



Universiteit
Leiden
The Netherlands

Biological model representation and analysis

Cao, L.

Citation

Cao, L. (2014, November 20). *Biological model representation and analysis*. Retrieved from <https://hdl.handle.net/1887/29754>

Version: Corrected Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/29754>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/29754> holds various files of this Leiden University dissertation

Author: Cao, Lu

Title: Biological model representation and analysis

Issue Date: 2014-11-20

Bibliography

- C. B. Akgül, B. Sankur, Y. Yemez, and F. Schmitt. 3d model retrieval using probability density-based shape descriptors. *IEEE Trans. Pattern Anal. Mach. Intell.*, 31(6):1117–1133, June 2009. ISSN 0162-8828. doi: 10.1109/TPAMI.2009.25. URL <http://dx.doi.org/10.1109/TPAMI.2009.25>.
- S. Aksoy and R. M. Haralick. Feature normalization and likelihood-based similarity measures for image retrieval. *Pattern Recognition Letters*, 22(5):563–582, April 2001. ISSN 01678655. doi: 10.1016/S0167-8655(00)00112-4.
- N. Amenta, M. Bern, and M. Kamvysselis. A new voronoi-based surface reconstruction algorithm. In *Proceedings of the 25th annual conference on Computer graphics and interactive techniques*, SIGGRAPH ’98, pages 415–421, New York, NY, USA, 1998. ACM. ISBN 0-89791-999-8. doi: 10.1145/280814.280947. URL <http://doi.acm.org/10.1145/280814.280947>.
- N. Amenta, S. Choi, T. K. Dey, and N. Leekha. A simple algorithm for homeomorphic surface reconstruction. In *Proceedings of the sixteenth annual symposium on Computational geometry*, SCG ’00, pages 213–222, New York, NY, USA, 2000. ACM. ISBN 1-58113-224-7. doi: 10.1145/336154.336207. URL <http://doi.acm.org/10.1145/336154.336207>.
- N. Amenta, S. Choi, and R. K. Kolluri. The power crust. In *Proceedings of the sixth ACM symposium on Solid modeling and applications*, pages 249–266, 2001.
- G. A. Ascoli. Progress and perspectives in computational neuroanatomy. *The Anatomical Record*, 257(6):195–207, 1999. ISSN 1097-0185. doi: 10.1002/(SICI)1097-0185(19991215)257:6<195::AID-AR5>3.0.CO;2-H. URL [http://dx.doi.org/10.1002/\(SICI\)1097-0185\(19991215\)257:6<195::AID-AR5>3.0.CO;2-H](http://dx.doi.org/10.1002/(SICI)1097-0185(19991215)257:6<195::AID-AR5>3.0.CO;2-H).
- G. A. Ascoli and J. L. Krichmar. L-neuron: A modeling tool for the efficient generation and

BIBLIOGRAPHY

- parsimonious description of dendritic morphology. *Neurocomputing*, 3233(0):1003 – 1011, 2000. ISSN 0925-2312.
- A. J. Baddeley, H. J. G. Gundersen, and L. M. Cruz-Orive. Estimation of surface area from vertical sections. *Journal of Microscopy*, 142(3):259–276, 1986. ISSN 1365-2818. doi: 10.1111/j.1365-2818.1986.tb04282.x. URL <http://dx.doi.org/10.1111/j.1365-2818.1986.tb04282.x>.
- G. Barequet, M. T. Goodrich, A. Levi-Steiner, and D. Steiner. Straight-skeleton based contour interpolation. In *Proceedings of the fourteenth annual ACM-SIAM symposium on Discrete algorithms*, SODA ’03, pages 119–127, Philadelphia, PA, USA, 2003. Society for Industrial and Applied Mathematics. ISBN 0-89871-538-5. URL <http://portal.acm.org/citation.cfm?id=644108.644129>.
- W. Barrett, E. Mortensen, and D. Taylor. An Image Space Algorithm for Morphological Contour Interpolation. In *In Proc. Graphics Interface*, pages 16–24, 1994.
- A. K. Bera and C. M. Jarque. Efficient tests for normality, homoscedasticity and serial independence of regression residuals: Monte carlo evidence. *Economics Letters*, 7(4):313 – 318, 1981. ISSN 0165-1765. doi: 10.1016/0165-1765(81)90035-5.
- J. Bernsen. Dynamic thresholding of gray-level images. In *International Conference on Pattern Recognition*, 1986.
- J. D. Boissonnat. Geometric structures for three-dimensional shape representation. *ACM Trans. Graph.*, 3(4):266–286, October 1984. ISSN 0730-0301. doi: 10.1145/357346.357349. URL <http://doi.acm.org/10.1145/357346.357349>.
- J. D. Boissonnat. Shape reconstruction from planar cross sections. *Comput. Vision Graph. Image Process.*, 44(1):1–29, August 1988. ISSN 0734-189X. doi: 10.1016/S0734-189X(88)80028-8. URL [http://dx.doi.org/10.1016/S0734-189X\(88\)80028-8](http://dx.doi.org/10.1016/S0734-189X(88)80028-8).
- J. D. Boissonnat and B. Geiger. Three-dimensional reconstruction of complex shapes based on the delaunay triangulation, 1993.
- P. J. Boon, N. Eminovic, A. De Vos, B. Buitendijk, E. J. Van Raaij, M. J. Den Broeder, W. J. Hage, and F.J. Verbeck. A virtual lab-notebook for multidimensional microscope images. In *Information Visualization, 2000. Proceedings. IEEE International Conference on*, pages 187–191, 2000. doi: 10.1109/IV.2000.859754.

