

Adolf, A., Wereszczyńska, K., Karsznia, I., Weibel, R. i Leyk, S. (2023). Data enrichment and supervised learning in road and settlement feature selection for small scale maps. *Abstracts of the International Cartographic Association*, 6, 3. <https://doi.org/10.5194/ica-abs-6-3-2023>

Ajdacka, I. i Karsznia, I. (2022a). Verifying and improving map specifications of river network selection for automatic generalization of small-scale maps. *Polish Cartographical Review*, 54(1), 75–91. <https://doi.org/10.2478/pcr-2022-0006>

Ajdacka, I. i Karsznia, I. (2022b). *Usprawnienie selekcji rzek na mapach małoskalowych z wykorzystaniem wzbogacenia danych oraz uczenia maszynowego*. XLIV Ogólnopolska Konferencja Kartograficzna, 29–30.09.2022, Toruń.

Alpaydin, E. (2010). *Introduction to Machine Learning*. The MIT Press.

Armstrong, M.P. (1991). Knowledge classification and organization. W: B. Buttenfield i R. McMaster (red.), *Map Generalization: Making Rules for Knowledge Representation* (s. 86–102). Longman.

Atlas geograficzny Polski. (2004). *Mapy regionów Polski w skali 1:1 000 000*. Demart.

Atlas Rzeczypospolitej Polskiej. (1993–1997). *Mapy regionów Polski w skali 1:500 000*. Główny Geodeta Kraju.

Back, T. (1996). *Evolutionary Algorithms in Theory and Practice*. Oxford University Press.

Baranowski, M. i Grygorenko, W. (1974). Próba obiektywnego doboru osiedli na mapie z zastosowaniem maszyny cyfrowej. *Polski Przegląd Kartograficzny*, 6, 149–155.

Batty, M. (2006). Hierarchy in cities and city systems. W: D. Pumain (red.), *Hierarchy in Natural and Social Sciences* (s. 143–168). Springer.

Batty, M. (2013). Big data, smart cities and city planning. *Dialogues in Human Geography*, 3(3), 274–279. <https://doi.org/10.1177/2043820613513390>

Biever, C. (2023). ChatGPT broke the Turing test — the race is on for new ways to assess AI. *Nature*, 619(7971), 686–689. <https://doi.org/10.1038/d41586-023-02361-7>

Bishop, C.M. (2006). *Pattern Recognition and Machine Learning*. Springer.

Brassel, K. i Weibel, R. (1988). A review and conceptual framework of automated map generalization. *International Journal of Geographical Information Systems*, 2(3), 229–244. <https://doi.org/10.1080/02693798808927898>

Carol, H. (1960). The hierarchy of central functions within the city. *Annals of the Association of American Geographers*, 50(4), 419–438. <https://doi.org/10.1111/j.1467-8306.1960.tb00359.x>

Chaode, Y., Liu, X., Waseem Boota, M. i Pan, Z. (2022). A comparison of machine learning methods applied to the automated selection of river networks. *The Cartographic Journal*, 59(3), 187–202. <https://doi.org/10.1080/00087041.2021.2006390>

Christaller, W. (1966). *Central Places in Southern Germany*. Prentice Hall.

Courtial, A. i Touya, G. (2022). Constraint-based evaluation of map images generalized by deep learning. *Journal of Geovisualization and Spatial Analysis*, 6, 13. <https://doi.org/10.1007/s41651-022-00104-2>

