SOFM

Almost all books on Neural Networks have a chapter on SOFM (or SOM), for example, chapter 9 of Haykin’s book (really good source).

Kohonen, Teuvo (1982). "Self-Organized Formation of Topologically Correct Feature Maps". Biological Cybernetics. **43** (1): 59–69. [*doi*](https://en.wikipedia.org/wiki/Digital_object_identifier):[*10.1007/bf00337288*](https://doi.org/10.1007%2Fbf00337288).

Kohonen, T. (2001). *Self-Organizing Maps*. Third, Extended Edition. Springer Series in Information Sciences vol. 30, Berlin, Germany: Springer-Verlag, [ISBN 978-3-540-67921-9](http://www.scholarpedia.org/article/Special:BookSources/9783540679219)

Connection between SOM and FCM:

<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=238310>

Neural Gas is less mainstream. Lots of papers (like on IEEE Xplore) that use NG for specific applications.

T. Martinetz, S. Berkovich, and K. Schulten. "Neural-gas" Network for Vector Quantization and its Application to Time-Series Prediction. IEEE-Transactions on Neural Networks, 4(4):558-569, 1993.

<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=238311>

Martinetz, T.; Schulten, K. (1994). "Topology representing networks". Neural Networks. **7** (3): 507–522. [*doi*](https://en.wikipedia.org/wiki/Digital_object_identifier):[*10.1016/0893-6080(94)90109-0*](https://doi.org/10.1016%2F0893-6080%2894%2990109-0).

<http://www.ks.uiuc.edu/Publications/Papers/PDF/MART91B/MART91B.pdf>

Growing Neural Gas

Here’s a nice modern paper that summarizes the algorithm:

<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7484280>

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.34.8576&rep=rep1&type=pdf>

<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6033293>