BIBLIOGRAPHY

- F. Boudon, C. Pradal, T. Cokelaer, P. Prusinkiewicz, and C. Godin.
- P. Bountris, E. Farantatos, and N. Apostolou. Advanced Image Analysis Tools Development for the Early Stage Bronchial Cancer Detection.
- I. Braude, J. Marker, K. Museth, J. Nissanov, and D. Breen. Contour-based surface reconstruction using MPU implicit models. *GRAPHICAL MODELS*, 69:2007.
- I. Braude, J. Marker, K. Museth, J. Nissanov, and D. Breen. Contour-based surface reconstruction using implicit curve fitting, and distance field filtering and interpolation. In *In Proc. International Workshop on Volume Graphics*, pages 95–102, 2006.
- L. Cao and F. J. Verbeek. Evaluation of algorithms for point cloud surface reconstruction through the analysis of shape parameters. pages 82900G–82900G–10, 2012. doi: 10.11117/12.906718.
- L. Cao and F. J. Verbeek. Analytical evaluation of algorithms for point cloud surface reconstruction using shape features. *Journal of Electronic Imaging*, 22(4):043008–043008, 2013. doi: 10.1117/1.JEI.22.4.043008. URL <http://dx.doi.org/10.1117/1.JEI.22.4.043008>.
- L. Cao, K. Yan, L. Winkel, M. De Graauw, and F. J. Verbeek. Pattern recognition in high-content cyomics screens for target discovery: case studies in endocytosis. pages 330–342, 2011. URL <http://dl.acm.org/citation.cfm?id=2075619.2075657>.
- R. Cardenes, H. Bogunovic, and A. F. Frangi. Fast 3D centerline computation for tubular structures by front collapsing and fast marching. In *Proceedings of the International Conference on Image Processing, ICIP 2010, September 26-29, Hong Kong, China*, pages 4109–4112. IEEE, 2010. ISBN 978-1-4244-7994-8. doi: <http://dx.doi.org/10.1109/ICIP.2010.5651609>.
- J. C. Carr, R. K. Beatson, B. C. McCallum, W. R. Fright, T. J. McLennan, and T. J. Mitchell. Smooth surface reconstruction from noisy range data. In *Proceedings of the 1st international conference on Computer graphics and interactive techniques in Australasia and South East Asia, GRAPHITE '03*, pages 119—127, New York, NY, USA, 2003. ACM. ISBN 1-58113-578-5. doi: <http://doi.acm.org/10.1145/604471.604495>. URL <http://doi.acm.org/10.1145/604471.604495>.
- T. Chen and Z. Q. Shen. An adaptive image segmentation method using region growing. In *Computer Engineering and Technology (ICCET), 2010 2nd International Conference on*, volume 7, pages V7–78–V7–80, April 2010.

BIBLIOGRAPHY

- P. Cignoni. Meshlab. June 2010.
- C. Collinet, M. Stter, C. R. Bradshaw, N. Samusik, J. C. Rink, D. Kenski, B. Habermann, F. Buchholz, R. Henschel, M. S. Mueller, W.E. Nagel, E. Fava, Y. Kalaidzidis, and M. Zerial. Systems survey of endocytosis by multiparametric image analysis. *Nature*, (7286):243249, 2010. doi: 10.1038/nature08779.
- J. Conway and N. Sloane. Sphere packings, lattices, and groups. 1999.
- C. Cortes and V. Vapnik. Support-Vector Networks. *Mach. Learn.*, 20(3):273–297, September 1995. ISSN 0885-6125. doi: 10.1023/A:1022627411411. URL <http://dx.doi.org/10.1023/A:1022627411411>.
- P. Cowin and J. Wysolmerski. Molecular mechanisms guiding embryonic mammary gland development. *Cold Spring Harb Perspect Biol*, 2(6):a003251, 2010. ISSN 1943-0264. URL <http://www.biomedsearch.com/nih/Molecular-Mechanisms-Guiding-Embryonic-Mammary/20484386.html>.
- N. Cristianini and J. Shawe-Taylor. In *An introduction to support Vector Machines: and other kernel-based learning methods*. Cambridge University Press, New York, NY, USA, 2000. ISBN 0521780195.
- B. Curless and M. Levoy. A volumetric method for building complex models from range images. In *Proceedings of the 23rd annual conference on Computer graphics and interactive techniques*, SIGGRAPH '96, pages 303–312, New York, NY, USA, 1996. ACM. ISBN 0-89791-746-4. doi: <http://doi.acm.org/10.1145/237170.237269>. URL <http://doi.acm.org/10.1145/237170.237269>.
- L. Damiano, S. L. Dévédec, P. D. Stefano, D. Repetto, R. Lalai, H. Truong, J. L. Xiong, E. H. Danen, K. Yan, and F. J. Verbeek. p140cap suppresses the invasive properties of highly metastatic mtln3-egfr cells via impaired cortactin phosphorylation. *Oncogene*, (5):624633, 2011. doi: 10.1038/onc.2011.257.
- M. N. Davies, A. Secker, A. A. Freitas, M. Mendao, J. Timmis, and D. R. Flower. On the hierarchical classification of g protein-coupled receptors. *Bioinformatics (Oxford, England)*, 23(23):3113–8, December 2007. ISSN 1367-4811. doi: 10.1093/bioinformatics/btm506.
- M. de Graauw, L. Cao, L. Winkel, M. H. A. M. van Miltenburg, S. E. Le Dévédec, M. Klop, K. Yan, C. Pont, V. M. Rogkoti, and A. Tijsma. Annexin a2 depletion delays egfr endo-

BIBLIOGRAPHY

- cytic trafficking via cofilin activation and enhances egfr signaling and metastasis formation. *Oncogene*, (20):26102619, 2013. doi: 10.1038/onc.2013.219.
- L. Devroye, L. Györfi, and G. Lugosi. *A Probabilistic Theory of Pattern Recognition*, volume 31 of *Stochastic Modelling and Applied Probability*. Springer, corrected edition, April 1996. ISBN 0387946187.
- T. K. Dey and S. Goswami. Tight cocone: a water-tight surface reconstructor. In *Proceedings of the eighth ACM symposium on Solid modeling and applications*, SM '03, pages 127–134, New York, NY, USA, 2003. ACM. ISBN 1-58113-706-0. doi: <http://doi.acm.org/10.1145/781606.781627>. URL <http://doi.acm.org/10.1145/781606.781627>.
- T. K. Dey and S. Goswami. Provable surface reconstruction from noisy samples. In *Proceedings of the twentieth annual symposium on Computational geometry*, SCG '04, pages 330–339, New York, NY, USA, 2004. ACM. ISBN 1-58113-885-7. doi: <http://doi.acm.org/10.1145/997817.997867>. URL <http://doi.acm.org/10.1145/997817.997867>.
- T. K. Dey and J. Sun. Defining and computing curve-skeletons with medial geodesic function. In *Proceedings of the Fourth Eurographics Symposium on Geometry Processing*, SGP '06, pages 143–152, Aire-la-Ville, Switzerland, Switzerland, 2006. Eurographics Association. ISBN 3-905673-36-3. URL <http://dl.acm.org/citation.cfm?id=1281957.1281975>.
- T. K. Dey, J. Giesen, and J. Hudson. Delaunay based shape reconstruction from large data. In *Proceedings of the IEEE 2001 symposium on parallel and large-data visualization and graphics*, pages 19–27, 2001.
- J. R. Ding, A. Bashashati, A. Roth, A. Oloumi, K. Tse, T. Zeng, G. Haffari, M. Hirst, M. A. Marra, A. Condon, S. Aparicio, and S. P. Shah. Feature based classifiers for somatic mutation detection in tumour-normal paired sequencing data. *Bioinformatics*, 2011. doi: 10.1093/bioinformatics/btr629.
- R.P.W. Duin, P. Juszczak, P. Paclik, E. Pekalska, D. de Ridder, D.M.J. Tax, and S. Verzakov. Pr-tools4.1, a matlab toolbox for pattern recognition. 2007.
- D. Eberly. Distance from a point to an ellipsoid. October 2011.
- A. B. Ekoule, F. C. Peyrin, and C. L. Odet. A triangulation algorithm from arbitrary shaped multiple planar contours. *ACM Trans. Graph.*, 10(2):182–199, April 1991. ISSN 0730-0301. doi: <http://doi.acm.org/10.1145/108360.108363>. URL <http://doi.acm.org/10.1145/108360.108363>.