- Courtial, A., Ayedi, A.E., Touya, G. i Zhang, X. (2020). Exploring the potential of deep learning segmentation for mountain roads generalisation. *ISPRS International Journal of GeoInformation*, 9(5), 338. <https://doi.org/10.3390/ijgi9050338>
- Courtial, A., Touya, G. i Zhang, X. (2021). Can graph convolution networks learn spatial relations? *Abstracts of the International Cartographic Association*, 3, 60. <https://doi.org/10.5194/ica-abs-3-60-2021>
- Courtial, A., Touya, G. i Zhang, X. (2022). Deriving map images of generalised mountain roads with generative adversarial networks. *International Journal of Geographical Information Science*, 37(3), 499–528. <https://doi.org/10.1080/13658816.2022.2123488>
- Dangermond, J. i Goodchild, M.F. (2019). Building geospatial infrastructure. *Geo-Spatial Information Science*, 23(1), 1–9. <https://doi.org/10.1080/10095020.2019.1698274>
- Dixon, O.M. (1967). The selection of towns and other features on Atlas maps of Nigeria. *The Cartographic Journal*, 4(1), 16–23. <https://doi.org/10.1179/caj.1967.4.1.16>
- Du, J., Wu, F., Xing, R., Gong, X. i Yu, L. (2022a). Segmentation and sampling method for complex polyline generalization based on a generative adversarial network. *Geocarto International*, 37, 4158–4180. <https://doi.org/10.1080/10106049.2021.1878288>
- Du, J., Wu, F., Yin, J., Liu, C. i Gong, X. (2022b). Polyline simplification based on the artificial neural network with constraints of generalization knowledge. *Cartography and Geographic Information Science*, 49, 313–337. <https://doi.org/10.1080/15230406.2021.2013944>
- Ellis, G. i Dix, A. (2007). A taxonomy of clutter reduction for information visualization. *IEEE Transactions on Visualization and Computer Graphics*, 13(6), 1216–1223. <https://doi.org/10.1109/TVCG.2007.70535>
- Feng, Y., Thiemann, F. i Sester, M. (2019). Learning cartographic building generalization with deep convolutional neural network. *ISPRS International Journal of Geo-Information*, 8(6), 258. <https://doi.org/10.3390/ijgi8060258>
- Flewelling, D.M. i Egenhofer, M.J. (1993). Formalizing importance: Parameters for settlement selection in a geographic database. W: *Auto-Carto XI: Proceedings of the International Symposium on Computer-Assisted Cartography*, Minneapolis, Minnesota, October 30 – November 1, 1993 (s. 167–175). American Congress on Surveying and Mapping, American Society for Photogrammetry and Remote Sensing. <https://cartogis.org/docs/proceedings/archive/auto-carto-11/pdf/formalizing-importance-parameters-for-settlementselection-from-a-geographic-database.pdf>
- Fu, Ch., Zhiyong, Z., Feng, Y. i Weibel, R. (2024). Keeping walls straight: Data model and training set size matter for deep learning in building generalization. *Cartography and Geographic Information Science*, 51(1), 130–145. <https://doi.org/10.1080/15230406.2023.2264757>
- Geisser, S. (1993). *Predictive Inference: An Introduction*. Chapman and Hall.
- Goodchild, M. (2009). NeoGeography and the nature of geographic expertise. *Journal of Location Based Services*, 3(2), 82–96. <https://doi.org/10.1080/17489720902950374>
- Gotlib, D. (2013a). Ogólna koncepcja, cel budowy i zakres informacyjny BDOT10k i BDOO. W: R. Olszewski i D. Gotlib (red.), *Rola Bazy Danych Obiektów Topograficznych w tworzeniu infrastruktury informacji przestrzennej w Polsce. Cz. II. Ogólna charakterystyka bazy danych obiektów*

topograficznych i bazy danych obiektów ogólnogeograficznych (s. 51–57). Główny Urząd Geodezji i Kartografii.

Gotlib, D. (2013b). Ewolucja bazy danych obiektów topograficznych w kontekście realizacji projektu GBDOT. W: R. Olszewski i D. Gotlib (red.), *Rola Bazy Danych Obiektów Topograficznych w tworzeniu infrastruktury informacji przestrzennej w Polsce. Cz. I. Od map analogowych do baz danych przestrzennych. Rys historyczny rozwoju opracowań topograficznych w kraju i na świecie* (s. 41–58). Główny Urząd Geodezji i Kartografii.

Gröbe, M. i Burghardt, D. (2021). Scale-dependent point selection methods for web maps. *KN – Journal of Cartography and Geographic Information*, 71, 143–154. <https://doi.org/10.1007/s42489-021-00079-y>

Grünreich, D. (1995). Development of computer-assisted generalization. W: J.C. Muller, J.P. Lagrange i R. Weibel (red.), *GIS and Generalization: Methodology and Practice* (s. 47–55). Taylor and Francis.

