浙江大学

本科生毕业设计中期报告



题目	在线交互式神经元重建的服务器系统					
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在线交互式神经元重建的服务器系统中期报告

1. 项目背景

将原始神经元图像信息进行神经元追踪和数字重建,有助于神经科学家直观地观察神经元结构,理解大脑运作的原理,甚至于探索智

参考文献

- [1] CANNON R C, TURNER D A, PYAPALI G K, et al. An on-line archive of reconstructed hippocampal neurons[J]. Journal of Neuroscience Methods, 1998, 84(1-2): 49-54.
- [2] DRUCKMANN S, FENG L, LEE B, et al. Structured synaptic connectivity between hippocampal regions[J]. Neuron, 2014, 81(3): 629.
- [3] PENG H, LONG F, ZHAO T, et al. Proof-editing is the bottleneck of 3D neuron reconstruction: the problem and solutions[J]. Neuroinformatics, 2011, 9(2): 103 105.
- [4] LUISI J, NARAYANASWAMY A, GALBREATH Z, et al. The FARSIGHT Trace Editor: An Open Source Tool for 3-D Inspection and Efficient Pattern Analysis Aided Editing of Automated Neuronal Reconstructions[J]. Neuroinformatics, 2011, 9(2): 305–315.
- [5] MYATT D R, HADLINGTON T, ASCOLI G A, et al. Neuromantic from Semi-Manual to Semi-Automatic Reconstruction of Neuron Morphology[J]. Frontiers in Neuroinformatics, 2012, 6:4.
- [6] PENG H, LONG F. Seeing more is knowing more: V3D enables real-time 3D visualization and quantitative analysis of large-scale biological image data sets[J]. Nature Biotechnology, 2010, 28(4): 348-53.
- [7] RODRIGUEZ A, EHLENBERGER D B, HOF P R, et al. Rayburst sampling, an algorithm for automated three-dimensional shape analysis from laser scanning microscopy images[J]. Nature Protocol, 2006, 1(4): 2152–2161.

[8] FENG L, ZHAO T, KIM J. neuTube 1.0: A New Design for Efficient Neuron Reconstruction Software Based on the SWC Format[J]. Eneuro, 2014, 2(1).