BIBLIOGRAPHY

1145/108360.108363.

- F. N. Fritsch and R. E. Carlson. Monotone Piecewise Cubic Interpolation. *SIAM Journal on Numerical Analysis*, 17(2):238–246, 1980. URL <http://scitation.aip.org/getabs/servlet/GetabsServlet?prog=normal&id=SJNAAM000017000002000238000001&idtype=cvips&gifs=yes>.
- K. Fukunaga. *Introduction to Statistical Pattern Recognition, Second Edition (Computer Science & Scientific Computing)*. Academic Press, 2 edition, October 1990. ISBN 0122698517.
- T. Galvez, M. Teruel, W. Heo, J. Jones, M. Kim, J. Liou, J. Myers, and T. Meyer. sirna screen of the human signaling proteome identifies the ptdins(3,4,5)p3-mtor signaling pathway as a primary regulator of transferrin uptake. *Genome Biology*, 8(7):R142, 2007. ISSN 1465-6906. doi: 10.1186/gb-2007-8-7-r142.
- S. Ganapathy and T. G. Dennehy. A new general triangulation method for planar contours. In *Proceedings of the 9th annual conference on Computer graphics and interactive techniques, SIGGRAPH '82*, pages 69–75, New York, NY, USA, 1982. ACM. ISBN 0-89791-076-1. doi: <http://doi.acm.org/10.1145/800064.801264>. URL <http://doi.acm.org/10.1145/800064.801264>.
- N. Geldner and G. Jürgens. Endocytosis in signalling and development. *Current Opinion in Plant Biology*, 9(6):589–594, 2006. ISSN 1369-5266. doi: 10.1016/j.pbi.2006.09.011. URL <http://www.sciencedirect.com/science/article/pii/S136952660600152X>.
- R. N. Ghosh, R. DeBiasio, C. C. Hudson, E. R. Ramer, C. L. Cowan, and R. H. Oakley. Quantitative cell-based high-content screening for vasopressin receptor agonists using transfluor technology. *Journal of biomolecular screening : the official journal of the Society for Biomolecular Screening*, 10(5):476–84, August 2005. ISSN 1087-0571. doi: 10.1177/1087057105274896.
- S. Goldoni, R. A. Iozzo, P. Kay, S. Campbell, A. McQuillan, C. Agnew, J. X. Zhu, D. R. Keene, Reed C. C., and R. V. Iozzo. A soluble ectodomain of lrig1 inhibits cancer cell growth by attenuating basal and ligand-dependent egfr activity. *Oncogene*, 26(3):368381, 2006.
- R. C. Gonzalez and R. E. Woods. *Digital Image Processing*. Addison-Wesley Longman Publishing Co., Inc., Boston, MA, USA, 2nd edition, 2001. ISBN 0201180758.
- A. Gouaillard, K. Mosaliganti, A. Gelas, L. Souhait, N. Obholzer, and S. Megason. Streaming

BIBLIOGRAPHY

- level set algorithm for 3d segmentation of confocal microscopy images. In *Engineering in Medicine and Biology Society, 2009. EMBC 2009. Annual International Conference of the IEEE*, pages 3621–3624, Sept 2009. doi: 10.1109/IEMBS.2009.5333522.
- J. B. S. Haldane. The Precision of Observed Values of Small Frequencies. *Biometrika*, 35(3/4): pp. 297–300, 1948. ISSN 00063444. URL <http://www.jstor.org/stable/2332350>.
- A. O. Hatch, S. Kajarekar, and A. Stolcke. Within-class Covariance Normalization for SVM-based Speaker Recognition. page 14711474, 2006.
- Y. He and H. Qin. Surface reconstruction with triangular b-splines. In *Proceedings of the Geometric Modeling and Processing 2004*, GMP ’04, pages 279–287, Washington, DC, USA, 2004. IEEE Computer Society. ISBN 0-7695-2078-2. URL <http://dl.acm.org/citation.cfm?id=977398.977793>.
- A. Henderson. *The {ParaView} Guide: A Parallel Visualization Application*. Kitware, November 2004.
- G. T. Herman, J. S. Zheng, and C. A. Bucholtz. Shape-Based Interpolation. *IEEE Comput. Graph. Appl.*, 12(3):69–79, May 1992. ISSN 0272-1716. doi: 10.1109/38.135915. URL <http://dx.doi.org/10.1109/38.135915>.
- H. Hoppe, T. DeRose, T. Duchamp, J. McDonald, and W. Stuetzle. Surface reconstruction from unorganized points. *SIGGRAPH Comput. Graph.*, 26(2):71–78, 1992. ISSN 0097-8930. doi: <http://doi.acm.org/10.1145/142920.134011>. URL <http://doi.acm.org/10.1145/142920.134011>.
- C. W. Hsu, C. C. Chang, and C.J. Lin. A practical guide to support vector classification. 1(1): 1–16, 2010.
- M. K. Hu. Visual pattern recognition by moment invariants. *Information Theory, IRE Transactions on*, 8(2):179–187, 1962. ISSN 0096-1000. doi: 10.1109/TIT.1962.1057692.
- S. M. Hu and J. Wallner. A second order algorithm for orthogonal projection onto curves and surfaces. *Computer Aided Geometric Design*, 22(3):251 – 260, 2005. ISSN 0167-8396. doi: 10.1016/j.cagd.2004.12.001.
- P. A. Jacobsen, D. Becker, D. P. Govier, S. G. Krantz, and A. Kane. Ellipsoid analysis of calvarial shape., September 2009. ISSN 1055-6656.
- A. K. Jain, R. P. W. Duin, and J. C. Mao. Statistical pattern recognition: A review. *IEEE*