Haklay, M. (2013). Citizen science and volunteered geographic information: Overview and typology of participation. W: D.Z. Sui, S. Elwood i M.F. Goodchild (red.), *Crowdsourcing Geographic Knowledge: Volunteered Geographic Information (VGI) in Theory and Practice* (s. 105–122). Springer.

Haklay, M. (2021). Geographic citizen science: An overview. W: A. Skarlatidou i M. Haklay (red.), *Geographic Citizen Science Design* (s. 15–37). UCL Press.

Harrie, L., Touya, G., Oucheikh, R., Ai, T., Courtial, A. i Richter, K.F. (2024). Machine learning in cartography. *Cartography and Geographic Information Science*, 51(1), 1–19. <https://doi.org/10.1080/15230406.2023.2295948>

Horton, R.E. (1945). Erosional development of streams and their drainage basins: Hydrophysical approach to quantitative morphology. *Geological Society of America Bulletin*, 56, 275–370. <https://doi.org/10.1177/030913339501900406>

Jepsen, S.T., Jensen, C.S. i Dyhre Nielsen, T. (2022). Relational fusion networks: Graph convolutional networks for road networks. *IEEE Transactions on Intelligent Transportation Systems*, 23(1), 418–429. <https://doi.org/10.1109/TITS.2020.3011799>

Jiang, B. i Claramunt, C. (2004). A structural approach to the model generalization of an urban street network. *Geoinformatica*, 8, 157–171. <https://doi.org/10.1023/B:GEIN.0000017746.44824.70>

Kadmon, N. (1972). Automated selection of settlements in map generalisation. *Cartographic Journal*, 9(2), 93–98. <https://doi.org/10.1179/000870472787352442>

Kang, Y., Song, G. i Roth, R. (2024). Artificial intelligence studies in cartography: A review and synthesis of methods, applications, and ethics. *Cartography and Geographic Information Science*, 51, 599–630. <https://doi.org/10.1080/15230406.2023.2295943>

Karsznia, I. (2010). Generalizacja osadnictwa i sieci dróg Bazy Danych Ogólnogeograficznych z wykorzystaniem bazy wiedzy. W: J. Korycka-Skorupa i J. Ostrowski (red.), *Polska kartografia w dobie przemian metodycznych i technologicznych. T. 3* (s. 51–71). Polskie Towarzystwo Geograficzne.

Karsznia, I. (2015). *Metodyka automatyzacji generalizacji wybranych elementów Bazy Danych Ogólnogeograficznych*. Wydawnictwa Uniwersytetu Warszawskiego.

Karsznia, I. (2023). Machine learning and geospatial technologies. W: A.J. Kent i D. Specht (red.), *The Routledge Handbook of Geospatial Technologies and Society* (s. 299–312). Routledge.

