, I.; Connors, J.; Gascoyne, R.; Horsman, D.; Jones, S.J. and Marra, M.A. 2009. Circos: an information aesthetic for comparative genomics. *Genome research* 19(9): 1639–1645.
- Kurniawan, N. 2012. Applying Value Creation Framework to Offer Public Transport Improvement (Case from Trans Jogja and Värmlandstrafik AB). Universitas Gadjah Mada, Indonesia.
- Kusdwiyanto. 2013. Performance Analysis of Bus Rapid Transit Projects In Yogyakarta, Semarang and Surakarta, Indonesia. Universitas Gadjah Mada, Indonesia.
- Leclercq, L.; S  n  cat, A. and Mariotte, G. 2017. Dynamic macroscopic simulation of on-street parking search: A trip-based approach. *Transportation Research Part B: Methodological* 101: 268–282, <https://doi.org/10.1016/j.trb.2017.04.004>.
- Lee, J.-H.; Cho, S.-H.; Kim, D.-K. and Lee, C. 2016. Valuation of Travel Time Reliability Accommodating Heterogeneity of Route Choice Behaviors. *Transportation Research Record: Journal of the Transportation Research Board* 2565: 86–93, <https://doi.org/10.3141/2565-10>.
- Leeuw, S.V.D. 2004. Why Model? *Cybernetics and Systems* 35(2–3): 117–128, <https://doi.org/10.1080/01969720490426803>.
- Li, F.; Duan, Z. and Yang, D. 2012. Dwell time estimation models for bus rapid transit stations. *Journal of Modern Transportation* 20(3): 168–177, <https://doi.org/10.1007/BF03325795>.
- Lomax, N. and Norman, P. 2016. Estimating Population Attribute Values in a Table: “Get Me Started in” Iterative Proportional Fitting. *The Professional Geographer* 68(3): 451–461, <https://doi.org/10.1080/00330124.2015.1099449>.
- Lucarotti, P.S.K. 1977. Car availability — the fundamental modal split. *Transportation Planning and Technology* 3(4): 203–213, <https://doi.org/10.1080/03081067708717107>.
- Luo, J.; Wang, S.; Li, X. and PAN, J. 2007. Modeling Travel Mode Choice Behavior and Individual Time Preference Heterogeneity [J]. *Journal of Highway and Transportation Research and Development* 2: 028.
- Macal, C.M. and North, M.J. 2010. Tutorial on agent-based modelling and simulation. *Journal of Simulation* 4(3): 151–162, <https://doi.org/10.1057/jos.2010.3>.
- Mahajan, A. and Kaur, A. 2016. Predictive Urban Traffic Flow Model using Vehicular Big Data. *Indian Journal of Science and Technology* 9(42), <https://doi.org/10.17485/ijst/2016/v9i42/98970>
- Malkhamah, S. 2001. Analisis Persepsi Masyarakat dan Operator Terhadap



