Shape analysis for phenotype characterisation from high-throughput imaging

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List of Abbreviations

2-3DLA	**Two**-phase approach for the **3D** reconstruction and measurements from **light** microscopy **axial**-view imaging
AOS	Additive operator splitting
ASD	Axial-view Sampling Density
c-LS	c-level set
CLSM	Confocal laser scanning microscope
CNN	Convolutional neural networks
CV	Chan-Vese
dpf	Days post fertilisation
ES	Evolution Strategy
GAC	Geodesic active contours
GFP	Green fluorescent protein
HD-CNN	Hierarchical deep CNN
hdf	Hours post fertilisation
HOG	Histograms of Oriented Gradients
HT	Hight-throughput
HTAI	High-throughput axial-view imaging
HTI	Hight-throughput imaging
HY	Hybrid

ILS	Improved level set
LBP	Local Binary Patterns
LR	Logistic regressor
LRLS	Local region based level set
LSF	Level set function
MM-HTAI	Multi-modal high-throughput axial-view imaging
MS	Mean shift
MVS	Multi-view stereo
OPT	Optical projection tomography
PBS	Phosphate-Buffered saline
PCA	Principal component analysis
PFA	Paraformaldehyde
PS	Problem statement
ReLU	Rectified linear units
RNN	Recurrent neural networks
RQ	Research question
SD	Sampling density
SFM	Structure from motion
SIFT	Scale Invariant Feature Transform
SVM	Support vector machine
t-SNE	t-Distributed Stochastic Neighbor Embedding
VAST	Vertebrate Automated Screening Technology
VRV	Voxel residual volume

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