- Karsznia, I. (2024). *Don't Hate, Automate! Settlement Selection with the Use of Machine Learning*. American Association of Geographers Annual Meeting, 16–20.04.2024, Honolulu, USA.
- Karsznia, I. i Sielicka, K. (2020). When traditional selection fails: How to improve settlement selection for small-scale maps using machine learning. *ISPRS International Journal of GeoInformation*, 9(4), 230. <https://doi.org/10.3390/ijgi9040230>
- Karsznia, I. i Weibel, R. (2018). Improving settlement selection for small-scale maps using data enrichment and machine learning. *Cartography and Geographic Information Science*, 45(2), 111–127. <https://doi.org/10.1080/15230406.2016.1274237>
- Karsznia, I., Adolf, A. i Leyk, S. (2021). Supervised learning for automated feature selection in road network generalization. *Abstracts of the International Cartographic Association*, 3, 139. <https://doi.org/10.5194/ica-abs-3-139-2021>
- Karsznia, I., Adolf, A., Leyk, S. i Weibel, R. (2024a). Using machine learning and data enrichment in the selection of roads for small-scale maps. *Cartography and Geographic Information Science*, 51(1), 60–78. <https://doi.org/10.1080/15230406.2023.2283075>
- Karsznia, I., Çöltekin, A. i Sundstedt, V. (2024b). Cartographic generalization of settlement representations: Human vs. machine. *Abstracts of the International Cartographic Association*, 8, 12. <https://doi.org/10.5194/ica-abs-8-12-2024>
- Karsznia, I., Weibel, R. i Leyk, S. (2022a). *May AI help you? Automatic settlement selection for small-scale maps using selected machine learning models*. AutoCarto 24th International Research Symposium on Cartography and GIScience, Cartography and Geographic Information Society, 02.11–04.11.2022, Redlands, California, USA.
- Karsznia, I., Wereszczyńska, K. i Weibel, R. (2022b). Make it simple: Effective road selection for small-scale map design using decision-tree-based models. *ISPRS International Journal of Geo-Information*, 11(8), 457. <https://doi.org/10.3390/ijgi11080457>
- Korpi, J. i Ahonen-Rainio, P. (2013). Clutter reduction methods for point symbols in map mashups. *The Cartographic Journal*, 50(3), 257–265. <https://doi.org/10.1179/1743277413Y.0000000065>
- Kraak, M.J., Roth, R.E., Ricker, B., Kagawa, A. i Le Sourd, G. (2020). *Mapping for a Sustainable World*. United Nations.
- Kulik, L., Duckham, M. i Egenhofer, M. (2005). Ontology driven map generalization. *Journal of Visual Languages & Computing*, 16(3), 245–267. <https://doi.org/10.1016/j.jvlc.2005.02.001>
- Lagrange, F., Landras, B. i Mustiere, S. (2000). Machine learning techniques for determining parameters of cartographic generalisation algorithms. W: D. Fritsch i M. Molenaar (red.), *XIXth ISPRS Congress, Amsterdam, The Netherlands. Vol. XXXIII, Part B4* (s. 718–725). International Society for Photogrammetry and Remote Sensing.
- Leitner, M. i Battenfield, B.P. (1995). Acquisition of procedural cartographic knowledge by reverse engineering. *Cartography and Geographic Information Science*, 22(3), 232–241. <https://doi.org/10.1559/152304095782540320>
- Le Mao, B., Ajdacka, I., Karsznia, I., Touya, G. i Adolf, A. (2024). Enriching river network data for multi-scale machine learning based selection: A case study of Poland and France. *Abstracts of the International Cartographic Association*, 7, 83. <https://doi.org/10.5194/ica-abs-7-83-2024>

Lisiewicz, M. i Karsznia, I. (2021). Verifying and exploring settlement selection rules and variables for small - scale maps using decision tree - based models. *Geographical Analysis*, 53(3), 560–587. <https://doi.org/10.1111/gean.12246>

Liu, X., Zhan, B. i Ai, T. (2010). Road selection based on Voronoi diagrams and “strokes” in map generalization. *International Journal of Applied Earth Observation and Geoinformation*, 12(Suppl. 2), 194–202. <https://doi.org/10.1016/j.jag.2009.10.009>

Liu, X. i inni (2022). Geographic information science in the era of geospatial big data: A cyberspace perspective. *The Innovation*, 3(5), 100279. <https://doi.org/10.1016/j.xinn.2022.100279>

Mackaness, W.A. (2006). Automated cartography in a bush of ghosts. *Cartography and Geographic Information Science*, 33(4), 245–256. <https://doi.org/10.1559/152304006779500678>

Mackaness, W.A. i Gould, N.M. (2014). *The role of geography in automated generalization*. ICA Workshop on Generalization and Multiple Representation, Vienna, Austria. <http://tinyurl.com/hozn5tj>

Mackaness, W.A., Burghardt, D. i Duchêne, C. (2014). Map generalisation: Fundamental to the modelling and understanding of geographic space. W: D. Burghardt, C. Duchêne i W.A. Mackaness (red.), *Abstracting Geographic Information in a Data Rich World: Methodologies and Applications of Map Generalization* (s. 1–15). Springer International.

Mackaness, W.A., Burghardt, D. i Duchêne, C. (2017). Map generalisation. W: D. Richardson i inni (red.), *The International Encyclopedia of Geography*. John Wiley & Sons. <https://doi.org/10.1002/9781118786352.wbieg1015>

Marshall, S. (2015). *Machine Learning: An Algorithm Perspective*. CRC Press, Taylor & Francis.