- Angkutan Umum Perkotaan di Yogyakarta. *Forum Teknik Sipil X/I*(Januari 2001).
- Manoj, K. and Senthamarai, K.K. 2013. Comparison of methods for detecting outliers. *International Journal of Scientific & Engineering Research*, September 2013.
- McCord, M.; Mishalani, R.; Goel, P. and Strohl, B. 2010. Iterative Proportional Fitting Procedure to Determine Bus Route Passenger Origin-Destination Flows. *Transportation Research Record: Journal of the Transportation Research Board* 2145: 59–65, <https://doi.org/10.3141/2145-07>.
- McDonnell, S. and Zellner, M. 2011. Exploring the effectiveness of bus rapid transit a prototype agent-based model of commuting behavior. *Transport Policy* 18(6): 825–835, <https://doi.org/10.1016/j.tranpol.2011.05.003>.
- McKillup, S. 2011. *Statistics explained: an introductory guide for life scientists*. New York: Cambridge University Press.
- Media, E. 2014. Harga BBM Naik, Tarif Trans Jogja Meningkatkan. *Elora | media corporation*. <http://www.news.eloramedia.net/2014/12/harga-bbm-naik-tarif-trans-jogja.html> (accessed 19 May 2015)
- Meignan, D.; Simonin, O. and Koukam, A. 2007. Simulation and evaluation of urban bus-networks using a multiagent approach. *Simulation Modelling Practice and Theory* 15(6): 659–671, <https://doi.org/10.1016/j.simpat.2007.02.005>.
- Mense, A. 2001. Introduction to Regression Techniques. University of Chicago, USA, 2001, <http://statisticaldesignmethods.com/files/regression-techniques.pdf> (accessed 10 June 2017)
- Milakis, D.; Cervero, R.; van Wee, B. and Maat, K. 2015. Do people consider an acceptable travel time? Evidence from Berkeley, CA. *Journal of Transport Geography* 44: 76–86, <https://doi.org/10.1016/j.jtrangeo.2015.03.008>.
- Miller, A. 2002. *Subset selection in regression*. 2nd ed. Monographs on statistics and applied probability 95. Boca Raton: Chapman & Hall/CRC.
- Møller, B. and Thøgersen, J. 2008. Car Use Habits: An Obstacle to the Use of Public Transportation? In Jensen-Butler, C.; Sloth, B.; Larsen, M.M.; Madsen, B. and Nielsen, O.A. (Eds), *Road Pricing, the Economy and the Environment*, pp. 301–313. Berlin, Heidelberg: Springer Berlin Heidelberg, [https://doi.org/10.1007/978-3-540-77150-0\\_15](https://doi.org/10.1007/978-3-540-77150-0_15)
- Montgomery, D. 2014. *Applied statistics and probability for engineers*. Sixth edition. Hoboken, NJ: John Wiley and Sons, Inc.
- Montini, L.; Prost, S.; Schrammel, J.; Rieser-Schüssler, N. and Axhausen, K. 2015. Comparison of Travel Diaries Generated from Smartphone Data and Dedicated GPS Devices. *Transportation Research Procedia* 11: 227–241, <https://doi.org/10.1016/j.trpro.2015.12.020>.

- Moreno, E.; Romana, M. and Martínez, Ó. 2016. A First Step to Diagnostic of Urban Transport Operations by Means of GPS Receiver. *Procedia Computer Science* 83: 305–312, <https://doi.org/10.1016/j.procs.2016.04.130>.
- Müller, K. and Axhausen, K. 2011. Hierarchical IPF: Generating a synthetic population for Switzerland. *ETH Zürich, Institut für Verkehrsplanung, Transporttechnik, Strassen-und Eisenbahnbau (IVT)*, <https://www.econstor.eu/handle/10419/119994>
- Munawar, A. 2007. Public transport reform in indonesia, a case study in the city of Yogyakarta. *World Academy of Science, Engineering and Technology* 28(2007): 276.
- Munawar, A. 2009. Urban Public Transport Reformation in Bali, Indonesia. *Transport and Tourism* 196.
- Munawar, A. 2014. Implementasi Intelligent Transport System di Daerah, Universitas Gadjah Mada.
- Narendra, A. 2015. Laporan Tugas Mata Kuliah Teori Keputusan dan Optimasi. Department of Civil and Environment Engineering, UGM..
- Narendra, A. 2016. Model Waktu Pelayanan Penumpang dengan Pemandu Perjalanan di Halte Trans Jogja. Department of Civil and Environment Engineering, UGM.
- NIST/SEMATECH. 2013. NIST/SEMATECH e-Handbook of Statistical Methods, <http://www.itl.nist.gov/div898/handbook/index.htm>
- Norman, P. 1999. Putting Iterative Proportional Fitting (IPF) on the Researcher's Desk School of Geography, University of Leeds, 1999.
- Obermeyer, A.; Treiber, M. and Evangelinos, C. 2014. Thresholds in choice behaviour and the size of travel time savings. *ITEA Annual Conference and Summer School on Transportation Economics*, <http://arxiv.org/abs/1402.3433v1>.
- Ortúzar, J. de D. and Willumsen, L. 2011. *Modelling Transport*. Fourth edition. Chichester, West Sussex, United Kingdom: John Wiley & Sons.
- Pandit, D. and Das, S. 2013. A Framework for Determining Commuter Preference Along a Proposed Bus Rapid Transit Corridor. *Procedia - Social and Behavioral Sciences* 104: 894–903, <https://doi.org/10.1016/j.sbspro.2013.11.184>.
- Patire, A.; Wright, M.; Prodhomme, B. and Bayen, A.M. 2015. How much GPS data do we need? *Transportation Research Part C: Emerging Technologies* 58: 325–342, <https://doi.org/10.1016/j.trc.2015.02.011>.
- Pearson, C. 2009. *Latitude, Longitude, And Great Circle Distances*. Pearson Software Consulting, [www.cpearson.com/excel/latlong.aspx](http://www.cpearson.com/excel/latlong.aspx).
- Perestroika, N. 2014. Kolaborasi Pemerintah Dan Swasta Dalam Penyelenggaraan