BIBLIOGRAPHY

- TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE*, 22(1):4–37, 2000.
- H. Jelinek, A. Karperien, D. Cornforth, R. M. Cesar Junior, and Leandro J. J. G. Micromod - an l-systems approach to neuron modelling. In *National University*, pages 156–163, 2002.
- H. F. Jelinek, R. M. Cesar, J. J. G. Leandro, and I. Spence. Automated morphometric analysis of the cat retinal alpha/y, beta/x and delta ganglion cells using wavelet statistical moment and clustering algorithms. *J Integr Neurosci*, 3(4):415–32, 2004. ISSN 0219-6352. URL <http://www.biomedsearch.com/nih/Automated-morphometric-analysis-cat-retinal/15657977.html>.
- X. Jiang, F. Huang, A. Marusyk, and A. Sorkin. Grb2 regulates internalization of egf receptors through clathrin-coated pits. 3(14):858–870, 2003.
- W. Johannsen. The genotype conception of heredity. *The American Naturalist*, 45(531):pp. 129–159, 1911. ISSN 00030147. URL <http://www.jstor.org/stable/2455747>.
- M. W. Jones and M. Chen. A New Approach to the Construction of Surfaces from Contour Data. *Comput. Graph. Forum*, 13(3):75–84, 1994.
- D.l Kaba, C. Wang, Y. M. Li, A. Salazar-Gonzalez, X. H. Liu, and A. Serag. Retinal blood vessels extraction using probabilistic modelling. *Health Information Science and Systems*, 2(1):2, 2014. ISSN 2047-2501. doi: 10.1186/2047-2501-2-2. URL <http://www.hissjournal.com/content/2/1/2>.
- P. Kalman, T. Juerg, A. H. Eric, and S. Milan. Quantitative analysis of pulmonary airway tree structures. *Computers in Biology and Medicine*, 36(9):974–996, 2006.
- D. G. Kang, D. C. Suh, and J. B. Ra. Three-dimensional blood vessel quantification via centerline deformation. *Medical Imaging, IEEE Transactions on*, 28(3):405–414, March 2009. ISSN 0278-0062. doi: 10.1109/TMI.2008.2004651.
- T. Kanungo, D. M. Mount, N. S. Netanyahu, C. D. Piatko, R. Silverman, and A. Y. Wu. An efficient k-means clustering algorithm: Analysis and implementation. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 24:881–892, 2002.
- M. Kass, A. Witkin, and D. Terzopoulos. Snakes: Active contour models. *International Journal of Computer Vision*, 1(4):321–331, 1988. ISSN 0920-5691. doi: 10.1007/BF00133570. URL <http://dx.doi.org/10.1007/BF00133570>.

BIBLIOGRAPHY

- M. Kazhdan. Reconstruction of solid models from oriented point sets. In *Proceedings of the third Eurographics symposium on Geometry processing*, SGP '05, Aire-la-Ville, Switzerland, Switzerland, 2005. Eurographics Association. ISBN 3-905673-24-X. URL <http://dl.acm.org/citation.cfm?id=1281920.1281931>.
- M. Kazhdan, M. Bolitho, and H. Hoppe. Poisson surface reconstruction. In *Proceedings of the fourth Eurographics symposium on Geometry processing*, SGP '06, pages 61–70, Aire-la-Ville, Switzerland, Switzerland, 2006a. Eurographics Association. ISBN 3-905673-36-3. URL <http://portal.acm.org/citation.cfm?id=1281957.1281965>.
- M. Kazhdan, M. Bolitho, and H. Hoppe. Poisson surface reconstruction. In *SGP '06: Proceedings of the fourth Eurographics symposium on Geometry processing*, pages 61–70, Aire-la-Ville, Switzerland, Switzerland, 2006b. Eurographics Association. ISBN 30905673-36-3. URL <http://portal.acm.org/citation.cfm?id=1281957.1281965>.
- E. Keppel. Approximating complex surfaces by triangulation of contour lines. *IBM J. Res. Dev.*, 19(1):2–11, January 1975. ISSN 0018-8646. doi: 10.1147/rd.191.0002. URL <http://dx.doi.org/10.1147/rd.191.0002>.
- M. Kirchner, W. Timm, F. Peying, P. Wangemann, and H. Steen. Non-linear classification for on-the-fly fractional mass filtering and targeted precursor fragmentation in mass spectrometry experiments. *Bioinformatics*, 26(6):791 – 797, 2010. ISSN 13674803.
- R. Klein, A. Schilling, and W. Straer. Reconstruction and simplification of surfaces from contours. *Graphical Models*, 62(6):429 – 443, 2000. ISSN 1524-0703. doi: 10.1006/gmod.2000.0530.
- R. Kolluri, J. R. Shewchuk, and J. F. O'Brien. Spectral surface reconstruction from noisy point clouds. In *Proceedings of the 2004 Eurographics/ACM SIGGRAPH symposium on Geometry processing*, SGP '04, pages 11–21, New York, NY, USA, 2004. ACM. ISBN 3-905673-13-4. doi: <http://doi.acm.org/10.1145/1057432.1057434>. URL <http://doi.acm.org/10.1145/1057432.1057434>.
- S. Kumar, J. Ghosh, and M. M. Crawford. Hierarchical Fusion of Multiple Classifiers for Hyperspectral Data Analysis. *Pattern Analysis & Applications*, 5(2):210–220, 2002. doi: 10.1007/s100440200019. URL <http://dx.doi.org/10.1007/s100440200019>.
- A. H. Land and A. G. Doig. An Automatic Method for Solving Discrete Programming Problems.

BIBLIOGRAPHY

- Econometrica*, 28:497–520, 1960a.
- A. H. Land and A. G. Doig. An Automatic Method of Solving Discrete Programming Problems. *Econometrica*, 28(3):497–520, 1960b.
- S. E. Le Dévédec, K. Yan, H. Bont, V. Ghotra, H. Truong, E. H. Danen, F. J. Verbeek, and B. van de Water. Systems microscopy approaches to understand cancer cell migration and metastasis. *Cellular and Molecular Life Sciences*, 67(19):3219–3240, 2010. ISSN 1420-682X. doi: 10.1007/s00018-010-0419-2.
- P. C. Lee, C. C. Chuang, A. S. Chiang, and Y. T. Ching. High-throughput computer method for 3d neuronal structure reconstruction from the image stack of the drosophila brain and its applications. *PLoS Computational Biology*, 8(9), 2012.
- T. C. Lee, R. L. Kashyap, and C. N. Chu. Building Skeleton Models via 3-D Medial Surface Axis Thinning Algorithms. *CVGIP: Graphical Models and Image Processing*, 56(6):462–478, 1994. ISSN 1049-9652. doi: 10.1006/cgip.1994.1042. URL <http://www.sciencedirect.com/science/article/pii/S104996528471042X>.
- A. Lehmussola, P. Ruusuvuori, and O. Yli-Harja. Evaluating the performance of microarray segmentation algorithms. *Bioinformatics*, 22(23):2910–2917, 2006.
- D. Leonard, A. Hayakawa, D. Lawe, D. Lambright, K. D. Bellve, C. Standley, L. M. Lifshitz, K. E. Fogarty, and S. Corvera. Sorting of egf and transferrin at the plasma membrane and by cargo-specific signaling to eea1-enriched endosomes. *Journal of cell science*, 121(Pt 20):3445–58, October 2008. ISSN 0021-9533. doi: 10.1242/jcs.031484.
- C. K. Leung and F. K. Lam. Image segmentation using maximum entropy method. In *Speech, Image Processing and Neural Networks, 1994. Proceedings, ISSIPNN '94., 1994 International Symposium on*, pages 29–32 vol.1, Apr 1994. doi: 10.1109/SIPNN.1994.344973.
- D. Levin. Algorithms for approximation. chapter Multidimen, pages 421–431. Clarendon Press, New York, NY, USA, 1987. ISBN 0-19-853612-7. URL <http://dl.acm.org/citation.cfm?id=48424.48448>.
- H. Li, C. Y. Ung, X. H. Ma, B. W. Li, B. C. Low, Z. W. Cao, and Y. Z. Chen. Simulation of crosstalk between small gtpase rhoa and egfr-erk signaling pathway via mekk1. *Bioinformatics*, 25(3):358–364, February 2009. ISSN 1367-4803. doi: 10.1093/bioinformatics/btn635. URL <http://dx.doi.org/10.1093/bioinformatics/btn635>.