Minsky, M.L. (2007). *The Emotion Machine: Commonsense Thinking, Artificial Intelligence, and the Future of the Human Mind*. Simon & Schuster.

Mitchell, T.M. (1997). *Machine Learning*. McGraw-Hill.

MRPiT. (2021). Rozporządzenie Ministra Rozwoju, Pracy i Technologii z dnia 27 lipca 2021 r. w sprawie bazy danych obiektów topograficznych oraz bazy danych obiektów ogólnogeograficznych, a także standardowych opracowań kartograficznych (Dz.U. 2021 poz. 1412). <https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20210001412>

MSWiA. (2011). Rozporządzenie Ministra Spraw Wewnętrznych i Administracji z dnia 17 listopada 2011 r. w sprawie bazy danych obiektów topograficznych oraz bazy danych obiektów ogólnogeograficznych, a także standardowych opracowań kartograficznych (Dz.U. 2011 nr 279 poz. 1642). <https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20112791642>

Müller, J.C. i Mouwes, P.J. (1990). Knowledge acquisition and representation for rule based map generalization: An example from the Netherlands. W: *Proceedings of GIS/LIS 90* (s. 58–67). American Congress on Surveying and Mapping.

Murphy, K.P. (2012). *Machine Learning: A Probabilistic Perspective*. The MIT Press.

Neun, M. (2007). *Data enrichment for adaptive map generalization using web services*. Doctoral thesis. University of Zurich. <http://tinyurl.com/ohhblh6>

Olszewski, R. (2009). *Kartograficzne modelowanie rzeźby terenu metodami inteligencji obliczeniowej*. Oficyna Wydawnicza Politechniki Warszawskiej.

- Opach, T., Korycka-Skorupa, J., Karsznia, I., Nowacki, T., Gołębiowska, I. i Rød, J.K. (2019). Visual clutter reduction in zoomable proportional point symbol maps. *Cartography and Geographic Information Science*, 46(4), 347–367. <https://doi.org/10.1080/15230406.2018.1490202>
- Porta, S., Crucitti, P. i Latora, V. (2006). The network analysis of urban streets: A dual approach. *Physica A: Statistical Mechanics and its Applications*, 369(2), 853–866. <https://doi.org/10.1016/j.physa.2005.12.063>
- Radomyska, A., Sawicka, K., Wiosna, A. i Zieliński, J. (2015). Realizacja koncepcji procesu generalizacji BDOO z BDOT10k. *Biuletyn Stowarzyszenia Kartografów Polskich*, 26, 26–27.
- RapidMiner. (2022). *RapidMiner 9: Operator Reference Manual*. <https://docs.rapidminer.com/latest/studio/operators/rapidminer-studio-operator-reference.pdf>
- Ratajski, L. (1967). Phenomenes des points de generalisation. *International Yearbook of Cartography*, 7, 143–151.
- Ratajski, L. (1973a). Rozważania o generalizacji kartograficznej. Cz. I. *Polski Przegląd Kartograficzny*, 5(2), 49–54.
- Ratajski, L. (1973b). Rozważania o generalizacji kartograficznej. Cz. II. *Polski Przegląd Kartograficzny*, 5(3), 103–110.
- Ratajski, L. (1989). *Metodyka kartografii społeczno-gospodarczej*. Wyd. 2. PPWK.
- Regnault, N. i McMaster, R.B. (2007). A synoptic view of generalisation operators. W: W.A. Mackaness, A. Ruas i L.T. Sarjakoski (red.), *Generalisation of Geographic Information: Cartographic Modelling and Applications* (s. 37–66). Elsevier.
- Richardson, D.E. i Muller, J.-C. (1991). Rule selection for small-scale map generalization. W: B.P. Buttenfield i R.B. McMaster (red.), *Map Generalization: Making Rules for Knowledge Representation* (s. 136–149). Longman.
- Richardson, D.E. i Thomson, R.C. (1996). Integrating thematic, geometric, and topological information in the generalization of road networks. *Cartographica: The International Journal for Geographic Information and Geovisualization*, 33(1), 75–83. <https://doi.org/10.3138/F150-7678-5Q15-8N06>
- Robinson, A.H., Sale, R.D. i Morrison, J.L. (1988). *Podstawy kartografii*. Państwowe Wydawnictwo Naukowe.
- Roth, R.E., Brewer, C.A. i Stryker, M.S. (2011). A typology of operators for maintaining legible map designs at multiple scales. *Cartographic Perspectives*, 68, 29–64. <https://doi.org/10.14714/CP68.7>
- Saliszczyk, K.A. (1998). *Kartografia ogólna*. Wydawnictwo Naukowe PWN.
- Sen, A. i Gokgoz, T. (2015). An experimental approach for selection/elimination in stream network generalization using support vector machines. *Geocarto International*, 30(3), 311–329. <https://doi.org/10.1080/10106049.2014.937466>
- Sester, M. (2000). Knowledge acquisition for the automatic interpretation of spatial data. *International Journal of Geographical Information Science*, 14, 1–24. <https://doi.org/10.1080/136588100240930>