Layanan Angkutan Umum. Universitas Gadjah Mada, Indonesia.

- Pinheiro, J.; Bates, D.; DebRoy, S.; Sarkar, D. and R Core Team. 2015. Nlme: Linear and Nonlinear Mixed Effects ModelsCRAN.R-project.org, 2015, <http://CRAN.R-project.org/package=nlme>.
- Pluvinet, P.; Gonzalez-Feliu, J. and Ambrosini, C. 2012. GPS Data Analysis for Understanding Urban Goods Movement. *Procedia - Social and Behavioral Sciences* 39: 450–462, <https://doi.org/10.1016/j.sbspro.2012.03.121>.
- Popov, D. 2009. An Introduction to Prune, Snip and Clip. *Linuxuser* (109): 72.
- Porter, B. (Ed). 2011. *Handbook of Traffic Psychology*. 1st ed. London ; Waltham, MA: Academic Press.
- Prabawati, A.R. 2012. Evaluasi Kinerja Bus Trans Jogja Trayek 3A. Institut Teknologi Sepuluh Nopember, Indonesia.
- Pratomo, A.B.; Sumarsono, A. and Yulianto, B. 2015. Analisis Kinerja Bus Trans Jogja (Studi Kasus Rute 4A dan 4B). *Matriks Teknik Sipil* 3(2), <http://matriks.sipil.ft.uns.ac.id/index.php/MaTekSi/article/view/344>
- Presiden Republik Indonesia. 2014. Peraturan Pemerintah Tentang Angkutan JalanKementrian Hukum dan HAM Republik Indonesia, October 2014.
- Pulugurta, S.; Madhu, E. and Kayitha, R. 2014. Fuzzy Logic–Based Travel Demand Model to Simulate Public Transport Policies. *Journal of Urban Planning and Development* 04014044, [https://doi.org/10.1061/\(ASCE\)UP.1943-5444.0000261](https://doi.org/10.1061/(ASCE)UP.1943-5444.0000261).
- Pulugurtha, S.; Puvvala, R.; Pinnamaneni, R.; Duddu, V. and Najaf, P. 2014. Buses as Probe Vehicles for Travel Time Data Collection on Urban Arterials. In *American Society of Civil Engineers (ASCE)*, <http://ascelibrary.org/doi/abs/10.1061/9780784413586.076> (accessed 30 May 2016)
- Qi, W.; Abel, G.; Raya, M. and Liu, S. 2017. Circular Visualization of China’s Internal Migration Flows 2010–2015. *Environment and Planning A* 49(11): 2432–2436.
- Qiu, F.; Li, W. and An, C. 2014. A Google Maps-based flex-route transit scheduling system. In *14th COTA International Conference of Transportation Professionals, Changsha, China*, pp. 247–257, <http://ascelibrary.org/doi/abs/10.1061/9780784413623.025> (accessed 20 July 2016)
- Raharjo, N.R. 2011. Pengaruh Kualitas Jasa Terhadap Citra Trans-Jogja. Universitas Atma Jaya Yogyakarta, Indonesia.
- Railsback, S. and Grimm, V. 2011. *Agent-based and individual-based modeling: a practical introduction*. Princeton university press.
- Rashidi, S.; Ranjitkar, P. and Hadas, Y. 2014. Bus dwell time modelling using