BIBLIOGRAPHY

- H. W. Lilliefors. On the Kolmogorov-Smirnov test for the exponential distribution with mean unknown. *Journal of the American Statistical Association*, 64(325):387–389, 1969.
- J. Lindblad. Surface area estimation of digitized 3d objects using weighted local configurations. *Image Vision Comput.*, 23(2):111–122, February 2005. ISSN 0262-8856. doi: 10.1016/j.imavis.2004.06.012. URL <http://dx.doi.org/10.1016/j.imavis.2004.06.012>.
- A. Lindenmayer. Mathematical models for cellular interactions in development i. filaments with one-sided inputs. *Journal of Theoretical Biology*, 18(3):280 – 299, 1968. ISSN 0022-5193.
- F. H. Long, J. L. Zhou, and H. C. Peng. Visualization and analysis of 3D microscopic images. *PLoS computational biology*, 8(6):e1002519, January 2012. ISSN 1553-7358. doi: 10.1371/journal.pcbi.1002519. URL <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3375219&tool=pmcentrez&rendertype=abstract>.
- E. Magid, O. Soldea, and E. Rivlin. A comparison of Gaussian and mean curvature estimation methods on triangular meshes of range image data. *Computer Vision and Image Understanding*, 107(3):139–159, September 2007. ISSN 10773142. doi: 10.1016/j.cviu.2006.09.007.
- P. C. Mahalanobis. On the generalised distance in statistics. In *Proceedings National Institute of Science, India*, volume 2, pages 49–55, April 1936a. URL <http://ir.isical.ac.in/dspace/handle/1/1268>.
- P. C. Mahalanobis. On the generalised distance in statistics. *Proceedings of the National Institute of Sciences of India*, 2:49–55, 1936b.
- R. Maini and H. Aggarwal. A comprehensive review of image enhancement techniques. March 2010. URL <http://arxiv.org/abs/1003.4053>.
- I. Manakos, T. Schneider, and U. Ammer. A comparison between the isodata and the recognition classification methods on basis of field data. *Poster at the XIXth ISPRS Congr.*, 2000.
- K. R. Mandrup, H. K. L. Johansson, J. Boberg, A. S. Pedersen, M. S. Mortensen, J. S. Jørgensen, A. M. Vinggaard, and U. Hass. Mixtures of environmentally relevant endocrine disrupting chemicals affect mammary gland development in female and male rats. *Reproductive Toxicology*, 2014. ISSN 0890-6238.
- F. J. Massey. The Kolmogorov-Smirnov test for goodness of fit. *Journal of the American Statistical Association*, 46(253):68–78, 1951a.
- F. J. Massey. The {K}olmogorov-{S}mirnov Test for Goodness of Fit. *Journal of the Amer-*

BIBLIOGRAPHY

- ican Statistical Association, 46(253):68–78, 1951b. URL <http://www.jstor.org/stable/2280095>.
- A. Materka. Discrete wavelet transform derived features for digital image texture analysis. (September):163–168, 2001.
- B. Mederos, N. Amenta, L. Velho, and L. H. de Figueiredo. Surface reconstruction from noisy point clouds. In *Proceedings of the third Eurographics symposium on Geometry processing*, Aire-la-Ville, Switzerland, Switzerland, 2005. Eurographics Association. ISBN 3-905673-24-X. URL <http://portal.acm.org/citation.cfm?id=1281920.1281929>.
- T. Mitchell. McGraw-Hill Education (ISE Editions), 1st edition, October 1997. ISBN 0071154671.
- T. Mitchell. Generative and discriminative classifiers: Naive bayes and logistic regression. 2005.
- J. C. Mullikin and P. W. Verbeek. Surface area estimation of digitized planes. *Bioimaging*, 1(1):6–16, 1993. ISSN 1361-6374. doi: 10.1002/1361-6374(199303)1:1<6::AID-BIO3>3.0.CO;2-3. URL [http://dx.doi.org/10.1002/1361-6374\(199303\)1:1<6::AID-BIO3>3.0.CO;2-3](http://dx.doi.org/10.1002/1361-6374(199303)1:1<6::AID-BIO3>3.0.CO;2-3).
- L. Muniz Feliciano, J. Van Grol, J. A. C. Portillo, L. Liew, B. Liu, C. R. Carlin, V. B. Carruthers, S. Matthews, and C. S. Subauste. Toxoplasma gondii-induced activation of egfr prevents autophagy protein-mediated killing of the parasite. *PLoS Pathog*, 9(12):e1003809, 12 2013.
- A. H. Natalie, M. Glen, and W. R. Edwin. A new method for imaging and 3d reconstruction of mammalian cochlea by fluorescent confocal microscopy. *Brain Research*, 1000(12):200 – 210, 2004. ISSN 0006-8993. Brain Research Volume 1000.
- S. Naz, H. Majeed, and H. Irshad. Image segmentation using fuzzy clustering: A survey. In *Emerging Technologies (ICET), 2010 6th International Conference on*, pages 181–186, Oct 2010.
- A. F. Neuwald, C. J. Lanczycki, and A. Marchler-Bauer. Automated hierarchical classification of protein domain subfamilies based on functionally-divergent residue signatures. In *BMC bioinformatics*, volume 13, page 144. June 2012. ISBN 1471210513144. doi: 10.1186/1471-2105-13-144.
- A. Ng, K. K. Brock, M. B. Sharpe, J. L. Moseley, T. Craig, and D. C. Hodgson. Individualized 3D reconstruction of normal tissue dose for patients with long-term follow-up: a step toward