- Sester, M., Feng, Y. i Thiemann, F. (2018). Building generalization using deep learning. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, XLII-4, 565–572. <https://doi.org/10.5194/isprs-archives-xlii-4-565-2018>
- Sielicka, K. i Karsznia, I. (2019). Evaluating map specifications for automated generalization of settlements and road networks in small-scale maps. *Miscellanea Geographica. Regional Studies on Development*, 23(4), 242–255. <https://doi.org/10.2478/mgrsd-2019-0025>
- Sirko, M. (1988). *Teoretyczne i metodyczne aspekty obiektywizacji doboru osiedli na mapach*. Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.
- Smith, R.H.T. (1965). Method and purpose in functional town classification. *Annals of the Association of American Geographers*, 55(3), 539–548. <https://doi.org/10.1111/j.1467-8306.1965.tb00534.x>
- Stanislawski, L., Battenfield, B.P., Bereuter, P., Savino, S. i Brewer, C.A. (2014). Generalisation operators. W: D. Burghardt, C. Duchêne i W.A. Mackaness (red.), *Abstracting Geographic Information in a Data Rich World: Methodologies and Applications of Map Generalisation* (s. 157–195). Springer International.
- Steiniger, S. i Weibel, R. (2007). Relations among map objects in cartographic generalization. *Cartography and Geographic Information Science*, 34(3), 175–197. <https://doi.org/10.1559/152304007781697866>
- Stoter, J., Post, M., van Altena, V., Nijhuis, R. i Bruns, B. (2014). Fully automated generalization of a 1:50k map from 1:10k data. *Cartography and Geographic Information Science*, 41(1), 1–13. <https://doi.org/10.1080/15230406.2013.824637>
- Stoter, J., Van Smaalen, J., Bakker, N. i Hardy, P. (2009). Specifying map requirements for automated generalization of topographic data. *The Cartographic Journal*, 46(3), 214–227. <https://doi.org/10.1179/174327709X446637>
- Strahler, A.N. (1952). Dynamic basis of geomorphology. *Geological Society of America Bulletin*, 63(9), 923–938. [https://doi.org/10.1130/0016-7606\(1952\)63\[923:DBOG\]2.0.CO;2](https://doi.org/10.1130/0016-7606(1952)63[923:DBOG]2.0.CO;2)
- Sutton, R.S. i Barto, A.G. (1998). *Reinforcement Learning: An Introduction*. MIT Press.
- Szombara, S. i Lupa, M. (2018). Cartographic generalization of the river network including standards of the objects recognition. W: *Proceedings of the 2018 Baltic Geodetic Congress, BGC Geomatics* (s. 117–120). IEEE. <https://doi.org/10.1109/BGC-Geomatics.2018.00028>
- Touya, G. (2007). *River network selection based on structure and pattern recognition*. 23rd International Cartographic Conference, Moscow, Russia, August 2007, 4–9. <https://doi.org/10.13140/RG.2.1.1594.4167>
- Touya, G. (2010). A road network selection process based on data enrichment and structure detection. *Transactions in GIS*, 14(5), 595–614. <https://doi.org/10.1111/j.1467-9671.2010.01215.x>
- Touya, G., Gruget, M. i Muehlenhaus, I. (2023a). Where am i now? Modelling disorientation in pan-scalar maps. *ISPRS International Journal of Geo-Information*, 12(2), 62. <https://doi.org/10.3390/ijgi12020062>
- Touya, G., Potié, Q. i Mackaness, W.A. (2023b). Incorporating ideas of structure and meaning in interactive multi scale mapping environments. *International Journal of Cartography*, 9(2), 342–372. <https://doi.org/10.1080/23729333.2023.2215960>