- decision tree based methods. In *93rd Annual Meeting of Transportation Research Board, Washington DC*, Washington, D.C.: Transportation Research Board of the National Academies.
- Sander, N.; Abel, G.; Bauer, R. and Schmidt, J. 2014. Visualising Migration Flow Data with Circular Plots Vienna Institute of Demography, Austria, 2014.
- Satiennam, T.; Jaensirisak, S.; Satiennam, W. and Detdamrong, S. 2016. Potential for modal shift by passenger car and motorcycle users towards Bus Rapid Transit (BRT) in an Asian developing city. *IATSS Research* 39(2): 121–129, <https://doi.org/10.1016/j.iatssr.2015.03.002>.
- Senevirante, P. 1990. Analysis of on-time performance of bus services using simulation. *Journal of Transportation Engineering* 116(4): 517–531.
- Shrewsbury, J. and New Zealand Transport Agency. 2012. *Calibration of trip distribution by generalised linear models*. Wellington, N.Z.: New Zealand Transport Agency.
- Siebers, P.O.; Macal, C.M.; Garnett, J.; Buxton, D. and Pidd, M. 2010. Discrete-event simulation is dead, long live agent-based simulation! *Journal of Simulation* 4(3): 204–210, <https://doi.org/10.1057/jos.2010.14>.
- Signorell, A. 2017. *DescTools: Tools for Descriptive Statistics*. Zürich: HWZ University of Applied Sciences in Business Administration, <https://cran.r-project.org/package=DescTools>.
- Sinnott, R. 1984. Virtues of Haversine. *Sky and Telescope* 68(2): 159.
- Sokolowski, J. and Banks, C. (Eds). 2009. *Principles of Modeling and Simulation: A Multidisciplinary Approach*. Hoboken, N.J: John Wiley.
- Stephan, F. 1942. An iterative method of adjusting sample frequency tables when expected marginal totals are known. *The Annals of Mathematical Statistics* 13(2): 166–178.
- Sturges, H. 1926. The Choice of a Class Interval. *Journal of the American Statistical Association* 21(153): 65–66, <https://doi.org/10.1080/01621459.1926.10502161>.
- Sugiyanto, G.; Malkhamah, S.; Munawar, A. and Sutomo, H. 2011. Modeling The Effect of Congestion Pricing on Mode Choice in Yogyakarta, Indonesia. *International Journal of Engineering & Technology IJET-IJENS* 11(01): 109–116.
- Sunitiyoso, Y. and Matsumoto, S. 2009. Modelling a social dilemma of mode choice based on commuters' expectations and social learning. *European Journal of Operational Research* 193(3): 904–914, <https://doi.org/10.1016/j.ejor.2007.10.058>.
- Sweroad and PT Bina Karya. 1997. *Manual Kapasitas Jalan Indonesia*. Departemen Pekerjaan Umum.
- Tamin, O. 2000. *Perencanaan dan Pemodelan Transportasi*. Bandung: Penerbit

ITB.