BIBLIOGRAPHY

- understanding dose risk for late toxicity. *International journal of radiation oncology, biology, physics*, 84(4):e557–63, November 2012. ISSN 1879-355X. doi: 10.1016/j.ijrobp.2012.06.026. URL <http://www.ncbi.nlm.nih.gov/pubmed/22929861>.
- W. Niblack. *An Introduction to Digital Image Processing*. Strandberg Publishing Company, Birkeroed, Denmark, Denmark, 1985. ISBN 87-872-0055-4.
- Y. Nishimura, K. Yoshioka, O. Bernard, B. Bereczky, and K. Itoh. A role of LIM kinase 1/cofilin pathway in regulating endocytic trafficking of EGF receptor in human breast cancer cells. *Histochemistry and cell biology*, 126(5):627–38, November 2006. ISSN 0948-6143. doi: 10.1007/s00418-006-0198-x.
- G. Nmeth, P. Kardos, and K. Palgyi. Topology preserving 3d thinning algorithms using four and eight subfields. 6111:316–325, 2010. doi: 10.1007/978-3-642-13772-3_32. URL http://dx.doi.org/10.1007/978-3-642-13772-3_32.
- Y. Ohtake, A. Belyaev, M. Alexa, G. Turk, and H. P. Seidel. Multi-level partition of unity implicits. *ACM Trans. Graph.*, 22(3):463–470, 2003. ISSN 0730-0301. doi: <http://doi.acm.org/10.1145/882262.882293>. URL <http://doi.acm.org/10.1145/882262.882293>.
- Oleg Okun. Feature normalization and selection for protein fold recognition. *Proc. of the 11th Finnish Artificial Intelligence Conference*, pages 207–221, 2004.
- N. Otsu. A Threshold Selection Method from Gray-level Histograms. *IEEE Transactions on Systems, Man and Cybernetics*, 9(1):62–66, January 1979. ISSN 0018-9472. doi: 10.1109/tsmc.1979.4310076. URL <http://dx.doi.org/10.1109/tsmc.1979.4310076>.
- S. Paulus, J. Dupuis, A. K. Mahlein, and H. Kuhlmann. Surface feature based classification of plant organs from 3d laserscanned point clouds for plant phenotyping. *BMC Bioinformatics*, 14(1):238, 2013. ISSN 1471-2105. doi: 10.1186/1471-2105-14-238. URL <http://www.biomedcentral.com/1471-2105/14/238>.
- L. Pelkmans, E. Fava, H. Grabner, M. Hannus, B. Habermann, E. Krausz, and M. Zerial. Genome-wide analysis of human kinases in clathrin- and caveolae/raft-mediated endocytosis. *Nature*, 436(7047):78–86, July 2005. ISSN 0028-0836. doi: 10.1038/nature03571. URL <http://dx.doi.org/10.1038/nature03571>.
- R. Pfeifle and H. P. Seidel. Fitting triangular b-splines to functional scattered data. *Computer Graphics Forum*, 15(1):15–23, 1996. ISSN 1467-8659. doi: 10.1111/1467-8659.1510015. URL <http://dx.doi.org/10.1111/1467-8659.1510015>.

BIBLIOGRAPHY

<http://dx.doi.org/10.1111/1467-8659.1510015>.

- M. Piccinelli, A. Veneziani, D. A. Steinman, A. Remuzzi, and L. Antiga. A Framework for Geometric Analysis of Vascular Structures: Application to Cerebral Aneurysms. *IEEE Trans. Med. Imaging*, 28(8):1141–1155, 2009. doi: <http://dx.doi.org/10.1109/TMI.2009.2021652>.
- H. Pottmann and S. Leopoldseder. A concept for parametric surface fitting which avoids the parametrization problem. *Computer Aided Geometric Design*, 20(6):343 – 362, 2003. ISSN 0167-8396. doi: 10.1016/S0167-8396(03)00078-5.
- A. Pressley. *Elementary differential geometry*. Springer, London; New York, 2010. ISBN 9781848828902 184882890X.
- P. Prusinkiewicz and A. Lindenmayer. *The Algorithmic Beauty of Plants*. Springer-Verlag New York, Inc., New York, NY, USA, 1990. ISBN 0-387-97297-8.
- Y. Qin, G. Stokman, K. Yan, S. Ramaiahgari, F. J. Verbeek, M. de Graauw, B. van de Water, and L. S. Price. camp signalling protects proximal tubular epithelial cells from cisplatin-induced apoptosis via activation of epac. *British Journal of Pharmacology*, 165(4b):1137–1150, 2012a. ISSN 1476-5381. doi: 10.1111/j.1476-5381.2011.01594.x. URL <http://dx.doi.org/10.1111/j.1476-5381.2011.01594.x>.
- Y. Qin, G. Stokman, K. Yan, S. Ramaiahgari, F. J. Verbeek, M. de Graauw, B. van de Water, and L. S. Price. camp signalling protects proximal tubular epithelial cells from cisplatin-induced apoptosis via activation of epac. *British journal of pharmacology*, 165(4b):1137–50, February 2012b. ISSN 1476-5381. doi: 10.1111/j.1476-5381.2011.01594.x.
- L. Qu, F. H. Long, X. Liu, S. K. Kim, E. W. Myers, and H. C. Peng. Simultaneous recognition and segmentation of cells: application in *c.elegans*. *Bioinformatics*, 27(20):2895–2902, 2011.
- Y. G. Qu, T. T. Wong, and P. A. Heng. Image segmentation using the level set method. In *Deformable Models*, Topics in Biomedical Engineering. International Book Series, pages 95–122. Springer New York, 2007. ISBN 978-0-387-31204-0. doi: 10.1007/978-0-387-68343-0_4. URL http://dx.doi.org/10.1007/978-0-387-68343-0_4.
- J. Z. Rappoport and S. M. Simon. Endocytic trafficking of activated egfr is ap-2 dependent and occurs through preformed clathrin spots. *Journal of Cell Science*, 122(9):1301–305, 2009.
- A. Ray, K. Shukla, L. Aggarwal, N. Sharma, S. Pradhan, and S. Sharma. Segmentation and classification of medical images using texture-primitive features: Application of bam-type