Touya, G., Zhang, X. i Lokhat, I. (2019). Is deep learning the new agent for map generalisation? *International Journal of Cartography*, 5(2–3), 142–157.

<https://doi.org/10.1080/23729333.2019.1613071>

Turing, A. (1950). Computing machinery and intelligence. *Mind*, 59(236), 433–460.

<https://doi.org/10.1093/mind/LIX.236.433>

Tyner, J.A. (2014). *Principles of Map Design*. The Guilford Press.

Van Altena, V. i Stoter, J. (2016). Context-aware thinning of artificial water networks for map generalization. *Journal for Geographic Information Science*, 4(1), 12–29.

https://doi.org/10.1553/giscience2016_01_s12

Van Kreveld, M., van Oostrum, R. i Snoeyink, J. (1997). Efficient settlement selection for interactive display. W: *Proceedings of the ACSM/ASPRS Annual Convention & Exposition, Seattle, WA, USA, 7–10 April 1997* (s. 287–296). American Congress on Surveying and Mapping, American Society for Photogrammetry and Remote Sensing.

Weibel, R. (1995). Three essential building blocks for automated generalization. W: J.C. Müller, J.P. Lagrange i R. Weibel (red.), *GIS and Generalization: Methodology and Practice* (s. 3–17). Taylor & Francis.

Weibel, R., Keller, S. i Reichenbacher, T. (1995). Overcoming the knowledge acquisition bottleneck in map generalisation: The role of interactive systems and computational intelligence. W: A.U. Frank i W. Kuhn (red.), *Spatial Information Theory: A Theoretical Basis for GIS: Proceedings COSIT '95* (s. 139–156). Springer. https://doi.org/doi:10.1007/3-540-60392-1_10

Weiss, R. i Weibel, R. (2014). Road network selection for small-scale maps using an improved centrality-based algorithm. *Journal of Spatial Information Science*, 9, 71–99.

<https://doi.org/10.5311/JOSIS.2014.9.166>

Yan, H. i Weibel, R. (2008). An algorithm for point cluster generalization based on the Voronoi diagram. *Computers & Geosciences*, 34(8), 939–954. <https://doi.org/10.1016/j.cageo.2007.07.008>

Yan, X., Yang, M. i Ai, T. (2025). Deep learning in automatic map generalization: Achievements and challenges. *Geo-spatial Information Science*, 1–22. <https://doi.org/10.1080/10095020.2025.2480815>

Yu, H., Ai, T., Yang, M., Huang, W. i Harrie, L. (2023). A graph autoencoder network to measure the geometric similarity of drainage networks in scaling transformation. *International Journal of Digital Earth*, 16(1), 1828–1852. <https://dx.doi.org/10.1080/17538947.2023.2212920>

Zheng, J., Gao, Z., Ma, J., Shen, J. i Zhang, K. (2021). Deep graph convolutional networks for accurate automatic road network selection. *ISPRS International Journal of Geo-Information*, 10, 768.

<https://doi.org/10.3390/ijgi10110768>

Zhiyong, Z., Cheng, F. i Weibel, R. (2024). SpaGAN: A spatially-aware generative adversarial network for building generalization in image maps. *International Journal of Applied Earth Observation and Geoinformation*, 135, 104236. <https://doi.org/10.1016/j.jag.2024.104236>

Żyszkowska, W. (2000). *Semiotyczne aspekty wizualizacji kartograficznej*. Wydawnictwo Uniwersytetu Wrocławskiego.