

University of Groningen

## Computer-aided Diagnosis Technologies in Medicine

Shi, Chenyu

DOI:  
[10.33612/diss.211902613](https://doi.org/10.33612/diss.211902613)

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2022

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*  
Shi, C. (2022). *Computer-aided Diagnosis Technologies in Medicine*. University of Groningen.  
<https://doi.org/10.33612/diss.211902613>

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

*Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.*

# Stellingen

behorende bij het proefschrift

## Computer-aided Diagnosis Technologies in Medicine

van

Chenyu Shi

1. Computer-aided diagnosis can be used as a second opinion to assist health professionals with decision-making. (Chapter 1)
2. The inhibition mechanism in shape-selective neurons in visual cortex is thought to increase the selectivity of neurons. (Rolls and Treves, 1990)
3. Inhibition-augmented COSFIRE filters combine the responses from both excitatory and inhibitory inputs. (Chapter 2)
4. Inhibition-augmented bar-selective COSFIRE filters can be used as ridge-ending detectors. (Chapter 3)
5. Automatic differentiation of u- and n-serrated patterns in diagnosis of epidermolysis bullosa acquisita are feasible by using normalized histogram of orientations of the detected ridges. (Chapter 4)
6. Convolutional neural networks outperform traditional pattern recognition techniques on automatic serration pattern analysis. (Chapter 5)
7. Life is like writing a research paper. It is hard and gets judged by other people all the time. Some may reject it and others see the value in it. Persistence and resilience are the most important virtues in dealing with life and papers!
8. When in doubt, check with nature.