BIBLIOGRAPHY

- artificial neural network. *Journal of Medical Physics*, 33(3):119–126, 2008. doi: 10.4103/0971-6203.42763.
- K. Roepstorff, L. Grovdal, M. Grandal, M. Lerdrup, and B. van Deurs. Endocytic downregulation of erbB receptors: mechanisms and relevance in cancer. *Histochemistry and cell biology*, 129(5):563–78, May 2008. ISSN 0948-6143. doi: 10.1007/s00418-008-0401-3.
- G. Rozenberg and A. Salomaa. *Mathematical Theory of L Systems*. Academic Press, Inc., Orlando, FL, USA, 1980. ISBN 0125971400.
- G. Rozenberg and A. Salomaa, editors. *The book of L*. Springer-Verlag New York, Inc., New York, NY, USA, 1986. ISBN 0-387-16022-1.
- O. Rubel, G. H. Weber, M. Y. Huang, E. W. Bethel, M. D. Biggin, C. C. Fowlkes, C. L. Luengo Hendriks, S. V. E. Keranen, M. B. Eisen, D. W. Knowles, J. Malik, H. Hagen, and B. Hamann. Integrating data clustering and visualization for the analysis of 3D gene expression data. *IEEE/ACM transactions on computational biology and bioinformatics / IEEE, ACM*, 7(1):64–79, 2010. ISSN 1557-9964. doi: 10.1109/TCBB.2008.49. URL <http://www.ncbi.nlm.nih.gov/pubmed/20150669>.
- P. T. Sander and S. W. Zucker. Inferring Surface Trace and Differential Structure from 3-D Images. *IEEE Trans. Pattern Anal. Mach. Intell.*, 12(9):833–854, September 1990. ISSN 0162-8828. doi: <http://dx.doi.org/10.1109/34.57680>. URL <http://dx.doi.org/10.1109/34.57680>.
- P. SangitaB and S. R. Deshmukh. Use of Support Vector Machine, decision tree and Naive Bayesian techniques for wind speed classification. *Power and Energy Systems (ICPS), 2011 International Conference*, pages 1–8, 2011. ISSN 00063444. URL <http://www.jstor.org/stable/2332350>.
- J. Serra. *Image Analysis and Mathematical Morphology*. Academic Press, Inc., Orlando, FL, USA, 1983. ISBN 0126372403.
- A. Shadvar and A. Erfanian. Mutual information-based Fisher discriminant analysis for feature extraction and recognition with applications to medical diagnosis. *Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Conference*, 2010:5811–4, January 2010. ISSN 1557-170X. doi: 10.1109/IEMBS.2010.5627461.

BIBLIOGRAPHY

- J. Sharpe, U. Ahlgren, P. Perry, B. Hill, A. Ross, J. Hecksher Srensen, R. Baldock, and D. Davidson. Optical projection tomography as a tool for 3d microscopy and gene expression studies. *Science*, 296(5567):541–545, 2002. doi: 10.1126/science.1068206.
- C. N. Silla and A. A. Freitas. A survey of hierarchical classification across different application domains. *Data Min. Knowl. Discov.*, 22(1-2):31–72, 2011. ISSN 1384-5810. doi: 10.1007/s10618-010-0175-9. URL <http://dx.doi.org/10.1007/s10618-010-0175-9>.
- S. D. Solvenus and N. Yamamoto. 3d displays of egg and apple. January 2011.
- P. Somol, P. Pudil, and J. Kittler. Fast branch amp; bound algorithms for optimal feature selection. *Pattern Analysis and Machine Intelligence, IEEE Transactions on*, 26(7):900–912, July 2004. ISSN 0162-8828. doi: 10.1109/TPAMI.2004.28.
- Y. Song, W. D. Cai, H. Huang, Y. Wang, D. Feng, and M. Chen. Region-based progressive localization of cell nuclei in microscopic images with data adaptive modeling. *BMC Bioinformatics*, 14(1):173, 2013. ISSN 1471-2105. doi: 10.1186/1471-2105-14-173. URL <http://www.biomedcentral.com/1471-2105/14/173>.
- Y. W. Sun, D. M. Guo, Z. Y. Jia, and W. J. Liu. B-spline surface reconstruction and direct slicing from point clouds. *The International Journal of Advanced Manufacturing Technology*, 27(9-10):918–924, 2006. ISSN 0268-3768. doi: 10.1007/s00170-004-2281-6. URL <http://dx.doi.org/10.1007/s00170-004-2281-6>.
- P. J. Tadrous. Subcellular microanatomy by 3d deconvolution brightfield microscopy: Method and analysis using human chromatin in the interphase nucleus. *Anat Res Int*, 2012:848707, 2012. ISSN 2090-2751.
- A. Takeuchi, M. Shneier, T. H. Hong, T. Chang, C. Scrapper, and G. S. Cheok. Ground truth and benchmarks for performance evaluation, 2003.
- G. Tarcic, S. K. Boguslavsky, J. Wakim, T. Kiuchi, A. Liu, F. Reinitz, D. Nathanson, T. Takahashi, P. S. Mischel, T. Ng, and Y. Yarden. An unbiased screen identifies dep-1 tumor suppressor as a phosphatase controlling egfr endocytosis. *Current Biology*, 19(21):1788–1798, 2009. doi: 10.1016/j.cub.2009.09.048.An.
- A. Telea and A. Vilanova. A robust level-set algorithm for centerline extraction. In *Joint EUROGRAPHICS-IEEE TCVG Symposium on visualization*, 2003.
- S. Tripathi, K. Kumar, B. K. Singh, and R. P. Singh. Image segmentation : A review. 1(4):

BIBLIOGRAPHY

- 838–843, 2012.
- N. N. Tsiaparas, S. Golemati, I. Andreadis, J. Stoitsis, I. Valavanis, and K. S. Nikita. Assessment of carotid atherosclerosis from b-mode ultrasound images using directional multiscale texture features. *Measurement Science and Technology*, 23(11):114004, 2012.
- C. Y. Ung, H. Li, X. H. Ma, J. Jia, B. W. Li, B. C. Low, and Y. Z. Chen. Simulation of the regulation of egfr endocytosis and egfr-erk signaling by endophilin-mediated rhoa-egfr crosstalk. *FEBS Letters*, 582(18):2283–2290, 2011.
- R. Van Uitert and I. Bitter. Subvoxel precise skeletons of volumetric data based on fast marching methods. *Medical Physics*, 34(2):627–638, 2007. doi: 10.1118/1.2409238. URL <http://link.aip.org/link/?MPH/34/627/1>.
- Andrea Vedaldi, Haibin Ling, and Stefano Soatto. Knowing a good feature when you see it: Ground truth and methodology to evaluate local features for recognition. In R. Cipolla, S. Battiato, and G. M. Farinella, editors, *Computer Vision*, volume 285 of *Studies in Computational Intelligence*, pages 27–49. Springer Berlin Heidelberg, 2010. ISBN 978-3-642-12847-9. doi: 10.1007/978-3-642-12848-6_2.
- F. J. Verbeek. Deformation correction using euclidean contour distance maps. In *Pattern Recognition, 1992. Vol.III. Conference C: Image, Speech and Signal Analysis, Proceedings., 11th IAPR International Conference on*, pages 347–351, Aug 1992.
- F. J. Verbeek. Theory & practice of 3d reconstructions from serial sections. In *In Image Processing, A Practical Approach*, pages 153–195. Oxford: Oxford University Press, 1999a.
- F. J. Verbeek. Theory and practice of 3d-reconstructions from serial sections. *Image Processing, A Practical Approach*, pages 153–195, 1999b.
- F. J. Verbeek and P. J. Boon. High-resolution 3d reconstruction from serial sections: microscope instrumentation, software design, and its implementations, 2002.
- F. J. Verbeek and D. P. Huijsmans. A graphical database for 3d reconstruction supporting (4) different geometrical representations. 465:117–144, 1998. doi: 10.1007/978-1-4615-5553-7_5.
- F. J. Verbeek, M. M. de Groot, D. P. Huijsmans, W. H. Lamers, and I. T. Young. 3d base: A geometrical data base system for the analysis and visualisation of 3d-shapes obtained from parallel serial sections including three different geometrical representations. *Computerized Medical Imaging and Graphics*, 17(3):151–163, 1993. ISSN 0895-6111. Confocal Microscopy.