- Taylor, G.; Brunsdon, C.; Li, J.; Olden, A.; Steup, D. and Winter, M. 2006. GPS accuracy estimation using map matching techniques: Applied to vehicle positioning and odometer calibration. *Computers, Environment and Urban Systems* 30(6): 757–772, <https://doi.org/10.1016/j.compenvurbsys.2006.02.006>.
- Teetor, P. 2011. *25 recipes for getting started with R*. 1st ed. Beijing: Sebastopol, Calif: O'Reilly Media.
- Tejada, J. and Punzala, J.R. 2012. On the misuse of Slovin's formula. *The Philippine Statistician* 61(1): 129–136.
- The R Core Team. 2016. *R: A Language and Environment for Statistical Computing*. The Comprehensive R Archive Network.
- The R Core Team. 2017. *R: A Language and Environment for Statistical Computing - Reference Index* R Foundation for Statistical Computing, 30 June 2017, <https://cran.r-project.org/doc/manuals/r-release/fullrefman.pdf> (accessed 9 July 2017)
- Thøgersen, J. 2006. Understanding repetitive travel mode choices in a stable context: A panel study approach. *Transportation Research Part A: Policy and Practice* 40(8): 621–638, <https://doi.org/10.1016/j.tra.2005.11.004>.
- Thohari, H. 2014. Tarif Trans Jogja Naik Rp1.000. *Tribun Jogja*. <http://jogja.tribunnews.com/2014/11/28/tarif-trans-jogja-naik-rp1000> (accessed 19 May 2015)
- Tian, J.; Yu, S. and Wang, J. 2014. Highway Short-term Traffic Simulation of Vehicle Production Model Research. *Advanced Science and Technology Letters* 45: 7–11, <https://doi.org/10.14257/astl.2014.45.02>.
- Tong, C.C. 1990. *A Study of Dynamic Departure Time and Route Choice Behavior of Urban Commuters*. University of Texas at Austin, <http://books.google.co.id/books?id=wJFvnQEACAAJ>.
- Turner, D.F. with contributions from H. 2015. Relimp: Relative Contribution of Effects in a Regression Model CRAN.R-project.org, 2015, <http://CRAN.R-project.org/package=relimp>.
- UGM, H. 2008. Universitas Gadjah Mada: Klarifikasi Tim Peneliti CIMDEV-Jurusan AN UGM: Jumlah Pengguna Trans Jogja Tidak Menurun, Tapi Sulit Diketahui Ketepatannya. <https://ugm.ac.id/id/berita/360-klarifikasi.tim.peneliti.cimdev-jurusan.an.ugm:jumlah.pengguna.trans.jogja.tidak.menurun.tapi.sulit.diketahui.ketepatannya> (accessed 17 May 2015)
- United States Department of Transportation - Federal Highway Administration. 2013. Travel Time Reliability Measures - Operations Performance Measurement. [http://ops.fhwa.dot.gov/perf\\_measurement/reliability\\_measures/index.htm](http://ops.fhwa.dot.gov/perf_measurement/reliability_measures/index.htm)



(accessed 23 May 2015)