BIBLIOGRAPHY

- F. J. Verbeek, D. P. Huijsmans, R. J. A. M. Baeten, N. J. C. Schoutsen, and W. H. Lamers. Design and implementation of a database and program for 3d reconstruction from serial sections: A data-driven approach. *Microscopy Research and Technique*, 30(6):496–512, 1995. ISSN 1097-0029. doi: 10.1002/jemt.1070300607. URL <http://dx.doi.org/10.1002/jemt.1070300607>.
- F. J. Verbeek, M. J. den Broeder, P. J. Boon, B. Buitendijk, E. Doerry, E. J. van Raaij, and D. Zivkovic. Standard 3d digital atlas of zebrafish embryonic development for projection of experimental data, 1999a. URL <http://dx.doi.org/10.1117/12.373465>.
- F. J. Verbeek, K. A. Lawson, and J. B. Bard. Developmental bioinformatics: linking genetic data to virtual embryos. *The International journal of developmental biology*, 43(7):761–771, 1999b. ISSN 0214-6282.
- L. Vincent and P. Soille. Watersheds in digital spaces: an efficient algorithm based on immersion simulations. *Pattern Analysis and Machine Intelligence, IEEE Transactions on*, 13(6):583–598, Jun 1991. ISSN 0162-8828. doi: 10.1109/34.87344.
- H. Wadell. Volume, shape, and roundness of quartz particles. *The Journal of Geology*, 43(3):250–280, 1935.
- A. R. Webb and K. D. Copsey. *Ensemble Methods*. John Wiley and Sons, Ltd, 2011. ISBN 9781119952954. doi: 10.1002/9781119952954.ch8.
- N. Wiener. *Extrapolation, Interpolation, and Smoothing of Stationary Time Series*. The MIT Press, 1964. ISBN 0262730057.
- B. Willis, J. N. Turner, D. N. Collins, B. Roysam, and T. J. Holmes. Developments in three-dimensional stereo brightfield microscopy. *Microscopy Research and Technique*, 24(5):437–451, 1993. ISSN 1097-0029. doi: 10.1002/jemt.1070240509. URL <http://dx.doi.org/10.1002/jemt.1070240509>.
- I. H. Witten and E. Frank. *Data Mining: Practical Machine Learning Tools and Techniques, Second Edition (Morgan Kaufmann Series in Data Management Systems)*. Morgan Kaufmann Publishers Inc., San Francisco, CA, USA, 2005. ISBN 0120884070.
- W. J. Xie, R. P. Thompson, and R. Perucchio. A topology-preserving parallel 3D thinning algorithm for extracting the curve skeleton. *Pattern Recognition*, 36(7):1529–1544, 2003. ISSN 0031-3203. doi: 10.1016/S0031-3203(02)00348-5. URL <http://www.sciencedirect.com>.

BIBLIOGRAPHY

- com/science/article/pii/S0031320302003485.
- K. Yan and F. J. Verbeek. Segmentation for high-throughput image analysis: Watershed masked clustering. In *ISoLA (2)*, volume 7610 of *Lecture Notes in Computer Science*, pages 25–41. Springer, 2012a.
- K. Yan and F. J. Verbeek. Segmentation for high-throughput image analysis: Watershed masked clustering. *Leveraging Applications of Formal Methods, Verification and Validation. Applications and Case Studies*, 7610:25–41, 2012b. doi: 10.1007/978-3-642-34032-1_4.
- K. Yan, S. Le Dévédec, B. van de Water, and F. J. Verbeek. Cell tracking and data analysis of in vitro tumour cells from time-lapse image sequences. In Alpesh Ranchordas and Helder Arajo, editors, *VISAPP 2009 - Proceedings of the Fourth International Conference on Computer Vision Theory and Applications, Lisboa, Portugal, February 5-8, 2009 - Volume 1*, pages 281–286. INSTICC Press, 2009a. ISBN 978-989-8111-69-2.
- K. Yan, F. J. Verbeek, S. E. Le Dévédec, and B. van de Water. Cell tracking and data analysis of in vitro tumour cells from time-lapse image sequences. pages 281–286, 2009b.
- A. G. Youness and A. M. Hamid. Adaptive linear discriminant analysis for online feature extraction. *Machine Vision and Applications*, 24(4):777–794, 2013. ISSN 0932-8092. doi: 10.1007/s00138-012-0439-z. URL <http://dx.doi.org/10.1007/s00138-012-0439-z>.
- C. Zhang and T. H. Chen. Efficient feature extraction for 2d/3d objects in mesh representation. In *in Mesh Representation, ICIP 2001*, volume 3, pages 935–938, 2001.
- G. P. Zhang. Neural networks for classification: a survey. *IEEE Transactions on Systems, Man and Cybernetics, Part C (Applications and Reviews)*, 30(4):451–462, November 2000. ISSN 10946977. doi: 10.1109/5326.897072.
- Y. Zhang, Y. Sun, and J. R. Cole. A sensitive and accurate protein domain classification tool (salt) for short reads. *Bioinformatics*, 29(17):2103–2111, 2013.
- T. Zhao, J. Xie, F. Amat, N. Clack, P. Ahammad, H. C. Peng, F. H. Long, and E. Myers. Automated reconstruction of neuronal morphology based on local geometrical and global structural models. *Neuroinformatics*, 9(2-3):247–261, 2011. ISSN 1539-2791. doi: 10.1007/s12021-011-9120-3. URL <http://dx.doi.org/10.1007/s12021-011-9120-3>.
- J. Ziegel and M. Kiderlen. Estimation of surface area and surface area measure of three-dimensional sets from digitizations. *Image Vision Comput.*, 28(1):64–77, 2010. ISSN 0262-

BIBLIOGRAPHY

8856. doi: 10.1016/j.imavis.2009.04.013. URL <http://dx.doi.org/10.1016/j.imavis.2009.04.013>.