- Urdan, T. 2010. *Statistics in Plain English*. 3rd ed. New York: Routledge.
- U.S. Department of Transportation. 1983. Calibrating & Testing a Gravity Model for Any Size Urban Area. <https://ntl.bts.gov/DOCS/CAT.html> (accessed 6 April 2017)
- Vedagiri, P. and Arasan, V.T. 2009. Estimating Modal Shift of Car Travelers to Bus on Introduction of Bus Priority System. *Journal of Transportation Systems Engineering and Information Technology* 9(6): 120–129, [https://doi.org/10.1016/S1570-6672\(08\)60092-6](https://doi.org/10.1016/S1570-6672(08)60092-6).
- Vij, A. and Shankari, K. 2015. When is Big Data Big Enough? Implications of Using GPS-Based Surveys for Travel Demand Analysis. *Transportation Research Part C: Emerging Technologies* 56: 446–462, <https://doi.org/10.1016/j.trc.2015.04.025>.
- Wang, C.; Ye, Z.; Wang, Y.; Xu, Y. and Wang, W. 2016. Modeling Bus Dwell Time and Time Lost Serving Stop in China. *Journal of Public Transportation* 19(3): 4.
- Wang, Y.; Li, L.; Wang, Z.; Lv, T. and Wang, L. 2013. Mode Shift Behavior Impacts from the Introduction of Metro Service: Case Study of Xi'an, China. *Journal of Urban Planning and Development* 139(3): 216–225.
- Wilensky, U. 2017. The NetLogo 6.0.1 User Manual Center for Connected Learning and Computer-Based Modeling Northwestern University, Evanston, IL., 2017, <http://ccl.northwestern.edu/netlogo/>.
- William, L.H. and Tam, M.L. 2008. Evaluation of Real-time Data Collection Technologies for Journey Time Estimation, [http://ascelibrary.org/doi/abs/10.1061/40995\(322\)4](http://ascelibrary.org/doi/abs/10.1061/40995(322)4)
- Wirasinghe, C. and Ghoneim, N. 1981. Spacing of Bus-Stops for Many to Many Travel Demand. *Transportation Science* 15(3): 210–221.
- Wong, D. 1992. The Reliability of Using the Iterative Proportional Fitting Procedure. *Professional Geographer* 44(3): 340–348.
- Yang, S.-Y. and Hsu, C.-L. 2015. A location-based services and Google maps-based information master system for tour guiding. *Computers & Electrical Engineering*, <https://doi.org/10.1016/j.compeleceng.2015.11.020>
- Ye, P.; Yang, S. and Xu, L. 2015. Community Bus Demand Characteristics Analysis Based on Smart Card Data and GPS Data. In *Fifth International Conference on Transportation Engineering*, <https://trid.trb.org/view.aspx?id=1369598> (accessed 25 July 2016)
- Yunianta, A. 2006. Pengaruh Manuver Kendaraan Parkir Badan Jalan Terhadap Karakteristik Lalu Lintas di Jalan Diponegoro Yogyakarta. Universitas Diponegoro.
- Zakaria, S.I. 2013. Analisis Faktor-Faktor Yang Mempengaruhi Kepuasan



Konsumen Terhadap Pengguna Jasa Transportasi (studi kasus pada pengguna Bus Trans Jogja di Kota Yogyakarta). Universitas Diponegoro, Indonesia.

- Zhang, C. and Teng, J. 2013. Bus Dwell Time Estimation and Prediction: A Study Case in Shanghai-China. *Procedia - Social and Behavioral Sciences* 96: 1329–1340, <https://doi.org/10.1016/j.sbspro.2013.08.151>.
- Zhang, L.; Jiancheng, W. and Zhihong, C. 2014. Characteristic Analysis of Bus Travel Speed on Commuting Corridors Based on GPS Data. In *CICTP 2014@ sSafe, Smart, and Sustainable Multimodal Transportation Systems*, pp. 1443–1453. ASCE, <http://ascelibrary.org/doi/abs/10.1061/9780784413623.140> (accessed 1 June 2015)
- Zhang, L. and Levinson, D. 2004. Agent-Based Approach to Travel Demand Modeling: Exploratory Analysis. *Transportation Research Record: Journal of the Transportation Research Board* 1898: 28–36, <https://doi.org/10.3141/1898-04>.
- Zhang, R.; Wang, T.; Wan, H.; Lei, L. and She, B. 2011. Analysis of Jinan BRT Speed Characteristics Based on Vehicle Traveling Data Recorder. In *11th International Conference of Chinese Transportation Professionals (ICCTP)*, [http://ascelibrary.org/doi/abs/10.1061/41186\(421\)97](http://ascelibrary.org/doi/abs/10.1061/41186(421)97) (accessed 14 April 2014)
- Zheng, H.; Son, Y.-J.; Chiu, Y.-C.; Head, L.; Feng, Y.; Xi, H.; Kim, S. and Hickman, M. 2013. A Primer for Agent-Based Simulation and Modeling in Transportation Applications. FHWA-HRT-13-054. United States Department of Transportation - Federal Highway Administration.
- Zhu, L.; Yu, L.; Chen, X.-M. and Guo, J.-F. 2012. Simulated Analysis of Exclusive Bus Lanes on Expressways: Case Study in Beijing, China. *Journal of Public Transportation* 15(4): 125.